

INTERNSHIP REPORT

**SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF
BACHELOR OF SCIENCE – FASHION DESIGN**

by

K. PRAVALLIKA (41105006)



**DEPARTMENT OF FASHION DESIGN
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited with “A++” by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI – 600119

JULY 2023

SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF FASHION DESIGN

INTERNSHIP REPORT (S105AINT)

2023 – 2024

Name of the Student: K. PRAVALLIKA

Reg No : 41105006

Semester : V

Batch : 2021-2024



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SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF FASHION DESIGN

INTERNSHIP REPORT (S105AINT)

2023 – 2024

VIVA –VOCE EXAMINATION

This is to certify that the Internship (S105AINT) is the work of K. PRAVALLIKA - 41105006, during semester V, is a student of Fashion Design department had undergone training in EHA SILKS has been monitored by the continuous assessment from 15/05/2023 to 04/06/2023.

Submitted for Viva Voce examination held on: 06/09/2023


Mentor


Class Coordinator


Internal Examiner


External Examiner


Head of the Department
Head of the Department
Fashion Design
Sathyabama Institute of Science and Technology
Chennai-600 119.



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DECLARATION

I K. PRAVALLIKA here by declare that the Internship (S105AINT) for 21 days from 15/05/2023 to 04/06/2023 done by me under the guidance of Mrs. N. GAYATHRI, is my original work and is prepared based upon the data and information collected during my internship period is submitted in partial fulfillment of the requirements for the completion of practical training session.

Date: 06/09/2023

Place: CHENNAI

K.pravallika

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY** for their kind encouragement in doing this Internship and completing it successfully. I am grateful to them.

I convey my thanks to **Dr. DEVYANI GANGOPADHYAY** Dean, School of Building and Environment for providing me constant support and guidance. Your dedication to fostering a positive and nurturing academic environment has made a significant impact on my personal and professional growth.

I express my deep sense of gratitude to **Mrs. S. KRITHIKA** Head of the Department, Department of Fashion Design, School of Building and Environment, for providing me the assistance and knowledge at the right time during the progressive review.

I would like to extend my sincere gratitude to **Mrs. POORNIMA KOTA** for giving me the chance to be a part of your esteemed organization and gain practical experience in the industry. I admire, the great opportunity that has provided to us and all the elements that made a contribution toward my understanding throughout this period

I would like to express my sincere and deep sense of gratitude to **Mr.K.S. RAVISIDHAARTH** for her valuable guidance, suggestions and constant encouragement. I feel privileged to have the opportunity to be under your guidance, that paved way for the successful completion of my internship.

Last but not the least, I would like to thank all my **FAMILY MEMBERS, FRIENDS AND RELATIVES** for their support during the Internship period.



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Ref: SHD/2023/04/24/48

24 April, 2023

BONAFIDE CERTIFICATE

This is to certify that **Ms. KRISHNAPURAM PRAVALLIKA**,
Register Number **41105006** is a Bonafide student of our Institution
pursuing 2nd year **BACHELOR OF SCIENCE** in **FASHION DESIGN**
during the academic year **2022-2023**. She will be completing the course in
the year **2024**.

This certificate is issued for the purpose of **Applying**
INTERNSHIP.

DEAN (STUDENT AFFAIRS)

Dr. G. SUNDARI, M.E., Ph.D.,
DEAN (STUDENT AFFAIRS)

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Jeppiaar Nagar, Rajiv Gandhi Salai
Chennai – 600 119.



GAYATHRI N 2 days ago

to EHA, FASHION, me ✓



Hai Ma'am,

Please add one more student Pravallika along with Karthika and Varshitha for the internship from 11th May to 3rd June 2023 in your esteemed organization. We request you to kindly permit her for an internship.

On Mon, Apr 24, 2023 at 5:10 PM EHA Silks <ehacare@gmail.com> wrote:

Hello Gayathri,

Good to hear from you on intership program and thank you for approaching us.

We encourage new generation and support them to learn new aspects of current market fashion and trends.

Will surely support your student to pursue new learning opportunities and their dreams.

Thanks & Regards

Poornima

Eha Silks

On Mon, 24 Apr, 2023, 15:28 GAYATHRI N, <gayathri.design@sathyabama.ac.in> wrote:

Dear Sir/Madam,

I am N. Gayathri, working as Assistant Professor in the Fashion Design department of Sathyabama Institute of Science and Technology. Students pursuing B.Sc. Fashion Design degree from our department needs to complete their internship for 21 days in their Second year as a part of their curriculum. We request you to kindly permit our students for their internship in your esteemed organization for 21 days from 11th May to 3rd June 2023. Kindly confirm your acceptance by mail.

please find the attached students name list with their register number.

Karthika.J - 41105004

Yapadinne Sai Varshitha - 41105018

Best Regards

N. Gayathri

Assistant Professor

Department of Fashion Design

Sathyabama Institute of Science & Technology

Chennai - 600119



Pravallika K 21 May

Dear Sir/Madam , I am K.Pravallika pursuing B.Sc Fashion Design at sathyabama Institute of Science and Technology.I



EHA Silks 11:23 am

to me, GAYATHRI ▾



Hi Pravallika,

We welcome you to intership program in our organisation.

All the best and wish you happy learning.

Thanks & Regards

Poornima

EHA SILKS

[Show quoted text](#)

PERFORMANCE APPRAISAL

DEPARTMENT OF FASHION DESIGN

INTERNSHIP REPORT 2023

(Continuous progress report of the trainee for the period of 21 days in the industry to be submitted to HOD by the Trainee Incharge of the Organization)

1. **Name of the Industry:** EHA SILKS
2. **Address** : 8-86, Anand Complex, Main Road, Uppada-533448.
Kothapalli Mandal, E.G. District, A.P.
3. **Name of the student** : K. Pravallika
4. **Duration** : 15-05-2023 to 04-06-2023
5. **Total No. of days** : 21 days

Evaluation of performance criteria shall be on

Note: Kindly grade the student as per her overall performance in the office during the assessment days, which will be converted to the allotted 40 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding the Units		✓			
Participation in the Industry	✓				
Handling the given work		✓			
Punctuality		✓			
Coordination With Other Workers		✓			
Oral communication			✓		
Attitude		✓			
OVERALL PERFORMANCE	Good enough to learning and explaining concepts. Good marketing skills.				

Any other Remarks :

Signature of the Head of the Office:

For EHA SILKS
D. Poornima

CERTIFICATE



INTERNSHIP DETAILS

1. INDUSTRY / ORGANIZATION: EHA SILKS

Mentor Name: **Mr. Srinivas**

Designation of the mentor: **Design In charge**

Contact Number: **9493748773**

Address: **8-86, Anand Complex, Main Road,
Uppada – 533448 U. Kothapalli Mandal, E.G. District, A.P.**

2. INSTITUTION: SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Mentor Name: **Mr. K. S. Ravisidhaarth**

Designation of the mentor: **Assistant Professor**

Student Name: **K. Pravallika**

Department: **Fashion Design**

Address: **Jeppiaar Nagar, Rajiv Gandhi Salai,
Chennai- 600119 Tamil Nadu, INDIA.**

DAILY REPORT

DATE	REPORT
15/5/2023	Visiting a Company's Showrooms
16/5/2023	Visiting Weavers and Weaving Unit
17/5/2023	Design Department
18/5/2023	Basic Design Development
19/5/2023	Design Department
20/5/2023	Motif Development
21/5/2023	Motif Development on Graph
22/5/2023	Design Department
23/5/2023	Weaving Unit
24/5/2023	Design Development on Graph
25/5/2023	Design Department
26/5/2023	Design Development on Graph
27/5/2023	Weaving Unit
28/5/2023	Design Department
29/5/2023	Dyeing Unit
30/5/2023	Design Development on Graph
31/5/2023	Weaving Unit
01/6/2023	Dyeing Unit
02/6/2023	Design Department
03/6/2023	Design Department / Weaving Unit
04/6/2023	Weaving Unit

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REPORT ON EHA SILKS IN HANDLOOM DESIGN UNIT



Figure 1

1. ABSTRACT:

Embarking on an internship at the pick loom weaving unit as a fashion design student has been a captivating journey into the world of textile production, where creativity intertwines with technical precision. The pick loom weaving unit, with its specialized looms and skilled weavers, has provided me with a unique opportunity to delve into the intricacies of this weaving technique and its significant role in the fashion industry.

Pick loom weaving is a versatile and time-honored method of creating fabrics, characterized by its rhythmic interlacing of weft threads through the warp. During my internship, I have witnessed firsthand the mesmerizing process of pick loom weaving, where each thread weaved contributes to the formation of exquisite patterns and textures.

In this internship report, I aim to offer a comprehensive overview of my experiences and discoveries during my time at the pick loom weaving unit. Through detailed exploration, I will delve into the fundamentals of pick loom weaving, the art of designing fabric patterns, the quality control measures in place, and the impact of pick loom weaving in the world of fashion design.

Throughout the report, I will also highlight the collaborative spirit at the pick loom weaving unit, where weavers, designers, and artisans work in harmony to create fabrics that encapsulate creativity and craftsmanship. The report will shed light on the dedication of the team to deliver fabrics of the highest quality, meeting the diverse requirements of the fashion industry.

Moreover, I will reflect on how this internship experience has enriched my understanding of textile production and its profound influence on my journey as a future fashion designer. The insights gained at the pick loom weaving unit have broadened my perspectives on the potential of woven fabrics as a medium of artistic expression.

Overall, my internship at the pick loom weaving unit has been an eye-opening and transformative experience, immersing me in the artistry of weaving and its indelible impact on fashion design. I am excited to share my experiences and learnings through this report, hoping to inspire a greater appreciation for the art of pick loom weaving in the realm of fashion design.

1.1 COMPANY PROFILE



Figure 3



Figure 2

FOUNDER

LOLLA VENKATA RAO “. He pioneered the weaving industry, beginning his career in the 1940s. He was one of the founder leaders of the kothapalli handloom board, uppada. With the assistance of an NGO-art and craft exhibition, they developed their own firm by showcasing the uppada saree and began distributing throughout the Indian states of Hyderabad, Madras, Vijayawada, Kakinada, and Rajahmundry in 1944.



Figure 4

“VENKATA RAMA LAKSHIMI FABRICS” in Uppada was founded in the year 1979 and registered as a business in the year 1980 - June 30. It has been in business for 43 years.



Figure 5



Figure 6



Figure 7

VENKATA RAMA LAKSHIMI FABRICS -UPPADA

In 1986, they began manufacturing the traditional saree Jamdani and slowly began supplying for government showrooms.

They also created marketing production collection branches in Bombay and Venkata Giri.



Figure 8



Figure 9



Figure 10

His son L.V.V. Satyanarayana, granddaughter Poornima & grandson Satyanarayana Kota founded the sister's branch of “Eha Silks” in 2016 at Chennai. The second branch was opened in Uppada in 2021.



Figure 11



Figure 12



Figure 13

In our distinctive designs and exceptional customer service, EHA SILKS embodies the qualities of excellence, freshness, and positivism. The sari, in our opinion, embodies this distinct Indian-ness and serves as a symbol of India's identity and tradition. Established for the manufacture and supply of a fine selection of Ladies Silk Sarees in 2021, EHA SILKS has earned a niche in the Indian textile industry. Now that there are 250 families weaving for EHA Silks, they award one weaver of the year for their best design, focusing on young brains as they create the traditional designs for their sarees.

1.2 MARKETING CENTERS

Hyderabad , Madras , Vijayawada , Vizag , Bangalore,
Bombay , Delhi , culcatta , Nagpur , Venkatagiri

1.3 STITCHING UNITS

- Kolkata,
- Jaipur

1.4 VISION

developed along with proportionate development in the socioeconomic to work towards developing a textile ecosystem where handloom weaving and the handloom weavers both contribute productively to society's overall economy on the one hand, and where handloom weaving is preserved and circumstances of the weaver families and their skill sets on the other.

1.5 MISSION

Being an active, successful organization that promotes handloom weaving with modern designs, preserves and improves the handloom weavers' handloom weaving abilities, and provides the handloom weavers with income, education, and dignity.

1.6 WEBSITES

- ❖ MAIL: ehacare@gmail.com
- ❖ Facebook: Eha. India
- ❖ Site: www.ehaonline.com
- ❖ WhatsApp: 9491119292
- ❖ Instagram: Eha silks



Figure 14

1.7 VISITING CARDS



Figure 15

1.8 AWARDS

- 🏆 NATIONAL MERIT CERTIFICATE AWARD – 2016
- 🏆 NATIONAL AWARD (MARKETING) -2018



Figure 16



Figure 17

1.9 Company Factsheet

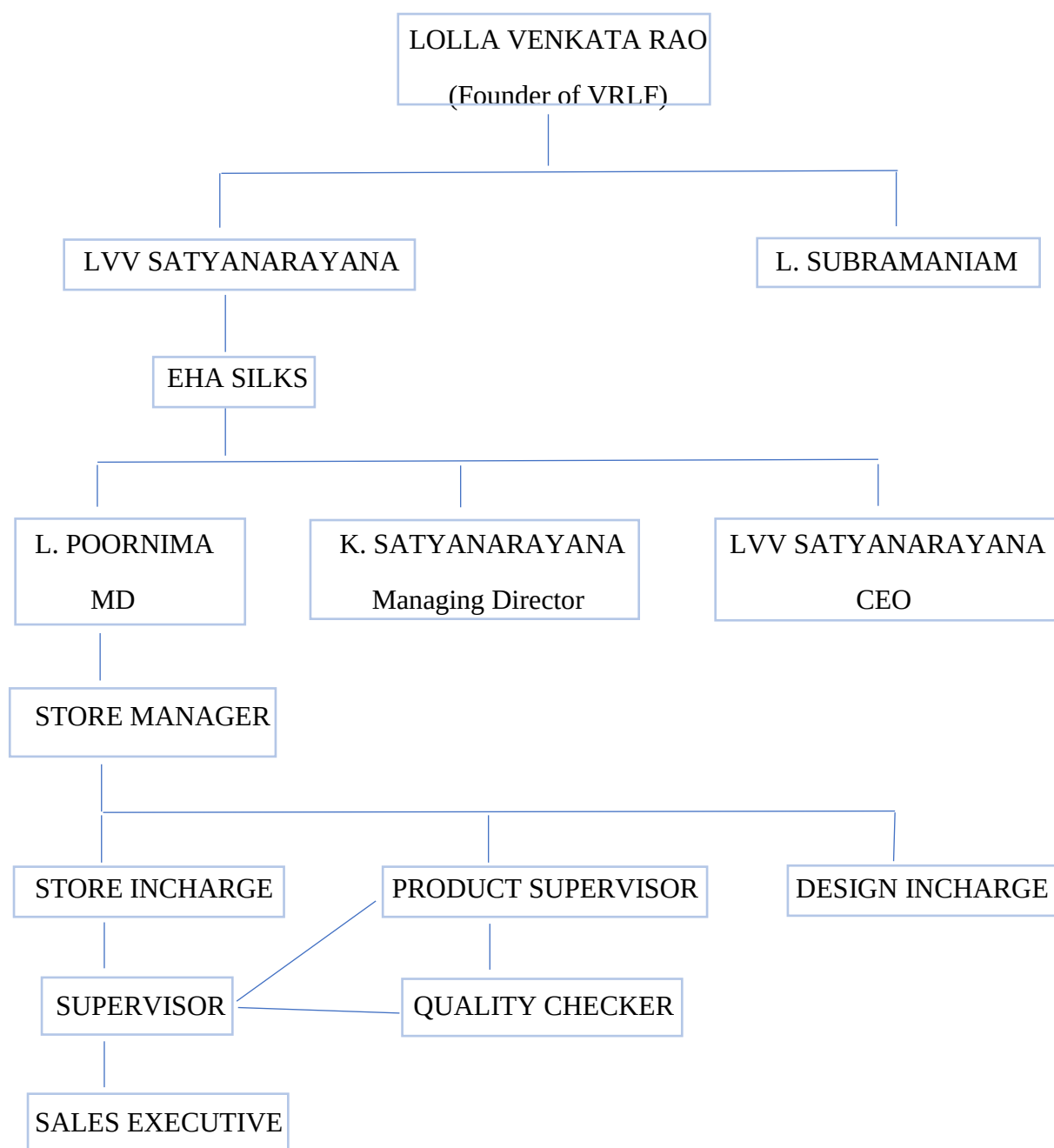
Basic Information

- ❖ Nature of Business - Manufacture, Wholesale & Retail
- ❖ Additional Business - Manufacturer
Exporter
Wholesaler
Trader
- ❖ Company Partners - K. Poornima,
L.V. Satyanarayana,
K. Satyanarayana
- ❖ Registered Address - 8-86, AnandComplex,
Main Road, Uppada, AP
- ❖ Industry - Indian ethnic wear for women
- ❖ Total Number of Employees - 20 to 25
- ❖ Year of Establishment - 2021
- ❖ Main Managing Partner - Mrs. Poornima K
- ❖ Annual Turnover - 2022-23 Rs. 2 Crore Approx.

Statutory Profile

- ❖ Banker - HDFC BANK
- ❖ GST No. - 37AAJFE1013G1ZV

2. ORGANIZATIONAL CHART



2.1 INTERNSHIP EXPERINCE

3. DESIGN UNIT

3.1 WORKS ON DESIGN DEVELOPMENT:

Uppada sarees are a traditional handwoven saree style from the town of Uppada in Andhra Pradesh, India. They are known for their intricate designs and fine craftsmanship. The motifs commonly used in Uppada sarees include floral patterns and peacocks, which are traditional and iconic to this style.

The phrase "whole body designs" implies that these motifs cover a significant portion of the saree's fabric, creating a rich and opulent look. The combination of floral and bird motifs, such as peacocks, adds elegance and beauty to the saree's overall appearance. These traditional motifs have been favored by many saree enthusiasts for generations.

However, as you mentioned, with changing trends and evolving tastes, newer and more unusual designs have been introduced in Uppada sarees. While the traditional motifs remain popular, contemporary designers and weavers have started experimenting with different patterns, colors, and combinations to cater to a broader audience and keep the art form vibrant and relevant in modern times.

It's fascinating to see how the world of fashion and design evolves while still respecting and preserving the essence of traditional crafts. Uppada sarees continue to be cherished for their timeless beauty and skilled craftsmanship.



Figure 18national award-winning motif design

3.2 CONTEMPORISED MOTIF DESIGNS:



Figure 19 Motif design



Figure 20 Motif design

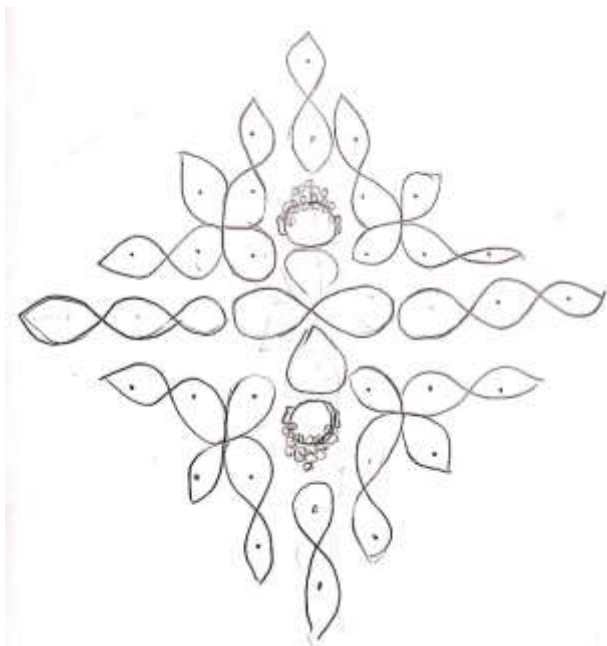


Figure 21 Motif design



Figure 22 Motif design



Figure 23 Motif design



Figure 24 Motif design

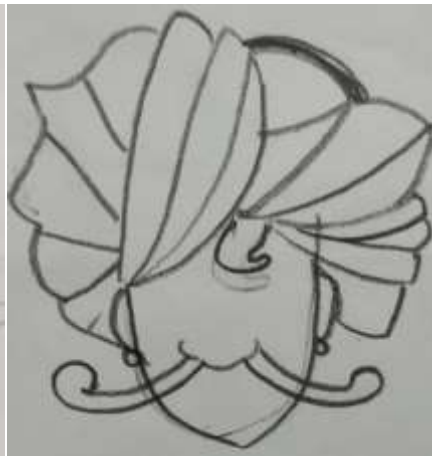


Figure 25 Motif design

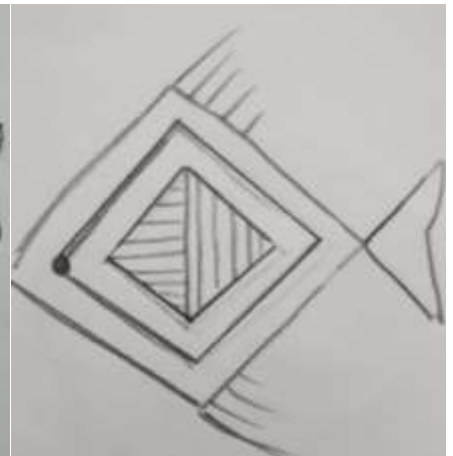


Figure 26 Motif design

3.3 GRAPH DESSIGN DEVELOPMENT

The design development process for Uppada sarees, specifically how the initial sketches are translated into a graph for further refinement and weaving.

The steps:

1. **Initial Sketch:** The saree designs are first conceptualized and drawn on a regular drawing sheet. These sketches represent the motifs, patterns, and overall layout of the saree design.
2. **Transferring to a Graph:** To facilitate the weaving process and ensure precision, the sketch is then transferred to a graph paper. Each box in the graph paper represents 1 inch.
3. **Box and Small Box Measurements:** In this context, 1 inch on the graph paper is further divided into 10 small boxes. So, each small box represents 1/10th of an inch.
4. **Conversion of Circles to Zigzags:** Traditional Uppada saree designs might include circular motifs. However, during the transfer to the graph paper, these circles are converted into zigzag patterns. The zigzags are easier to weave and replicate compared to the curves of a circle.
5. **Leaving Three Boxes between Each Curve:** To ensure that the zigzags have enough space and are not too congested, three boxes (which are each equivalent to 1 inch) are left between each curve. This spacing allows for a clear and balanced design.

By following these steps and using the graph paper as a guide, the weavers can faithfully recreate the intricate and beautiful Uppada saree designs with precision and accuracy. This meticulous process is one of the reasons why Uppada sarees are highly regarded for their fine craftsmanship and artistic appeal.

3.4 GRAPH

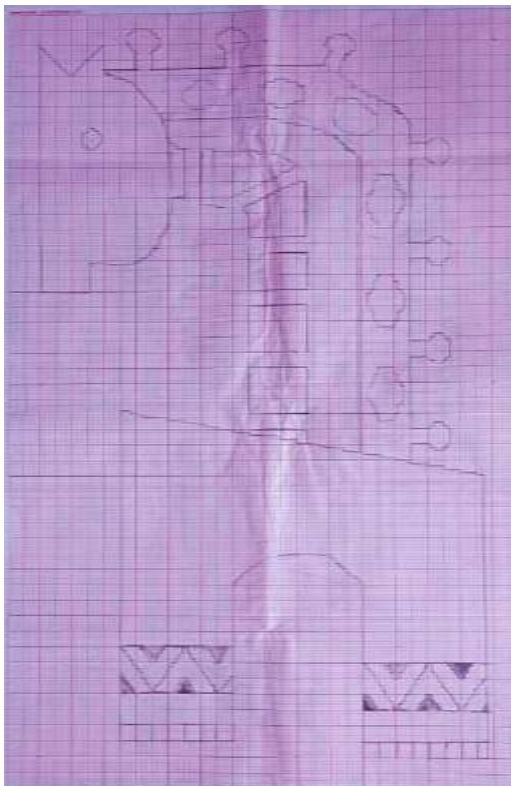


Figure 27

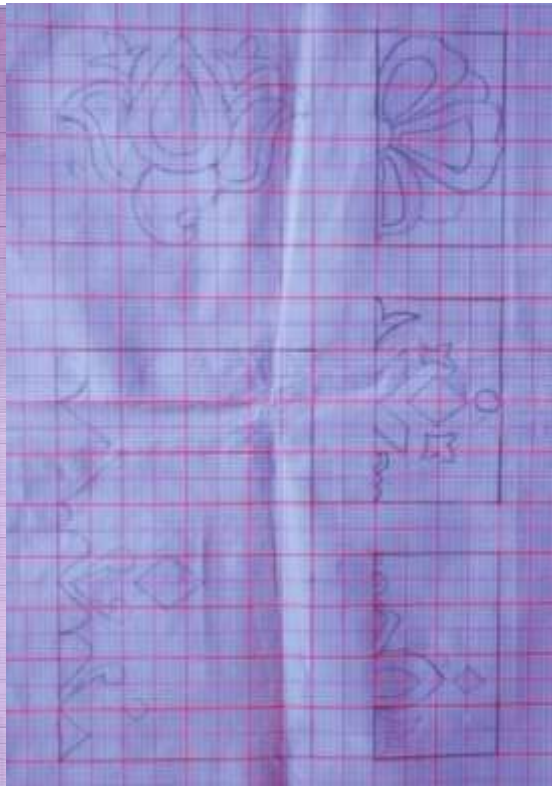


Figure 28

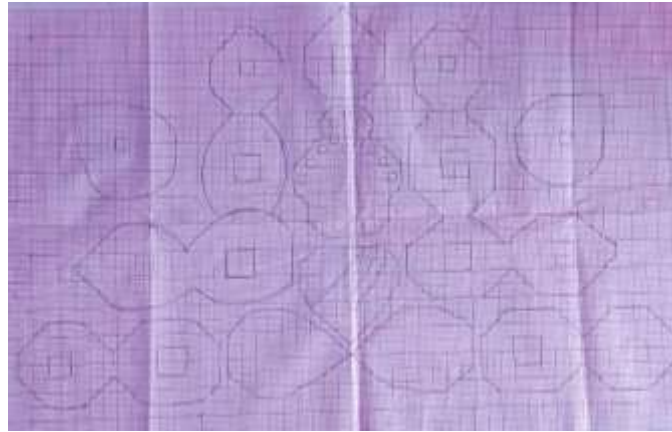


Figure 29

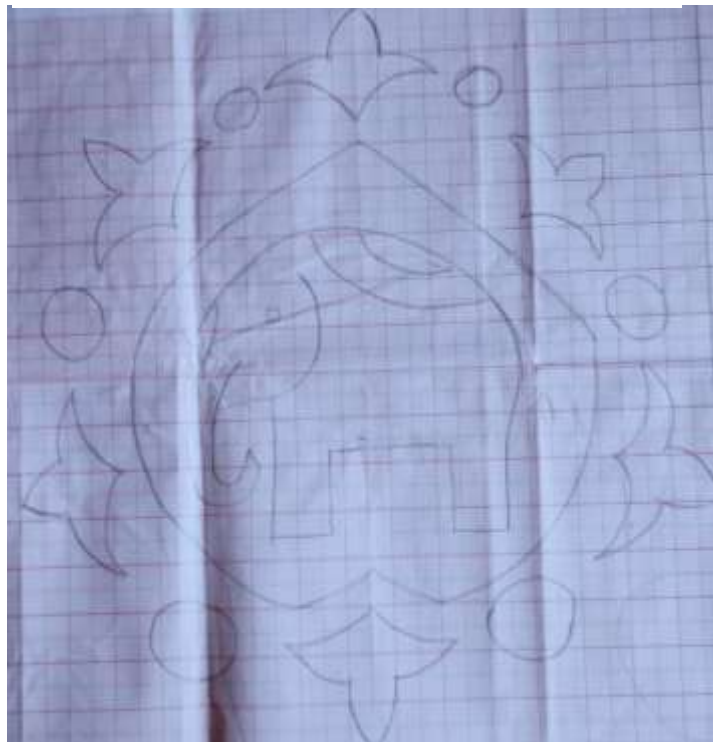


Figure 30

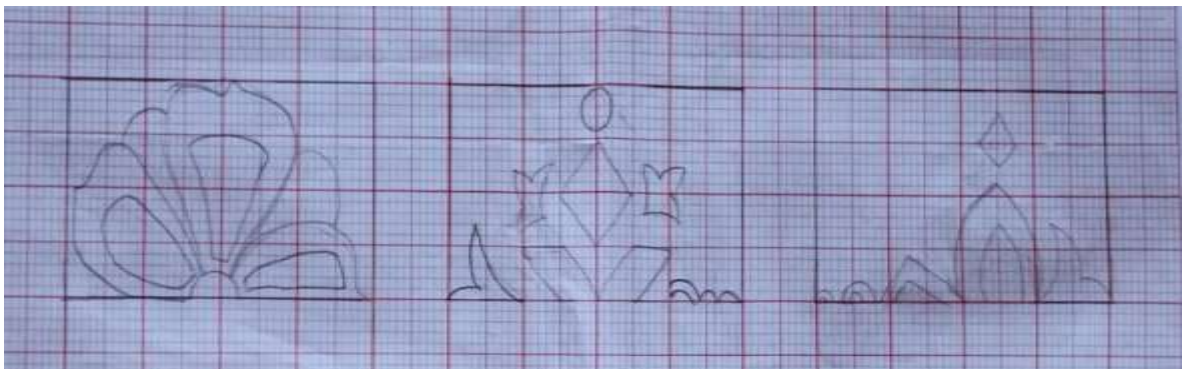
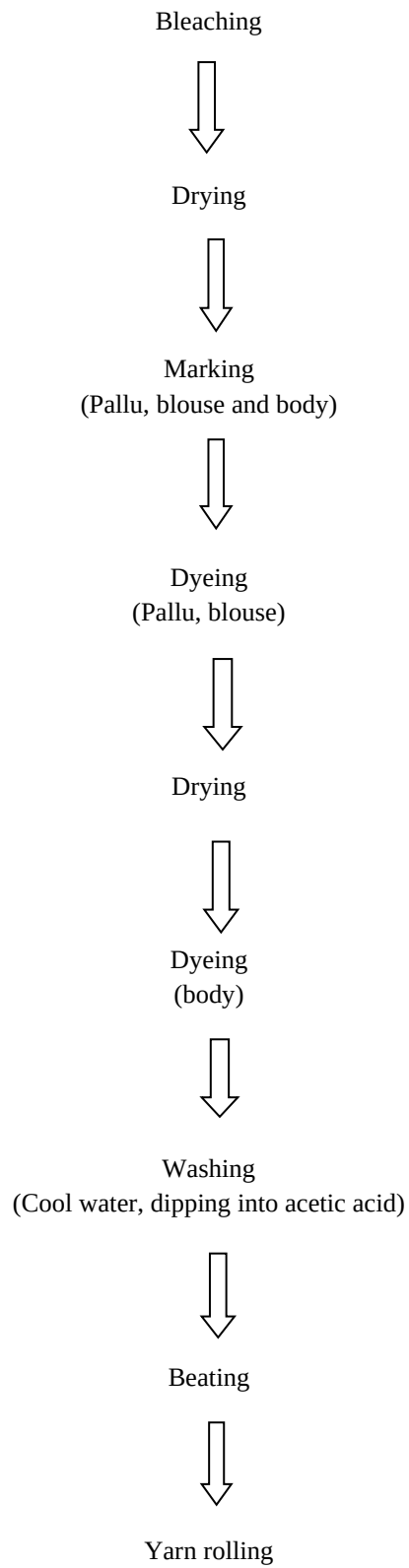


Figure 31

4. Flow chart of Dyeing Unit



4. DYEING UNIT

4.1 Preparation for the bleaching

the processes involved:

- **Preparation for Bleaching:** Before the dyeing process begins for the yarns, the fabric undergoes a bleaching process. Bleaching is done to remove any natural color, impurities, or stains from the fabric, creating a blank canvas for dyeing.
- **Dyeing Yarns:** Once the fabric has been bleached and prepared, the yarns are dyed. The dyeing process involves adding color to the yarns, giving them the desired hue for the Uppada sarees.
- **Batch Size:** The text mentions dyeing "8-6 sarees at a time." It might mean that a batch of 8 to 6 sarees is dyed simultaneously. The batch size could vary based on the capacity of the dyeing facility or the preference of the artisans.
- **Using Husk to Lid the Fire:** In the context of the dyeing process, using husk to lid the fire might refer to a traditional or eco-friendly method of heating the dyeing vats. Husk, being a readily available biomass material, can be used as fuel for heating, making it an economical and sustainable option.

In summary, the preparation for bleaching is the first step in the dyeing process for Uppada sarees. Once the fabric is ready, the yarns are dyed to achieve the desired colors. The use of husk to lid the fire suggests the utilization of an eco-friendly heating method for the dyeing vats, aligning with the traditional and sustainable practices often observed in handloom industries.



Figure 32 Husk



Figure 33 Burner

4.2 Bleaching

Uppada saree manufacturing, the bleaching process is a crucial step that prepares the fabric for dyeing. The steps involved in the bleaching process based on the provided information:

Boiling the Water: The first step is to fill a vessel with water and bring it to a boil. The water is allowed to boil for approximately 15 minutes. Boiling helps to remove impurities and prepares the water for the subsequent steps.

Formation of Bubbles: After boiling for 15 minutes, bubbles start appearing in the water. This indicates that the water is at the right temperature and ready for the next stage of the bleaching process.

Adding Soda: Once the water is appropriately heated, soda ash (sodium carbonate) is added to the boiling water. Soda ash is an alkali that acts as a cleansing agent and helps in the bleaching process. It aids in the removal of any residual natural color or impurities from the fabric.

Introducing Soap: Following the addition of soda ash, soap is added to the boiling water. The soap assists in the cleansing process and helps to remove any dirt, oils, or other contaminants from the fabric.

The combination of boiling water, soda ash, and soap creates an environment that effectively bleaches the fabric, leaving it clean and ready for dyeing. After the bleaching process, the fabric becomes a blank canvas, devoid of any natural color or impurities, allowing it to readily absorb the dyes and achieve vibrant and consistent colors during the dyeing stage.



Figure 34 Soap



Figure 35 Yarns after drying

4.3 MARKING -PALLU AND BODY

the marking process is an important step that involves designating specific portions of the fabric for the saree's body and pallu..

The steps involved in the marking process based on the provided information:

1. **Removal of Moisture:** Before proceeding with the marking process, the yarns or fabric are ensured to be free from any moisture or dampness. This might involve drying the yarns after dyeing or ensuring that the fabric is completely dry after any wet treatment.
2. **Marking for Body and Pallu:** Once the fabric is dry and ready, the artisans mark the saree for two meters at a time. This marking is done to designate the portion of the fabric that will be used for the saree's body and pallu. The pallu refers to the decorative end piece of the saree that drapes over the shoulder, while the body represents the main part of the saree.
3. **Multiple Sarees in One Batch:** The text mentions marking specifically "8-6 number of sarees" for which the dyeing is being done. This suggests that in each dyeing batch, a set number of sarees, ranging from 6 to 8 sarees, are marked at a time. This batch-wise approach ensures consistency in color and design among the sarees that are being dyed together.

By marking the fabric for body and pallu, the artisans ensure that the subsequent weaving process creates the desired pattern and design for each part of the saree. This step is critical in maintaining the distinct look and aesthetics of Uppada sarees, making them highly cherished and sought-after among saree enthusiasts.



Figure 36 yarns marking

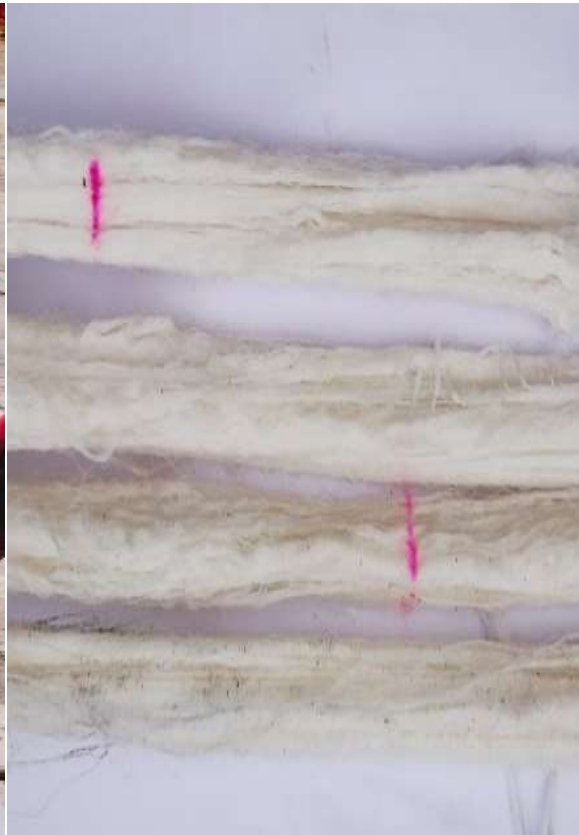


Figure 37 markings

4.4. SEPERATING -PALLU AND BODY



Figure 38 Differentiating pallu and blouse



Figure 39 Pallu and blouse separation

4.5 DYEING PROCESS

The process of separating the pallu (decorative end piece) and the body of the saree during the dyeing process for Uppada sarees. Let's break down the steps involved:

1. **Dyeing the Body of the Saree:** The first step is to dye the body of the saree separately. The body refers to the main part of the saree that covers the torso when draped. The artisans dye the body portion of the saree to achieve the desired color and design.
2. **Marking the Pallu and Blouse:** Once the body of the saree is dyed and dried, the next step is to mark the pallu and blouse areas. The pallu and blouse are marked separately from the body to ensure that each section receives the appropriate color and design during the dyeing process.
3. **Separate Dyeing for Pallu and Blouse:** After marking, the pallu and blouse are dyed individually. This is done to create distinct patterns, colors, or designs on these specific sections of the saree. The pallu, being the decorative part, often features intricate motifs and designs, while the blouse might have a different color or pattern to complement the overall look.

By dyeing the pallu and blouse separately, the artisans have more control over the design elements and color combinations, allowing them to create visually appealing and harmonious Uppada sarees. This attention to detail and precision in the dyeing process contributes to the exquisite beauty and craftsmanship of Uppada sarees, making them highly prized and cherished by saree enthusiasts.

In the dyeing unit, getting an appropriate color requires combining two or more colors.

Here, they mixed yellow one full spoon, and orange half spoon to create the copper color. And to obtain green they mixed yellow and blue



Figure 8 dye mixing



Figure 41 dyeing



Figure 42 copper dye

To get the copper color on the body part they first dipped into the copper color dye



Figure 43 Dyeing process



Figure 44 Dyeing process

Cover the pallu and the blouse part with the polyethene cover to resist the dye on the surface of the pallu and the blouse part



Figure 45 dyeing process

Now, add the green color dye to the pallu and the blouse part



Figure 46 Dye



Figure 47 Dye

If the dye does not produce the desired color, repair it using a chemical called hydrogen.



Figure 48 dyeing fixing agent

4.6.1 WASHING AFTER DRYING

The washing process after drying is an essential step in the production of Uppada sarees.

The steps involved based on the provided information:

1. **Washing with Cool Water:** After the dyeing and drying process, the Uppada sarees are washed with cool water. Washing helps to remove any residual dye, impurities, or substances from the fabric that might have accumulated during the dyeing process. Cool water is used to ensure that the colors on the sarees are not affected or faded during this washing stage.
2. **Dipping into Acetic Acid:** After the initial wash, the sarees are dipped into acetic acid. Acetic acid, also known as vinegar, is a mild acid used in the textile industry to set colors and enhance the luster of the fabric. The acetic acid bath is applied to achieve a lustrous effect on the Uppada sarees, making them look more vibrant and appealing.

The washing and acetic acid treatment play a crucial role in enhancing the colors and the overall appearance of the Uppada sarees, giving them a glossy and attractive finish. After this process, the sarees are carefully dried again before undergoing any additional finishing touches or packaging for sale. The attention to detail in every step of the manufacturing process contributes to the high-quality and exquisite beauty of Uppada sarees, making them a popular choice among saree enthusiasts.



Figure 49 Water washing



Figure 50 Acid washing



Figure 51 Yarns drying

After removing the moisture from the yarns, they were beaten to give them luster.



Figure 52 Yarn beating



Figure 53 Yarn after beating

The yarns become more lustrous after drying for a while, and they are then rolled and packed for distribution.



Figure 54 Silk yarns



Figure 55 Silk yarns roll

5.1 WEAVING UNIT

5.1.1 RAW MATERIALS

The weaving unit for Uppada sarees, the raw materials play a crucial role in the production process.

1. **Silk from Bangalore:** Bangalore, a city in the Indian state of Karnataka, is renowned for its silk production. Silk is a luxurious and highly valued fabric used in weaving Uppada sarees. The silk used for Uppada sarees is likely sourced from Bangalore due to the region's expertise and tradition in silk production.
2. **Zari from Surat:** Surat, a city in the Indian state of Gujarat, is famous for its zari production. Zari is a metallic thread, often made with gold or silver, that adds a rich and decorative element to the sarees. In Uppada sarees, zari is used to create intricate patterns and designs, especially in the pallu and borders, enhancing the overall beauty of the saree.
3. **Warp Yarns:** Warp yarns are the longitudinal yarns that run along the length of the saree. These yarns are typically the longest in the weaving process. They provide the structural integrity and form the foundation for the saree. Silk yarns are commonly used for the warp, as they are strong and durable, ensuring the saree's longevity.

Weft Yarns: Weft yarns are the transverse yarns that run across the width of the saree, interlacing with the warp yarns to form the fabric. In the case of Uppada sarees, the weft yarns are described as "very smooth and soft." These soft and smooth yarns contribute to the luxurious feel and comfort of the saree when draped.

By sourcing high-quality silk from Bangalore and zari from Surat, and carefully selecting warp and weft yarns, the weaving unit ensures that the Uppada sarees maintain their traditional beauty, durability, and elegance, making them a sought-after choice for saree enthusiasts worldwide. The combination of skilled craftsmanship and the use of premium raw materials is what sets Uppada sarees apart and makes them a symbol of Indian handloom heritage.



Figure 56 Weft yarn



Figure 57 Warp yarn

In the process of weaving the silk/gold Zari are winded on the spindle



Figure 59 Silver Zari

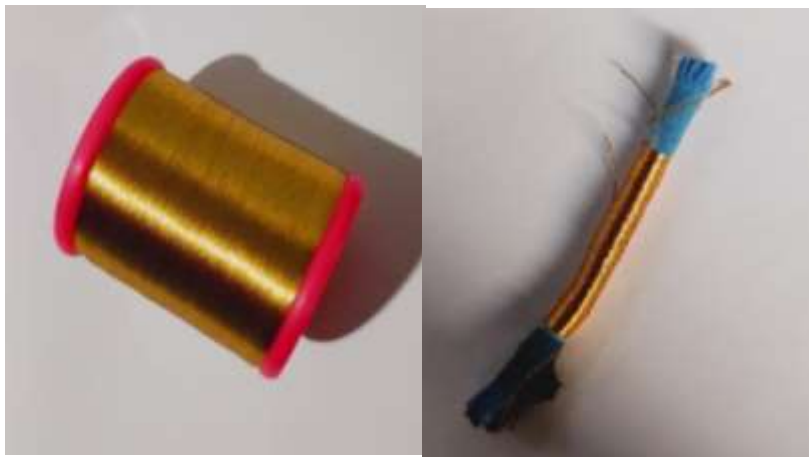


Figure 60 Gold Zari



Figure 61 yarn Holding needle

Figure 62 spindle

5.2.1 PARTS OF HANDLOOM MACHINE



Figure 63 Saree Beam



Figure 64 Yarn beam

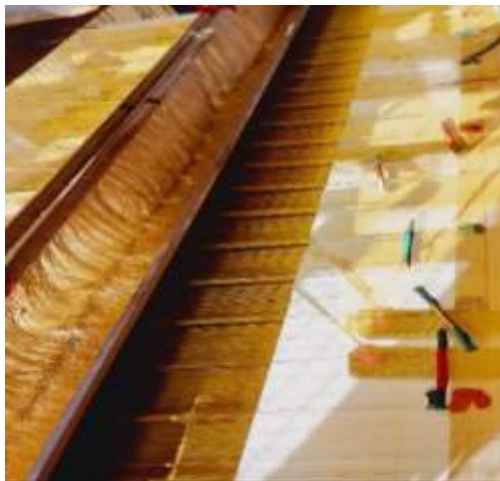


Figure 65 Warp yarn



Figure 66 Back rail



Figure 67 filling carrier



Figure 68 Treadles

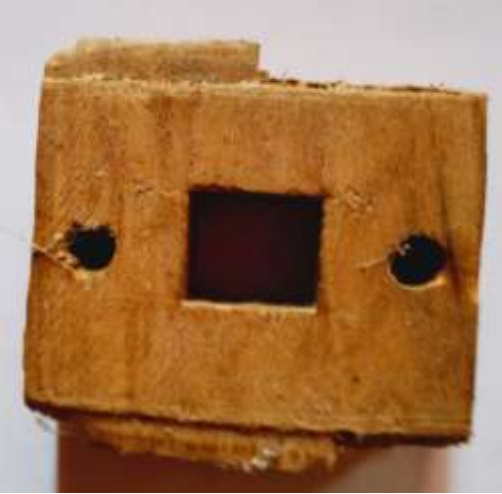


Figure 69 Filling carrier threading



Figure 70 Spindle holder



Figure 71 Harness



Figure 72 Shaft frame



Figure 73 Shaft frame lifter



Figure 74 Shaft frame lifters



Figure 75 Reed



Figure 76 Reed



Figure 77 spindle winding machine



Figure 78 Handle



Figure 79 Zari winding



Figure 80 Spinning wheel

5.3.1 WEAVING:

Weaving is a complex process that involves interlacing warp and weft yarns to create a fabric. Here is a step-by-step process of weaving on a basic weaving unit

PROCESSES:

The process of laying yarns on the stands and interlocking the warp and weft threads is a fundamental part of the handloom weaving process for Uppada sarees

- **Laying Yarns on Stands:** The weaving process begins by laying the warp yarns on the stands. The warp yarns are the longitudinal yarns that run along the length of the saree. These yarns are carefully arranged and stretched across the loom's frame, forming the foundation for the saree's fabric.
- **Attaching Broken Yarns:** Sometimes, yarns may break during the weaving process. The broken yarns are carefully reattached to the fabric, one by one, at the designated area known as the "broken yarns area." This ensures that the weaving continues without compromising the integrity of the saree's fabric.
- **Grouping Warp Yarns:** The warp yarns are grouped together, with each group containing 100 strands. These grouped strands are essential for the weaving process, as they determine the pattern and design that will be created on the saree.
- **Unitizing and Knotting:** After grouping the strands, the 45 groups of warp strands are united and knotted. This step is crucial for creating the desired design and maintaining the consistency of the pattern throughout the saree.
- **Using Sticks or Threads:** To interlock the warp and weft threads during weaving, sticks or threads are utilized. These sticks or threads help distinguish the strands for the up and down movement, enabling the weaving process to create the intricate patterns and designs characteristic of Uppada sarees.
- **Border Strands:** The border of the Uppada saree is a significant aspect of its design. It consists of more than 2800 strands, which provide a distinct and decorative element to the saree's overall appearance. The exact number of strands in the border may vary depending on the specific design and intricacy required.

The steps involved in this process based on the provided information:

The weaving process for Uppada sarees demands precision, skill, and attention to detail. Each step contributes to the saree's final look and quality, and the handloom weavers' expertise is instrumental in producing these exquisite and cherished pieces of art.



Figure 81 Stand, yarns are laid on this stand



Figure 82 Yarn preparation



Figure 83 yarn segregation



Figure 84 yarn knotting at edges



Figure 85 yarn winding

After the cross checking of the yarns, the yarns are winded around the sticks, will be sent to the design unit
Typically, they lay 6 to 8 sarees at a time (1 saree = 252 inches).

5.4.1 DESIGN UNIT:

Uppada saree manufacturing, the design unit plays a crucial role in creating the intricate and beautiful patterns on the sarees.

The process involved in the design unit based on the provided information:

- Length of Thread: A thread that is three meters long is used in the design unit. This thread will be the foundation for creating the intricate designs on the saree.
 - 288 Strands Up and Down: Within this three-meter-long thread, there are 288 strands that run both up and down. These strands are essential for forming the intricate patterns and designs in the Uppada saree.
 - Locking the Designs: The designs are locked into place by using the 288 strands of thread. These strands are carefully knotted around sticks, creating a framework for the patterns and designs.
1. Types of Locking: There are several types of locking techniques used in the design unit to create different patterns on the saree:
 - a. Single Butta: A "butta" refers to a small design motif, often used in repeating patterns. In the design unit, the 288 strands are knotted to create a single butta, which will be repeated across the saree.
 - b. Entire Body Design: For sarees with larger and more elaborate designs covering the entire body of the saree, the 288 strands are used to create the intricate patterns that extend throughout the fabric.
 - c. Border Design: The border of the Uppada saree is an important element of its design. The 288 strands are utilized to create the decorative patterns and motifs that embellish the saree's borders.

By using the design unit to lock the designs into place, Uppada sarees achieve their distinctive and captivating look. The skill and craftsmanship of the weavers in executing these intricate patterns make Uppada sarees highly valued and cherished among saree enthusiasts. The combination of traditional techniques and artistic creativity contributes to the timelessness and beauty of Uppada sarees.



Figure 86 Shaft frame



Figure 87 Design making



Figure 88 design knotting

The design is flipped to the strands using the sticks, and the other thread secures the knot. The threads that used for securing the knots are called as fisherman threads



Figure 89 fishier man silk

5.5. WEAVING PROCESSES:

Figure 93

To create a fabric, the intricate process of weaving requires weaving together warp and weft strands. Here is a step-by-step explanation for how to weave on a basic weaving unit:

1. set up the loom: Start by setting up the loom, which is the framework used for weaving. This involves assembling the loom, attaching the warp beam, and securing the warp threads to the loom.



Figure 90 Warp yarn attachment

Figure 91 Yarn attachment

Figure 92 Greece and powder

2. Prepare the warp yarn: The warp yarns are the longitudinal threads that run parallel to each other on the loom. Measure and wind the warp yarn onto the warp beam, ensuring even tension and spacing. Thread the warp yarn through the heddles, which are small wire or nylon loops that help control the warp threads during weaving.
3. Position the shuttle: The shuttle holds the weft yarn and is used to pass it through the warp threads. Place the shuttle in a convenient location near the loom for easy access during weaving.
4. Start the weaving process: Begin by positioning the shuttle at one edge of the warp threads. This is usually called the selvedge. Pass the shuttle through the warp threads, going over and under alternating threads.
5. Beat the weft: After passing the shuttle through the warp threads, use a tool called a beater or reed to push the weft yarn tightly against the previous row of weft. This helps create a tightly woven fabric.
6. Repeat the weaving process: Continue to pass the shuttle back and forth through the warp threads, creating rows of weft. Use the beater to beat the weft after each pass, ensuring a consistent and tightly woven fabric.
7. Handle pattern changes: If you want to create a pattern in your fabric, you can manipulate the warp threads using devices like harnesses or treadles. These devices allow you to raise and lower specific warp threads, creating different patterns or designs in the fabric.
8. Finish the fabric: Once you have woven the desired length of fabric, finish off the weaving. Cut the weft yarn, leaving a tail for securing the fabric. Remove the fabric from the loom and secure the ends to prevent unraveling.
9. Finishing touches: After removing the fabric from the loom, you can perform various finishing techniques such as washing, ironing, or hemming to give the fabric its final appearance.

It's important to note that the above steps provide a general overview of the weaving process. Different types of looms and weaving techniques may have additional steps or variations.

6. PROJECT REPORT

6.1 Overview of the Weaving Unit:

The weaving unit is a specialized section within a textile manufacturing or fashion design organization that focuses on the production of woven fabrics. It is a vital component of the textile industry, where skilled weavers and artisans work together to create a diverse range of fabrics using various weaving techniques.

Below is an overview of the weaving unit and its key characteristics:

- **Purpose and Function:**

The primary purpose of the weaving unit is to transform yarns, threads, or fibers into woven fabrics through the interlacing of warp and weft threads. The unit utilizes different types of looms, ranging from traditional handlooms to advanced mechanized looms like power looms and Jacquard looms. Its function is to produce fabrics that meet specific design requirements and quality standards.

Flexibility and Adaptability:

The weaving unit exhibits flexibility and adaptability to cater to various demands. It can produce fabrics in different fiber compositions, colors, weights, and weave structures, depending on market trends and customer preferences.

- **Innovation and Experimentation:**

Innovation is encouraged in the weaving unit to explore new weave structures, fiber blends, and finishes. Experimentation with unique patterns and textures allows the unit to offer exclusive fabrics, giving fashion designers a competitive edge.

- **Collaborative Environment:**

The weaving unit operates in a collaborative environment where weavers, designers, technicians, and quality control personnel work together seamlessly. Effective communication and teamwork enable the efficient production of fabrics that meet desired specifications.

- **Sustainability and Eco-Friendly Practices:**

Increasingly, weaving units are embracing sustainable practices by using eco-friendly fibers, dyes, and processing methods. Sustainable weaving contributes to environmentally responsible and socially conscious textile production.

- **Market Relevance:**

The weaving unit plays a vital role in meeting the demand for various textiles, including apparel, home furnishings, upholstery, and industrial fabrics. Its ability to adapt to changing market trends and customer preferences ensures its continued relevance in the industry.

7. Internship Experience

7.1 Weaving Techniques:

During my internship, I was introduced to various weaving techniques, such as plain weave, twill weave, satin weave, and dobby weaves. I also learned about jacquard weaving, which enables intricate and complex patterns to be woven into the fabric.

The weaving unit employs various weaving techniques to create different patterns, textures, and designs. Common

weaving techniques include plain weave, twill weave, satin weave, dobby weave, leno weave, and Jacquard weaving. Each technique contributes to the uniqueness and versatility of the fabrics produced.

Warp (lengthwise threads) and weft (crosswise threads) are two sets of threads that are interlaced during the weaving process to make cloth. Different weaving methods are used to create various patterns, textures, and motifs. I'll go through a few of the most popular weaving methods utilized in the fashion business below:

- **Plain Weave:**

The most basic and popular weaving method is plain weave. By crossing one warp thread and then the next, the weft threads produce a balanced and finely woven fabric using this technique. The finished cloth has a checkerboard-like pattern and is robust and long-lasting. Fabrics with a plain weave include taffeta, calico, and muslin.

- **Twill Weave:**

A diagonal pattern is produced on the fabric surface by twill weaving. It is accomplished by weaving a diagonal line by passing the weft thread over a specific number of warp threads and then under a different number of warp threads. Depending on the direction of the diagonal line, twill weaves can be either right-hand or left-hand twills. Twill materials are frequently used in denim, chinos, and tweed and are renowned for their strength and drape.

- **Satin Weave:**

Satin weave results in a glossy, silky cloth with a beautiful finish. Long weft thread floats over numerous warp threads, producing few interlacing points, are what give it its distinctive appearance. Satin fabrics offer a high gloss and a luxury feel as a result. Silk, polyester, and other fibers can be used to create satin weaves. Satin, charmeuse, and sateen are among examples.

- **Dobby Weave:**

In dobby weaving, the fabric is decorated with minute geometric motifs or textures. The dobby mechanism on the loom used for dobby weaving enables the selective raising and lowering of warp threads. This method makes it possible to create elaborate patterns and gives the fabric's surface character. Shirts, dresses, and household textiles frequently use dobby-woven fabric.

- **Jacquard Weave:**

Jacquard weaving is an advanced method that enables the incorporation of complicated and finely detailed patterns into the fabric. It makes use of a Jacquard loom, which has a mechanism that employs punch cards or a computer to regulate the movement of each individual warp thread. Jacquard fabrics are perfect for elaborate designs and high-end clothing because they may include intricate motifs, pictures, and textures.

- **Leno Weave:**

This method is used to make fabrics that are open and airy. The weft threads are held in place by twisting nearby warp threads around them. This produces a structure that resembles a mesh and makes it simple for air to travel through. Leno-woven materials are frequently utilized in breathable, light-weight textiles like scarves and mosquito nets.

- **Pile Weave**

Fabrics with a raised surface or pile are made using pile weave. This can be done using weaving methods like velvet weaving, in which extra warp threads are introduced to form loops on the fabric surface that are later cut, or weaving methods like terry cloth weaving, in which extra weft threads are added to create loops on the fabric surface. Fabrics like velvet, corduroy, and terry cloth frequently have pile weaves.

- **Double Cloth Weave:**

Double cloth weaving entails simultaneously weaving two distinct layers of fabric that are intertwined to make a single, reversible fabric. This method offers design flexibility by enabling contrasting colors and patterns on each side of the fabric. Reversible coats, blankets, and other items can be made from double textile fabrics. These weaving methods are the cornerstone of textile design and are essential to the fashion sector. Fashion designers may produce distinctive and appealing fabrics that realize their imaginative concepts by expertly fusing these techniques and experimenting with various fibers, colors, and patterns.

8. Craftsmanship and Skilled Labor:

The weaving unit is a hub of craftsmanship, where skilled weavers possess a deep understanding of weaving techniques, loom operation, and fabric properties. Their expertise allows them to translate designers' concepts into tangible fabrics, making them an essential part of the creative process.

- **Design Integration:**

The weaving unit collaborates closely with fashion designers or textile designers to integrate fabrics with specific designs. Designers work with weavers to create custom patterns, motifs, and textures, resulting in fabrics tailored to the designers' vision and collection theme.

- **Quality Control and Fabric Analysis:**

Quality control is a crucial aspect of the weaving unit. Fabrics are rigorously inspected for defects, strength, colorfastness, and other properties. Fabric analysis involves conducting tests to ensure that the woven fabrics meet industry standards and customer requirements.

Quality control and fabric analysis are essential aspects of the weaving process, ensuring that the woven fabrics meet the required standards of appearance, strength, and functionality. By implementing rigorous quality control measures and conducting fabric analysis, textile manufacturers and fashion designers can deliver products of superior quality. Let's explore the significance of quality control and fabric analysis in weaving:

- **Ensuring Consistency and Uniformity:**

Quality control in weaving involves monitoring and maintaining consistency in various aspects of fabric production. It ensures that the woven fabrics have uniform texture, color, and pattern throughout the length and width of the fabric. Consistency is critical to meeting customer expectations and achieving a high standard of quality.

- **Strength and Durability Testing:**

Quality control includes testing the strength and durability of woven fabrics. Tensile strength tests assess how much force the fabric can withstand before breaking, indicating its resistance to tearing or stretching. Abrasion resistance tests evaluate the fabric's ability to withstand wear and friction over time. These tests help determine the fabric's suitability for different applications, whether it's for clothing, upholstery, or industrial use.

- **Colorfastness and Dye Quality:**

Fabric analysis includes evaluating the colorfastness of dyes used in the weaving process. Colorfastness tests measure how well the fabric retains its color when exposed to light, washing, or other environmental factors. Ensuring colorfastness is crucial to maintaining the fabric's appearance and preventing color bleeding or fading during use.

- **Texture and Hand Feel:**

Fabric analysis also involves assessing the texture and hand feel of the woven fabric. The texture refers to the surface characteristics, such as smoothness, roughness, or softness, which can impact the fabric's comfort and aesthetics. Hand feel refers to how the fabric feels when touched and plays a vital role in determining its suitability for specific garments or applications.

- **Inspection for Defects:**

Quality control measures involve thorough inspection of the woven fabrics for defects, such as broken threads, snags, or irregular patterns. Any flaws or imperfections identified during inspection can be rectified before the fabric is released for further processing or use.

- **Performance Testing:**

In addition to strength and durability tests, performance testing may be conducted to assess specific functional properties of the fabric. This includes tests for water resistance, breathability, and thermal insulation, among others, depending on the intended application of the fabric.

- **Compliance with Industry Standards:**

Fabric analysis ensures that the woven fabrics comply with industry standards and regulations. Meeting these standards is essential for manufacturers and designers to provide high-quality products that are safe and suitable for their intended purposes.

- **Continuous Improvement:**

Quality control and fabric analysis are not one-time processes but ongoing efforts to improve product quality. Feedback from customers, designers, and production teams is invaluable in identifying areas for improvement and enhancing the overall quality of woven fabrics

9. Loom Operation:

I had the opportunity to operate both handlooms and power looms under the guidance of experienced weavers. Learning how to set up the loom, thread the warp, and control the weaving process was an enlightening experience.

Loom operation is a crucial aspect of the weaving process, as it involves setting up the loom, preparing the warp and weft threads, and controlling the weaving process to create the desired fabric. Below, we'll delve into the various steps involved in loom operation:

9.1 Loom Types:

There are different types of looms used in weaving, each with its specific characteristics and applications. Some common loom types include:

9.2 Handloom:

Handlooms are traditional looms operated manually. Weavers control the weaving process by hand, selecting the warp threads and passing the weft threads through them. Handlooms are versatile and suitable for creating small batches of fabrics with intricate designs.

A handloom is a traditional weaving device operated manually by skilled artisans. It is a fundamental tool in the production of handwoven fabrics and plays a significant role in preserving cultural heritage, supporting sustainable practices, and promoting artisanal craftsmanship. Here, we delve into the importance and characteristics of handlooms in textile production:

- Cultural Heritage:**
 Handlooms have a rich history deeply intertwined with the cultural heritage of various regions around the world. Different countries and communities have their unique weaving traditions, patterns, and techniques passed down through generations. Handloom weaving often reflects the cultural identity of a particular group, making it an integral part of their heritage.
- Craftsmanship and Artistry:**
 Weavers who operate handlooms are highly skilled artisans with intricate knowledge of weaving techniques and designs. They possess a level of expertise and creativity that allows them to produce fabrics of exceptional quality and artistry. Handloom weaving involves meticulous attention to detail and manual control, creating a sense of artistry and uniqueness in each woven piece.
- Sustainable and Eco-Friendly:**
 Handloom weaving is an environmentally sustainable method of textile production. Unlike mass-produced fabrics created using mechanized processes, handloom weaving consumes minimal energy and water. It also supports the use of natural fibers, which are biodegradable and eco-friendly. By promoting handloom textiles, fashion designers can contribute to sustainable and ethical practices in the fashion industry.
- Artisan Empowerment:**
 Supporting handloom weaving empowers local artisans and weavers, especially in rural areas. These artisans often belong to economically marginalized communities, and their craft provides a means of livelihood and economic independence. By incorporating handloom fabrics into their collections, designers can contribute to the preservation of these traditional livelihoods.
- Versatility in Design:**
 Handloom fabrics offer a wide range of design possibilities. Weavers can experiment with various weaving techniques, colors, and patterns to create textiles with unique textures and appearances. Handloom fabrics can range from lightweight and airy for warm climates to heavy and insulating for colder regions, providing designers with versatility in their design choices.
- Customization and Exclusivity:**
 Each handloom fabric is individually crafted, making it a truly exclusive and bespoke material. Fashion designers can collaborate with skilled weavers to develop custom designs, colors, and patterns tailored to their specific collections. This level of customization adds value and uniqueness to the garments, attracting discerning consumers seeking one-of-a-kind pieces.
- Promotion of Fair-Trade Practices:**
 Handloom weaving is often associated with fair trade practices, ensuring that weavers receive fair compensation for their work. By sourcing handloom fabrics from ethical suppliers, designers contribute to supporting fair wages and better working conditions for artisans.
- Aesthetic Appeal:**
 Handloom fabrics have a distinctive charm and aesthetic appeal, characterized by the imperfections and irregularities that result from the manual weaving process. These qualities add character and a sense of authenticity to the garments, resonating with consumers who appreciate artisanal craftsmanship.

9.3 Power Loom:

Power looms are mechanized looms that automate much of the weaving process. They are powered by electricity and can produce fabrics at a faster rate than handlooms. Power looms are often used for mass production of textiles.

A power loom is a mechanized weaving machine that revolutionized the textile industry by significantly increasing the efficiency and speed of fabric production. Unlike traditional handlooms, which require manual operation, power looms are driven by mechanical or electronic power, allowing for mass production of textiles. Below, we explore the key features and impact of power looms in the textile industry:

- **Mechanized Weaving:**
The primary characteristic of a power loom is its mechanized operation. The power loom automates various weaving processes, such as shedding, picking, and beating-up, reducing the need for manual intervention. This mechanization results in a higher rate of fabric production, making it well-suited for large-scale manufacturing.
- **Increased Efficiency:**
By replacing manual labor with mechanical power, power looms significantly enhance efficiency in textile production. They can produce fabrics at a much faster rate compared to handlooms, which is crucial for meeting the demand for textiles in a rapidly growing market.
- **Consistency and Uniformity:**
Power looms are designed to maintain consistency and uniformity in fabric production. The mechanical operation ensures that each woven fabric has a standardized texture, pattern, and appearance, which is essential for maintaining quality and meeting customer expectations.
- **Versatility and Adaptability:**
Power looms are versatile machines capable of weaving a wide range of fabrics, from lightweight and delicate materials to heavy and sturdy textiles. They can accommodate various fiber types, allowing for the production of fabrics suitable for different applications, including apparel, home furnishings, and industrial use.
- **Cost-Effective Production:**
The increased efficiency and productivity of power looms contribute to cost-effective fabric production. As they can produce fabrics in larger quantities with reduced labor requirements, power looms offer a more economically viable option for textile manufacturers.
- **Impact on the Textile Industry:**
The introduction of power looms during the Industrial Revolution marked a significant turning point in the textile industry. It led to the mechanization of fabric production, shifting it from cottage industry-based handloom weaving to large-scale textile mills. The mass production capabilities of power looms contributed to the growth of the textile industry and the availability of affordable textiles for consumers.
- **Combination with Modern Technology:**
In modern times, power looms have been further enhanced with digital technology. Computerized controls and automation systems have been integrated into power looms, allowing for precise pattern reproduction, reduced waste, and improved efficiency in fabric production.
- **Sustainable Considerations:**
While power looms offer efficiency and productivity benefits, they also raise environmental concerns

related to energy consumption. As the textile industry moves toward sustainability, there is a growing interest in adopting eco-friendly practices, including using energy-efficient power looms and sustainable fibers.

9.4 Jacquard Loom:

Jacquard looms are specialized looms equipped with a Jacquard mechanism, allowing for the creation of intricate and complex patterns. They are commonly used for weaving textiles with detailed designs, such as brocade and damask.

The Jacquard loom is a groundbreaking mechanical weaving device that has had a profound impact on the textile industry since its invention in the early 19th century. Named after its inventor, Joseph Marie Jacquard, this loom revolutionized the way intricate patterns and designs are woven into fabrics. Here,

we explore the significance, functioning, and influence of the Jacquard loom in weaving:

- **Advancement in Weaving Technology:**
Before the Jacquard loom, intricate patterns in fabrics were woven by hand using labor-intensive methods. The Jacquard loom's introduction marked a significant leap in weaving technology, enabling the automatic production of intricate designs. This innovation transformed the textile industry by increasing efficiency and allowing for the mass production of complex patterned fabrics.
- **The Jacquard Mechanism:**
At the heart of the Jacquard loom is the Jacquard mechanism, a series of punched cards or, in modern versions, a computerized control system. These cards are perforated with holes, and each card corresponds to a specific row or pick of the woven fabric. By reading the arrangement of holes, the loom determines which warp threads to lift and which to leave down, allowing for precise control over the weaving process.
- **Versatility in Design:**
One of the most remarkable features of the Jacquard loom is its versatility in design. The use of punched cards or digital controls means that the loom can weave highly complex patterns, images, and motifs into the fabric. This capability opens up a world of design possibilities, allowing fashion designers to create intricate textiles with detailed graphics, damask patterns, and even realistic images.
- **Intricate Fabric Creation:**
Jacquard looms can produce a wide range of fabrics, from delicate and lightweight materials like silk and chiffon to heavier and more substantial textiles like brocade and upholstery fabrics. The ability to create complex structures and patterns ensures that Jacquard-woven fabrics stand out in terms of their aesthetic appeal and craftsmanship.
- **High-Quality Fabrics:**
Jacquard-woven fabrics are known for their high quality and durability. The precise control over each warp thread allows for uniform tension and a tight weave, resulting in fabrics that are strong, long-lasting, and resistant to wear and tear. This makes Jacquard fabrics suitable for various applications, including fashion garments, home furnishings, and upholstery.
- **Luxury and Elegance:**
The intricate and detailed patterns produced by Jacquard looms give fabrics a sense of luxury and elegance. Jacquard-woven textiles are often associated with high-end fashion and interior design due to

their exquisite appearance and artistic flair.

- **Modern Jacquard Looms:**

While traditional Jacquard looms used punched cards, modern versions have evolved to incorporate computerized controls. Computerized Jacquard looms allow for even greater design complexity and flexibility. Designers can input patterns directly into the loom's software, eliminating the need for physical punched cards.

- **Influencing Fashion Design:**

The Jacquard loom has significantly influenced fashion design by offering designers the ability to create fabrics that blend art and functionality. Designers can incorporate elaborate Jacquard-woven textiles into their collections, showcasing their creativity and setting their designs apart in a highly competitive industry.

9.5 Setting up the Loom:

Before starting the weaving process, the loom needs to be properly set up. This involves the following steps:

- **Warping:**

The warp threads are wound onto the loom's warp beam. This process is known as warping, and it ensures that the warp threads are evenly spaced and under appropriate tension.

- **Threading:**

The warp threads are then threaded through the loom's heddles and reed. Heddles are wire or metal frames that control the raising and lowering of individual warp threads, while the reed helps space the warp threads evenly.

- **Tying Up:**

The warp threads are attached to the loom's treadles and shafts. The arrangement of these ties determines the weaving pattern that can be achieved.

- **Preparing the Weft:**

The weft threads are wound onto a shuttle or bobbins, depending on the type of loom used. The shuttle carries the weft thread across the warp threads during the weaving process. For shuttle-less looms, such as air-jet or rapier looms, the weft threads are propelled through the shed using air or a mechanical device.

- **Weaving Process:**

The weaving process involves passing the weft thread through the gap between the raised and lowered warp threads, known as the shed. This creates the interlacing pattern that forms the fabric. The sequence of raising and lowering the warp threads is controlled by the loom's treadles or a computerized Jacquard mechanism.

- **Beat-up and Selvages:**

After each weft insertion, the weft thread is beaten down into place using the reed. This step is called beat-up and ensures that the fabric's weft and warp threads are tightly interlocked. The edges of the fabric, known as selvages, are also carefully woven to prevent fraying.

- **Repeat the Process:**

The process of weaving is repeated, advancing the fabric on the loom as each row of weft threads is added. This continues until the desired fabric length is achieved.

- **Troubleshooting and Quality Control:**

Throughout the weaving process, weavers need to be vigilant for any issues that may arise. Quality control is essential to identify and rectify any defects or irregularities in the fabric. This can involve inspecting the fabric for broken threads, tension problems, or pattern inconsistencies.

10. Design Integration:

The studio encouraged creativity and innovation. I collaborated with the design team to integrate unique weaving patterns into fashion collections. Understanding the interplay between fabric structure, color, and design opened up new possibilities for creating distinctive garments.

Design integration is the process of incorporating weaving techniques into fashion design to create innovative and unique textiles that enhance the overall aesthetics and functionality of garments. By combining various weaving methods with creative design concepts, fashion designers can produce one-of-a-kind fabrics that set their collections apart. Below, we'll explore the significance of design integration and its impact on the fashion industry:

- **Exploring Weave Structures:**

Fashion designers collaborate with skilled weavers to experiment with different weave structures and patterns. Understanding the capabilities of each weaving technique allows designers to envision how the fabrics will drape, behave, and interact with the human body. By exploring the potential of plain weave, twill weave, satin weave, dobby weave, and jacquard weave, designers can create fabrics that suit their specific design requirements.

- **Creating Texture and Dimension:**

Integrating weaving techniques into fashion design allows designers to add texture and dimension to their garments. For instance, using twill weave can result in diagonal patterns, while dobby and jacquard weaves enable intricate geometric designs. By thoughtfully combining different weave structures, designers can produce fabrics with dynamic surface textures that enhance the visual appeal of the garments.

- **Unique Pattern Development:**

Designers often collaborate with skilled weavers to develop custom patterns and motifs for their collections. Jacquard weaving, in particular, offers an extensive range of design possibilities, allowing for the creation of complex and detailed patterns. By customizing fabric designs, designers can establish a distinct brand identity and offer exclusive pieces to their customers.

- **Exploring Color and Fiber Combinations:**

Integrating weaving techniques into fashion design enables designers to experiment with color and fiber combinations. Different fibers, such as cotton, silk, wool, or synthetic materials, respond differently to various weaving techniques, influencing the final appearance and feel of the fabric. By strategically choosing fibers and color palettes, designers can achieve specific visual effects and tactile qualities in their garments.

- **Sustainability and Eco-Friendly Practices:**

Designers can use weaving techniques to incorporate sustainable and eco-friendly practices into their collections. Choosing natural fibers and employing traditional weaving methods can promote sustainable fashion. Additionally, using eco-conscious dyeing processes and reducing fabric waste contribute to environmentally responsible design practices.

- **Incorporating Cultural Heritage:**
Weaving techniques often have deep cultural significance in different regions around the world. By integrating traditional weaving methods into their designs, fashion designers can pay homage to cultural heritage and promote a sense of authenticity in their collections. This approach also fosters cross-cultural appreciation and sustainable preservation of craft traditions.
- **Designing Functional Textiles:**
Beyond aesthetics, integrating weaving techniques allows designers to create functional textiles tailored to specific needs. Fabrics can be engineered to have specific properties, such as water repellency, breathability, or stretch, depending on the intended garment's purpose and use.
- **Bridging Fashion and Textile Design:**
Design integration bridges the gap between fashion design and textile design. Collaboration between fashion designers and skilled textile artists or weavers fosters a deeper understanding of materials and opens up new possibilities for both disciplines.

11. Quality Control and Fabric Analysis:

I learned about the importance of fabric testing and analysis to ensure that the woven fabrics meet the required quality standards. This involved conducting tests for strength, colorfastness, and texture to identify any flaws and rectify them promptly.

Quality control and fabric analysis are essential aspects of the weaving process, ensuring that the woven fabrics meet the required standards of appearance, strength, and functionality. By implementing rigorous quality control measures and conducting fabric analysis, textile manufacturers and fashion designers can deliver products of superior quality. Let's explore the significance of quality control and fabric analysis in weaving:

- **Ensuring Consistency and Uniformity:**
Quality control in weaving involves monitoring and maintaining consistency in various aspects of fabric production. It ensures that the woven fabrics have uniform texture, color, and pattern throughout the length and width of the fabric. Consistency is critical to meeting customer expectations and achieving a high standard of quality.
- **Strength and Durability Testing:**
Quality control includes testing the strength and durability of woven fabrics. Tensile strength tests assess how much force the fabric can withstand before breaking, indicating its resistance to tearing or stretching. Abrasion resistance tests evaluate the fabric's ability to withstand wear and friction over time. These tests help determine the fabric's suitability for different applications, whether it's for clothing, upholstery, or industrial use.
- **Colorfastness and Dye Quality:**
Fabric analysis includes evaluating the colorfastness of dyes used in the weaving process. Colorfastness tests measure how well the fabric retains its color when exposed to light, washing, or other environmental factors. Ensuring colorfastness is crucial to maintaining the fabric's appearance and preventing color bleeding or fading during use.
- **Texture and Hand Feel:**
Fabric analysis also involves assessing the texture and hand feel of the woven fabric. The texture refers to the surface characteristics, such as smoothness, roughness, or softness, which can impact the fabric's comfort and aesthetics. Hand feel refers to how the fabric feels when touched and plays a vital role in

determining its suitability for specific garments or applications.

- **Inspection for Defects:**
Quality control measures involve thorough inspection of the woven fabrics for defects, such as broken threads, snags, or irregular patterns. Any flaws or imperfections identified during inspection can be rectified before the fabric is released for further processing or use.
- **Performance Testing:**
In addition to strength and durability tests, performance testing may be conducted to assess specific functional properties of the fabric. This includes tests for water resistance, breathability, and thermal insulation, among others, depending on the intended application of the fabric.
- **Compliance with Industry Standards:**
Fabric analysis ensures that the woven fabrics comply with industry standards and regulations. Meeting these standards is essential for manufacturers and designers to provide high-quality products that are safe and suitable for their intended purposes.
- **Continuous Improvement:**
Quality control and fabric analysis are not one-time processes but ongoing efforts to improve product quality. Feedback from customers, designers, and production teams is invaluable in identifying areas for improvement and enhancing the overall quality of woven fabrics.

12. Professional Environment:

Being part of a professional weaving unit taught me the significance of teamwork and clear communication. Coordinating with designers, weavers, and quality control personnel enhanced my interpersonal skills and adaptability.

The Professional Environment in the Weaving Unit: Nurturing Craftsmanship and Collaboration

The professional environment in a weaving unit is a dynamic and collaborative setting that fosters craftsmanship, teamwork, and innovation. It encompasses various aspects, including organizational culture, workplace practices, communication, and the collective pursuit of excellence. Let's explore the key elements that define the professional environment in a weaving unit:

- **Collaborative and Supportive Culture:**
The weaving unit fosters a collaborative and supportive culture where individuals work together towards a common goal. Weavers collaborate with designers, technicians, and quality control personnel to bring creative visions to life. Open communication and a willingness to share ideas and expertise create a positive and inclusive work environment.
- **Commitment to Quality:**
A strong emphasis on quality is a hallmark of the professional environment in the weaving unit. Every member of the team is dedicated to producing fabrics that meet the highest standards of craftsmanship and aesthetics. Quality control measures are integrated into the production process to identify and rectify any defects or inconsistencies.
- **Teamwork and Communication:**
Effective teamwork and communication are essential for seamless operations in the weaving unit. Weavers coordinate with other team members to ensure the smooth flow of materials, troubleshoot

issues, and achieve production targets. Regular meetings and clear communication channels facilitate efficient collaboration.

- **Innovation and Experimentation:**

The professional environment encourages innovation and experimentation in weaving techniques and fabric designs. Weavers are given opportunities to explore new patterns, fiber combinations, and weave structures. This spirit of innovation allows the weaving unit to offer unique and diverse fabrics that cater to different design needs.

- **Workplace Safety and Well-being:**

Safety and well-being are prioritized in the professional environment. Adequate training, safety protocols, and ergonomic considerations are put in place to protect the health of the team. A supportive work environment that values the well-being of employees fosters motivation and productivity.

- **Meeting Deadlines and Efficiency:**

The weaving unit operates on a schedule to meet production deadlines and delivery commitments. Time management and efficient use of resources are emphasized to ensure the timely completion of orders without compromising on quality.

- **Professional Development and Growth:**

The professional environment encourages individual growth and career development. Weavers are supported in pursuing additional training, attending workshops, and learning new techniques to enhance their skills and expertise.

13. CONCLUSION

In conclusion, my internship at the weaving unit has been an enriching and transformative experience that has provided me with invaluable insights into the world of textile production. As a fashion design student, this opportunity has allowed me to witness firsthand the intricate craftsmanship, innovative techniques, and collaborative spirit that go into creating exceptional woven fabrics.

During my time at the weaving unit, I had the privilege of working closely with skilled weavers and artisans, witnessing their dedication to their craft and their ability to bring creative visions to life. I learned about various weaving techniques, from the simplicity of plain weave to the intricacy of pick loom weaving, each contributing to the unique qualities of the fabrics produced.

The design integration process at the weaving unit was a revelation, as I collaborated with the weavers to develop custom patterns and motifs that aligned perfectly with my fashion collection's theme. Their expertise and willingness to experiment allowed us to create textiles that were not only visually stunning but also functional and durable, meeting the highest standards of quality.

Moreover, the weaving unit's commitment to sustainability and eco-friendly practices resonated deeply with my passion for responsible fashion. Witnessing the use of natural fibers, eco-conscious dyeing processes, and efforts to reduce waste reinforced the importance of environmental stewardship in the fashion industry.

The exposure to the pick looms and other mechanized weaving devices opened my eyes to the efficiency and possibilities of modern textile production. While I deeply appreciate the artistry of traditional handloom weaving, I now see the role of artistes in meeting the demands of a fast-paced and ever-changing fashion market.

As I prepare to apply the knowledge and skills gained from my internship to my future career in fashion design, I am filled with gratitude for this invaluable opportunity. The experience at the weaving unit has not only expanded my technical expertise but also nurtured my passion for sustainable and innovative textile design.

In conclusion, my internship at the weaving unit has been a transformative experience that has deepened my understanding of weaving techniques, design integration, and sustainable textile production. It has equipped me with the skills and inspiration to embark on my career as a fashion designer with confidence and a renewed sense of purpose.

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