

USED CAR SHOWROOM

CAPSTONE PROJECT

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Design – Interior Design degree

By

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SCHOOL OF BUILDING AND ENVIRONMENT

SATHYABAMA

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

**Accredited with Grade “A++” by NAAC
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MAY – 2024

SATHYABAMA

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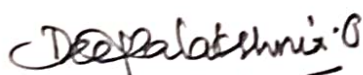
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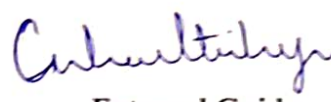
This is to certify that this Project Report is the bonafide work of P. Jeni Priscilla (40102004) who carried out the project entitled "USED CAR SHOWROOM" under our supervision from Jan 2024 to May 2024.


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DECLARATION

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1. ABSTRACT

A used car, a pre-owned vehicle, or a secondhand car is a vehicle that has previously had one or more retail owners. Used cars are sold through a variety of outlets, including franchise and independent car dealers, rental car companies, buy here pay here dealerships, leasing offices, auctions, and private party sales. A car showroom is a retail store that displays cars for sale and is part of a car dealership. Showrooms are also used to engage customers with the brand and may include lounges for customers to relax. The India Used Car Market size is estimated at USD 31.62 billion in 2024, and is expected to reach USD 63.87 billion by 2029, growing at a CAGR of 15.10% during the forecast period (2024-2029). The COVID-19 pandemic had a minimal impact on the industry.

A showroom is a large space used to display products for sale. Showrooms are different from dealerships, which also may include a finance department, service and repairs, and parts department. The primary function of a dealership is to sell new and used vehicles. A used car, a pre-owned vehicle, or a secondhand car is a vehicle that has previously had one or more retail owners. Used cars are sold through a variety of outlets, including franchise and independent car dealers, rental car companies, buy here pay here dealerships, leasing offices, auctions, and private party sales.

I mainly focus on the Display and lighting used inside a car showroom is important because it can help attract customers, highlight vehicles, and make the dealership feel safer. The success of car sales largely depends on the lighting of such objects. Visual displays in a car showroom can help attract potential customers, influence their buying decisions, and enhance the customer experience showcasing the cars as well as their features in an attractive and engaging way which influences the customer's interest.

Through this project, I aim to enhance used car buying and service experiences for visitors and clients and focus on the used cars which are sold by the car's owner that will be serviced and then displayed inside the showroom.

1 INTRODUCTION:

The purpose of the project is to make a separate showroom for used cars to bring trust among the people and to help them to choose the best car for themselves. Maruthi Suzuki, Hyundai, Ford, Toyota and Honda are the brands which are used in this used car showroom. Which is on Mettupalayam road since Coimbatore serves the second most important city in TamilNadu and serves as the main hub for car sales and service.

1.1 AIM:

- To create a business hub for the different car dealership.
- To create a platform for used or secondhand cars buying and service experience for the visitors and clients.
- To provide a hub where a customer can taste 3 varieties of used brand cars where they can choose the best for him.
- To provide a better service before car delivery.

1.2 OBJECTIVE:

- To make all the documentation procedure under one roof that can feel effortless.
- To put many options before the customer so that he can make his best decision.
- To give the best service for the car before handing it over to the client.
- The digital display helps the customer to interact.

1.3 SCOPE OF THE PROJECT:

- Customers can dispose of their old vehicle and save money on new purchases.
- Rise in middle class income and young population may result in strong growth.
- The global used car market is expected to grow at a compound annual growth rate (CAGR) of 5.5% from 2020 to 2027, reaching USD 2,150.6 billion by 2027.
- Dealers generally keep their margin in the range of 10% to 20 %. It depends on the several factors of cars such as car type, age, and demand.

1.4 LIMITATIONS:

- The interior should stick to the concept.
- Only used cars are allowed to display inside the showroom.
- After buying the car from the seller the car should be serviced and before delivery the car should be serviced.

1.5 METHODOLOGY:

- To refer to different case studies based on the selected topic, the case studies will help to get some ideas about designing a showroom.
- By understanding the standards, importance of each space, and the users as well as the workers and technicians will help to the next level of designing.
- Special study is based on 'Artificial lighting inside a showroom' will make the space more comfortable and helps to highlight the product
- The interior of the showroom should be based on the concept which we derived from relating both product and the special study.

1.6 ABOUT CAR SHOWROOM:

The primary function of a car dealership is to sell new and used vehicles to customers. However, their role extends beyond just selling cars. They also offer various services to assist customers in their car-buying journey, including financing, trade-ins, and after-sales services. New and used vehicles must be sold to clients via auto dealers.

They allow consumers to test drive various vehicles from different manufacturers before purchasing. Dealerships also have knowledgeable sales employees on hand to address inquiries from clients and give them details on various models and amenities.

Most consumers require financing to buy a car, and auto dealers provide various finance solutions to meet various demands. They collaborate with banks and other financial organizations to offer consumers the greatest financing choices. Car dealerships offer several benefits to customers, making them an essential part of the car-buying process. Car dealerships offer after-sales services, including maintenance and repair, parts and accessories, and warranties. These services ensure that customers' cars remain in good condition and are properly maintained.

The most prevalent kind of auto dealership is a franchised dealership. The manufacturers have given these dealerships permission to sell and service their automobiles. They feature many new and used cars and offer lease and financing alternatives. Franchised dealerships have skilled mechanics who can fix and maintain cars.

Independent auto lots sell new and secondhand vehicles that manufacturers do not approve. Companies provide lease and financing alternatives; some might have a service department for upkeep and repairs. Independent auto lots may concentrate on a certain brand or model of vehicle.

Dealerships that sell used cars are experts in doing so. They provide a variety of brands and models at various pricing points. If compared to franchised dealerships, these dealerships may offer fewer alternatives for financing and warranties on their cars.

Internet dealerships let buyers buy cars without going to a physical dealership because they run fully online. These stores provide delivery to the customer's location, a selection of new and used cars, and financing options. A network of regional partners may also be available for service and maintenance at some online dealerships.

High-end vehicles from luxury manufacturers like Mercedes-Benz, BMW, and Lexus are their areas of expertise. They have a wide selection of new and used cars and give excellent customer service.

These dealerships might additionally feature a high-end car-specific servicing division.

Car dealerships play a significant role in the sales process of automobiles. They offer a range of services to customers, including financing, trade-ins, and after-sales services. Car dealerships are convenient for customers as they provide all the necessary services in one location. They also have knowledgeable sales staff who can provide customers with information on different car models, features, and financing options.

However, car dealerships face intense competition, changing customer preferences, and increasing costs. Different types of car dealerships are available, each with unique characteristics. Franchised dealerships, independent dealerships, used car dealerships, luxury car dealerships, and online dealerships are the most common car dealerships. Each dealership has its advantages and disadvantages, and it is up to the customer to choose the dealership that best suits their needs and preferences

1.7 HISTORICAL SIGNIFICANCE:

The early automobile showrooms were simple spaces with a few cars displayed on the street or in a garage. However, with the growing popularity of cars in the 20th century, car showrooms became larger and more prominent. The first automobile showroom in the world was opened in Europe in of 1890s late specifically in Paris, by the 1920s, car dealerships had become a common sight in most major cities around the world. And from that time the USA became one of the pioneers in this industry through Ford, Chevrolet and others.

In the 1920s and 1940s, car showrooms became larger and more elaborate, with luxurious interiors, air conditioning (yes AC as you read), and even lounges for customers to relax in.

By the 1950s, car showrooms had become even more elaborate, with massive glass windows, elaborate lighting, and even rotating platforms to showcase the latest models. as the automobile industry grew, so did the automobile showroom. In the 1960s till 1980s, showrooms became larger and more specialized, with a concept and separated areas of 3S (Sales, Service, and Spare parts). Showrooms were also designed to be more customer-focused, with comfortable seating and displays of accessories and options.

Between the 1980s and 1990s late, a unique feature of car showrooms was the emergence of specialized dealerships. Many car manufacturers began to create dealerships that specialized in

specific types of cars, such as luxury cars, sports cars, to compete, car showrooms had to become more customer-centric, offering more personalized service and more extensive product knowledge.

Today and especially after COVID-19 with the advent of computer networks and the internet has changed the way car showrooms operated. Customers could now research cars online, compare prices and features, and even buy cars without ever setting foot in a showroom, from the comfort of their homes with the help of interactive displays, Virtual Reality experiences, and even robotic assistants. (Thanks to the enormous waves of disruptive technology which dramatically changed every way of thinking) Car brands are competing today to create an immersive customer experience, using technology and luxury to create a memorable and personalized experience for each customer.

1.8 ARTICLES:

Original publication: Conference Paper, Nowak, A., and J. Flotyński, A Virtual Car Showroom, in: Web3D '18: Proceedings of the 23rd International ACM Conference on 3D Web Technology Poznań, Poland — June 20 - 22, 2018, ACM New York, NY, USA, 2018, pp. 23:1–23:2, ISBN 978-1-4503-5800-2, DOI 10.1145/3208806.3208832, <https://dl.acm.org/citation.cfm?id=3208832>

A Virtual Car Showroom

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ABSTRACT

In this poster, we present a virtual car showroom. The use of virtual and augmented reality (VR/AR) becomes increasingly popular in various application domains, including prototyping, marketing and merchandising. In car industry, VR/AR systems enable rapid creation and evaluation of virtual prototypes by domain specialists as well as potential customers. In this work, we present a virtual car showroom implemented using the Unity game engine, an HMD and a gesture tracking system. The application enables immersive presentation and interaction with 3D cars in a virtual environment.

CCS CONCEPTS

• Human-centered computing → Virtual reality; Mixed / augmented reality.

KEYWORDS

3D, car showroom, prototyping, marketing, merchandising

ACM Reference Format:

Adrian Nowak and Jakub Flotyński. 2018. A Virtual Car Showroom. In *Web3D '18: The 23rd International Conference on Web3D Technology*, June 20–22, 2018, Poznań, Poland. ACM, New York, NY, USA, Article 4, 2 pages. <https://doi.org/10.1145/3208806.3208832>

1 INTRODUCTION

Virtual reality (VR) and augmented reality (AR) applications become increasingly popular in various application domains, such as education, training, tourism, medicine, cultural heritage, prototyping, marketing and merchandising. Wide use of VR/AR applications has been enabled by the availability and falling prices of various presentation and interaction systems, such as glasses, HMDs, haptic interfaces as well as motion tracking and capture systems.

In marketing, VR and AR enable efficient creation and evaluation of both concepts and implementation. Development and modification of virtual products is typically less time-consuming and permits faster feedback from potential users in comparison to development and modification of real products. VR/AR systems can also provide valuable information about customers' behavior and preferences in virtual shops and showrooms. Currently, real shops, showrooms and products are mostly used in such research [Barbara Borsiak 2017].

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In this poster, we present a virtual car showroom based on the Unity game engine, an Oculus Rift headset and a Leap Motion hand tracking device. The system permits virtual visit, which, on the one hand, may be attractive to potential customers of real car showrooms, on the other hand, it gives an opportunity to car producers and distributors to improve their products on the basis of fast feedback from customers. In the poster, we explain the system architecture and functionality, and we indicate possible future development.

2 SYSTEM ARCHITECTURE

The virtual car showroom has been implemented as a Unity-based application, which uses an Oculus Rift headset [ocu 2018] and a Leap Motion device [lea 2018]. The Unity web engine [Techn. 2018] is a widely-used tool for creating VR applications with different devices such as headsets and motion tracking systems. The Oculus Rift HMD enables immersive presentation of 3D content, while the Leap Motion hand tracking device enables interaction with 3D cars using hand gestures.

3 SYSTEM FUNCTIONALITY

The following commands are triggered by gestures recognized by the Leap Motion device to enable navigation and interaction with cars within the showroom.

- (1) *Select a car*, which is executed by indicating the car using the forefinger of the right hand (Fig. 1). In the 3D scene, a number of different cars are accessible.



Figure 1: Selecting a car in the virtual car showroom

- (2) *Open the main menu*, which is executed by showing the open left hand (Fig. 2). The menu enables change of the color of the car, watching the car from around, and getting in the car.
- (3) *Change the color of the car*, which is executed by selecting a color from the palette from the main menu using the forefinger of the right hand (Fig. 3). The selected color is applied to the body of the car.

Fig: 1.8.1

2 UNDERSTANDING THE CAR SHOWROOM

2.1 HISTORY OF CARS:

Car body designs have changed and become more sophisticated with each passing year. Gone are the days when retro cars were the buzz makers. With so much going on in the auto industry, it is essential to look back at how far we have come since Model T first rolled out. Go through this decade-by-decade breakdown of the evolution of car body designs. Over the decades, the auto industry has witnessed everything from elegant sedans to rogue roadsters. The sporty SUVs and sleek models have taken over the classic tear-drop car design.

2.1.1 Ancient cars:

French inventor Nicolas-Joseph Cugnot built the first steam-powered road vehicle in 1769, while French-born Swiss inventor François Isaac de Rivaz designed and constructed the first internal combustion-powered automobile in 1808. The modern car—a practical, marketable automobile for everyday use—was invented in 1886, when German inventor Carl Benz patented his Benz Patent-Motorwagen. Commercial cars became widely available during the 20th century. One of the first cars affordable by the masses was the 1908 Model T, an American car manufactured by the Ford Motor Company. Cars were rapidly adopted in the US, where they replaced horse-drawn carriages. In Europe and other parts of the world, demand for automobiles did not increase until after World War II. The car is considered an essential part of the developed economy.

2.1.2 Modern cars:

Cars have controls for driving, parking, passenger comfort, and a variety of lamps. Over the decades, additional features and controls have been added to vehicles, making them progressively more complex. These include rear-reversing cameras, air conditioning, navigation systems, and in-car entertainment. Most cars in use in the early 2020s are propelled by an internal combustion engine, fueled by the combustion of fossil fuels. Electric cars, which were invented early in the history of the car, became commercially available in the 2000s and are predicted to cost less to buy than petrol-driven cars before 2025. The transition from fossil fuel-powered cars to electric cars features prominently in most climate change mitigation scenarios, such as Project Drawdown's 100 actionable solutions for climate change.

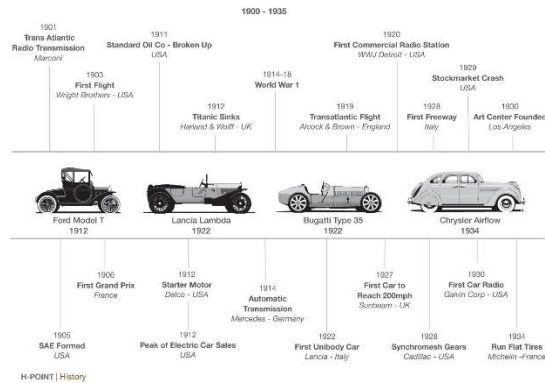


Fig: 2.1.a

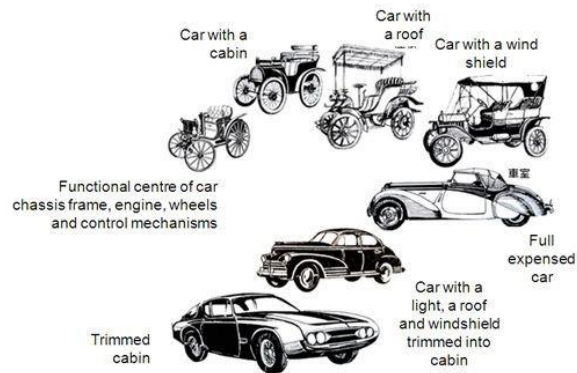


Fig: 2.1.b

2.2 TYPES OF CARS:

There are many different types of automobiles available in India, but many of them fall into one of seven categories: Hatchback, Sedan, SUV, MUV, Coupe, Convertible, and Pickup Truck. For every car type there are different types of brands also available on the market and some of the brands only focus on luxury and some of them focus on budget friendly cars and some of them are specially manufactured for sports purposes. From that i have selected the budget friendly cars in my car showroom they are,



2.2.1 Maruthi Suzuki:

Maruti Suzuki has 2,413 Arena sales outlets across 1,992 cities and 380 Nexa sales outlets across 228 cities in India. The company aims to increase its sales network to 4,000 outlets by 2020. It has 4044 service stations across 1,861 cities throughout India. Maruti's dealership network is larger than that of enough known companies combined. Service is a major revenue generator of the company. Most of the service stations are managed on a franchise basis, where Maruti Suzuki trains the local staff. Also, The Express Service stations exist, sending across their repairman to the vehicle if it is away from a normal service center.

2.2.2 Hyundai:

Built With Top Quality. Hyundai cars are known for their exceptional build quality, using high-quality materials and advanced manufacturing techniques. Hyundai Motor Company has served

as the trailblazer of Korea's automobile industry since rolling out its Pony, developed with its own exclusive technology. Hyundai Motor Company has risen as a globally recognized automobile manufacturer that exports its branded vehicles to over 200 countries. Reliability, safety, and a low cost-to-own are Hyundai's keys to quality and why more and more Hyundai buyers are sticking to the brand. Those commitments to Hyundai quality are paying off with great results from consumer data measuring the number of repairs, cost-to-own, and crash test results.

2.2.3 Toyota:

Toyota is the largest automobile manufacturer in the world, producing about 10 million vehicles per year. Toyota cars are reliable, durable, and built to last. From their sturdy engines to their reliable transmissions, Toyota cars offer a high level of quality that can be trusted. Toyota builds its vehicles with high quality and the latest materials to ensure safety and high performance. Toyota is world-famous as the manufacturer of high-quality, high-value cars, vans and trucks that set the standard for long-term resale value and durability. It was established in 1933 as a division of the Toyoda Automatic Loom Works, Ltd., and in 1937 it was incorporated as the Toyota Motor Co., Ltd. Toyota later established many related companies, including Toyoda Machine Works, Ltd. (1941), and Toyota Auto Body, Ltd. (1945). The most popular Toyota cars in India are Urban Cruiser Tisor (Rs. 7.74 Lakh), Innova Crystal (Rs. 19.99 Lakh) and Innova Hy cross (Rs. 19.77 Lakh).

2.2.4 Ford:

Ford is the second-largest U.S.-based automaker (behind General Motors) and the sixth largest in the world (behind Toyota, Volkswagen Group, Hyundai Motor Group, Stellates, and General Motors) based on 2022 vehicle production. At the end of 2010, Ford was the fifth-largest automaker in Europe. Most of us know Ford as the company that revolutionized the world of manufacturing with the creation of the assembly line. Or maybe you think of Ford as the first automaker to design a vehicle suitable for the everyday consumer. Overall, Ford is a popular brand that has been in the market for a long time, and its popularity can be attributed to various factors such as brand recognition, product quality, and customer loyalty. However, the popularity of Ford cars may vary depending on the market and consumer preferences.

3. LITERATURE STUDY

3.1 STUDY ON ARTIFICIAL LIGHTING IN A CAR SHOWROOM:

Proper lighting is essential to today's brick-and-mortar retailers, especially those that sell goods in showroom settings. Whether you're selling appliances, electronics, or jewelry, retail lighting design serves a similar purpose in successful showrooms.

First, there's the practical function of providing illumination for the space. Customers need to see the products being sold, and they also require a proper amount of light to navigate around the showroom floor.

Then there's the less apparent, but equally important purpose of creating mood and atmosphere within the showroom. The right lighting can help build brand loyalty by establishing a positive emotional connection with your customers. If shoppers feel good when they're in your showroom, they're going to have a better experience.

And when lighting leads to a more desirable experience, customers will browse the space for a longer period. Happier customers are more likely to make a purchase, become loyal, repeat shoppers, and tell friends and family about the great experience they had in your establishment.

Considering the impact lighting can have on business, sales, and customer satisfaction in retail showrooms, it makes sense to take a strategic approach when designing a lighting plan for a showroom space.

3.2 TYPE OF LIGHTINGS:

Effective showroom lighting doesn't come in a one-size-fits-all package. Instead, it is a strategic blend of color, contrast, control, and efficiency, which is often determined by the physical space and the types of products being sold in the showroom itself. Retail display lighting, which includes showroom lighting, helps create personality while reinforcing brand and identity. A showroom that sells automobiles will most likely have a slightly different lighting plan than a showroom specializing in jewelry or luxury goods. No matter what's being sold, there are a few basic factors to consider when starting to plan a new or upgraded LED showroom display.

In showroom environments, lighting not only sets the mood of the space, it also helps draw attention to highlighted merchandise. To properly achieve this, a showroom must use a combination of the four primary types of lighting – ambient, accent, task, and decorative lighting.

3.2.1 Ambient Lighting:

This type of illumination, also known as general lighting, is the main source of light within a showroom space. Diffused ambient lighting makes customers feel more comfortable

and provides a better sense of well-being. The right levels of ambient light should also contribute to customers shopping for longer within a particular space. To make your showroom feel more inviting, LED lights such as flat panels and commercial cans are ideal ambient light sources. These types of LED lights for showrooms are suitable for a wide range of spaces. This includes showrooms that sell cars, kitchen cabinets, high-end clothing and accessories, electronics, and more.

3.2.2 Accent Lighting:

Accent lighting puts emphasis on products by using a focused source of light. It adds depth and contrast, while highlighting shape, texture, finish, and color of merchandise. This type of lighting directs customers toward products or displays and is an essential part of the decision-making process that leads to a purchase.

The key to effective accent lighting is to make it brighter and more precise than the surrounding ambient light. Track fixtures with directional capabilities are very effective sources of accent light. They are easy to adjust, which allows you to precisely aim for the proper amount of light wherever it's needed most.

3.2.3 Task Lighting:

Task lighting illuminates an area designed for a specific function. It provides a focused source of bright, crisp light. Customer service counters, consultation areas, individual workspaces, and point-of-sale checkout areas are typical sections within a showroom that benefit from task lighting.

In showrooms specializing in high-end apparel, dressing rooms need appropriate task lighting so customers can accurately assess the fit and look of the items being tried on. Effective task lighting, no matter where it's being used, should eliminate shadows, prevent glare, and showcase colors accurately. Hanging pendant fixtures, or individual task lamps are both considered useful sources of this type of illumination.

3.2.4 Decorative Lighting:

This lighting is all about aesthetics and visual appeal. The decorative fixture designs you choose help convey your brand's identity and generate an emotional response from clients and customers in your showroom.

Decorative lighting includes sconces, chandeliers, pendants, table and floor lamps, and cylinders. When used effectively, decorative lighting in a showroom should complement the space's interior, while contributing to the overall lighting plan. It reflects brand image and reinforces the theme and style of the space to shoppers.

Depending on the merchandise being sold in your showroom, effective decorative lighting can range from sleek, minimalist and modern, to ornate, opulent, and nostalgic.

3.3 IMPACT OF LIGHTING IN SHOWROOM:

The selection of goods sold in a showroom is often more specialized than the wide range of merchandise found in a typical retail store. Showrooms generally sell higher-ticket items, too, including cars, jewelry, personal electronics, and furniture. Because of the profit potential at stake in this type of sales environment, showrooms can benefit significantly from the best LED retail lighting displays.

When you choose LED lights for your showroom, it's an investment that will eventually pay itself off. LEDs use less energy than fluorescent, halogen, and other traditional light sources, so energy bills will be much lower. LEDs also produce light that's known to be crisp, clear, and optimally bright, which is ideal for most showroom settings.

Plus, LED lighting comes in a range of color temperatures, from cool to warm, and has the ability to accurately show product colors that are true-to-life. Color accuracy is especially important for customer satisfaction and your showroom's overall credibility.

To create an effective LED showroom display that keeps customers comfortable and attentive, this requires a well-balanced mix of impactful lighting that's just the right temperature and renders the right colors.

3.4 CORRELATED COLOR TEMPERATURE:

Correlated color temperature, or CCT, falls into three general categories, all measured in Kelvin (K) – warm, neutral, and cool. Warm light with a faint yellow glow is called warm white. It ranges 3000K or below, and enhances reds and oranges, dulls blue tones, and adds a yellow tint to whites and greens. Ambient light in showrooms selling furniture, luxury clothing, and other “soft” textile-based goods can benefit from warm-ranging temperatures.

Neutral white light ranges from 3000K – 3500K. It enhances most colors equally and doesn't overemphasize yellow or blue tones. Neutral light enhances feelings of well-being and may extend the amount of time customers spend within a space, potentially leading to a purchase. Cool white light, typically ranging above 3500K or 4000K, has a bluish tint. It enhances blue tones, dulls reds, and gives a bluish tint to whites and greens. This temperature of light works best in showrooms featuring electronics and home appliances, but if it ranges too blue, there's a risk of the space appearing too cold or sterile to customers.

3.5 COLOR RENDERING INDEX:

If something appears to be the wrong color, this could drastically impact sales. This is especially true if your showroom sells jewelry, clothing, furniture, tile, and other goods where color is considered a critical factor.

Because it's important to show products in their truest colors, it is essential to choose lights that do not distort colors. Lights with a high Color Rendering Index, or CRI, are vital for this.

The closer a light source's CRI is to 100, which is the CRI of daylight, the better it will be at accurately showing true-to-life colors.

3.6 TCP SHOWROOM LIGHTING:

TCP Lighting, or Technical Consumer Products, is a US-based manufacturer and distributor of commercial lighting products. Retail display lighting has a lot to accomplish in a showroom. It must attract customers and make them comfortable in your space. It must reinforce your brand, highlight merchandise, and enhance colors. Lastly, it should give an impression about image and price range, while reducing your overall energy costs.

LED showroom display lighting can easily do all this. The lighting experts at TCP can help you reconfigure your showroom's current lighting to make it more effective and efficient.

3.7 TOYOTA CAR SHOWROOM:

Architects: Takenaka Corporation

Year: 2018

Takenaka Corporation

City: Ibaraki

Area: 1979 m²

Lighting Design: Izumi Construction:

Design Team: Masaomi Yonezu,

Country: Japan

A new car showroom and Used car sales space are set upon a fan-shaped site, which is connected to two roads. In addition to up to ten outdoor exhibition spaces for new cars (Roof top) and 50 used cars (On the ground) and test drive course were requested. About form determination in planning a new car showroom, a unique "big outdoor exhibition space" and "test drive course" were important factors to differ from other dealers. The frame was designed to be lightweight and rationalized by adopting a pure rigid frame structure with pillars aligned with the curvature of the test drive course. The roof surface was constituted by a straight-line member, and while suppressing the thickness. The rise was adjusted to save parts.

"A new geometry for a new era of Mobility". This building is located along the national highway in the northern area of Osaka. It is a car showroom that mainly sells and maintains cars. I wanted to redefine the concept of purchasing a car. And I also wanted to redefine the box showroom to an expression of the movement of cars. The road has been folded over to create a test-driving course on the site, A tunnel space with floors, walls and ceilings in a row. A new space that blends into the surrounding suburb. A large sweeping curve creates a test drive course, and continues to the top of the roof, and forms an outdoor exhibition space "PARKING HILL "Visitors who are not interested in cars can relax in a tunnel-shaped interior space wrapped with wood-based materials. The outdoor shop tent is used as a kids' corner. In this curved interior

space, the time to choose a car by family while looking at outdoor goods, turning the book, time to imagine and discover a new experience. As I go up the spiral staircase set in the center of the showroom, I reach the outdoor exhibition space "PARKING HILL". There, the green lawn spreads under the open sky, you can imagine the scenery of the holiday, new experience and future.

In planning a new car showroom, a unique "big outdoor exhibition space" and "test drive course" were important factors to differ from other dealers. The interior space was placed within a curved test drive course, the roof covering the interior space is continuous running to ground level and planned as an outdoor exhibition space on the roof. To satisfy the ceiling height of the showroom in relation to the roof and the test drive course, we needed to find a solution which satisfies the gradient of 1/6. This solution allows a car to travel across the roof, and it determines the size of the building and the thickness of the roof. A new form was found through a parametric study in which the cross section and the plan were linked. We switched the traditional X, Y, Z(axis) system to a new geometry of space which has not only the dimension of a person but is also in a new scale that includes the size and movement of a car. For example, the turning circle of the car and the road gradient. It is the birth of "a new geometry based on the relationship between people, buildings and their surroundings". Creating a new dynamic in the way we experience the car. First floor and second floor plan.

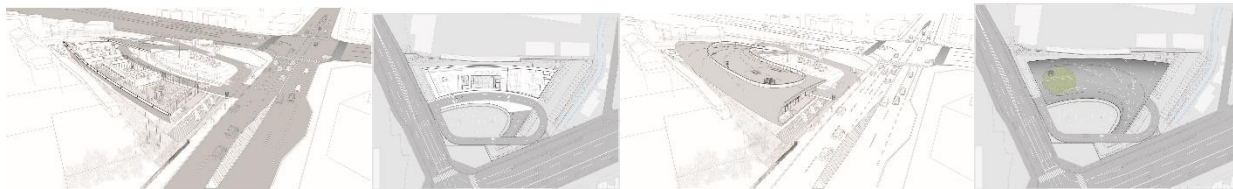


Fig: 3.7.a

We plan a showroom along the northern national route with a lounge and a car delivery room placed behind the showroom. which makes a center core plan. A repair shop was placed at the southern end of the premises. Here, we have created a new architectural space and shape that incorporates the movement, scale, and speed of the car for a new era of Mobility. In addition, by using traffic graphics and road materials, we have realized new architecture that is continuous with the city.

Materials like brick, lime mortar, lime or gypsum plaster and lime concrete have been the most favored building materials. When it comes to interior wood is the most prominent material used inside the showroom to make the space warmer compared to India, Japan climate is cooler for that they use more wood to make them feel warm inside the space. And to compliment that black and white colors are used.

Flooring - In the interior space wooden flooring was used it will enhance the look and add value

to the car showroom. It is low maintenance, strong and durable. Hardwood flooring is resistant to noise and vibrations.

Ceiling - The basic ceiling height of the showroom is 3,700 to 4,875 mm (about 2.87 ft) or more than the height of the road is 2800 or more.

Wall Treatments - Used wooden board in the wall to show the continuity from the flooring to the ceiling.



Fig: 3.7.b

Types of light -Track light and spotlight are used in the interior space. Lighting lines which are placed in a streamline shape can be dimmed and expanded and can respond flexibly to the change of cars and exhibits. In addition, the curved wall plays the role of a reflecting plate and produces the effect of reducing light unevenness.

Types of display - Digital display, it will talk about the car and its brands. signages it will help to find the direction and pathways. The name board highlights the brand of the car. Magazine and books helps to know about the cars.

Color palette – Warm brown, black for frame works and white for walls are used.

Air conditioning - Air conditioning is blown out in the horizontal direction along the ceiling surface from the air outlet that is stored through the ducts that are hidden in the false ceiling.



Fig: 3.7.c

Types of display - Digital display, it will talk about the car and its brands. signages it will help to find the direction and pathways. The name board highlights the brand of the car. Magazine and books helps to know about the cars.

This showroom is combined with the exhibition center that make the people visit the showroom frequently not only people the as well as the dealers also and it has a separate roadway for test driving that make the people more excitement.

3.8 GREAT NORTH HEADQUARTERS:

Architects: Warren and Mahoney

Year: 2018

Manufacturers: GIB, Nawkaw, Targetti New Zealand

Area: 2159 m²

Photographs: Simon Devitt

Location: Auckland, Germany.

Premier New Zealand car dealership The Gilstrap Group needed their new 119 Great North Road, Auckland Headquarters to balance beauty and function – to balance their position at the “forefront of the end-to-end car sales experience” while showcasing their investment in “enhanced engineering and innovation through better design”. Their proposed mixed-use space needed to hero Bentley, Lamborghini and Aston Martin's 'star-cars' in a full-service corporate, warehouse, servicing and showroom build not yet seen in the New Zealand automotive industry. Nine levels are needed to connect in one luxurious, customer-focused and highly functional build.

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difficult and unique challenges. First, is the cohabitation of three strong brands with potentially competing products within a single space. Second, is the desire to challenge the car dealership typology and its corresponding workplace culture to suit the product. Third, is the need to convince global brands to display their opulent vehicles in a way that is suited to New Zealand audiences.

The architects put forward a minimalist aesthetic that heroes car brands first, the building second. Cars are displayed for everyone – not just customers, but also to passers-by. This level of interaction is taken a step further with the inclusion of a public café inside the main entrance, making the building and the entertainment of the cars open to all. A highly curated mechanics workshop inside a glass-clad operating theatre creates a new platform on which to celebrate the engineering of the vehicles and the people tasked with maintaining them. Bringing executive teams down into lower level meeting spaces and pushing the envelope of the building close to the street were uncommon and successful moves in delivering a unique space. Collaboration with Targetti New Zealand led to the development of a multi-task light, a bespoke, centralized system controlling power, data, sprinklers and lighting in one linear fitting inspired by under-car-hood engineering. The 119 Great North Road building is the first building of its type to achieve a 5-Star Green Star Design rating. The project team has worked closely with the New Zealand Green Building Council to develop a custom tool tailored to the mix of uses within the project. Michael Gilstrap, Group Joint Managing Director, says the completed design was way beyond what the company had ever anticipated. “We had high expectations, but we were blown away by it. It’s a great place for customers. (The architects) have produced a design which perfectly showcases some of the world’s most beautiful cars. At the same time, it is the most technologically impressive and environmentally friendly building of its type in the country.”

The design of this retail space responds with flair to difficult and unique challenges First, is the cohabitation of three strong brands with potentially competing products within a single space. Second, is the desire to challenge the car dealership typology and its corresponding workplace culture to suit the product. Third, is the need to convince global brands to display their opulent vehicles in a way that is suited to New Zealand audiences.

A double-Storey in-situ concrete truss is at the core of the structure, developed to ensure a completely free glazed street frontage. Resisting both gravity and lateral loading, the truss visually connects the mixed-use building’s nine floors. Braced at showroom levels, a line of V-columns back from the main façade offers large, clear floor plates, while showroom levels protrude to create a glazed enclosure for each of the three brands. The effect is like a ‘jeweler box’, presenting unique cars in a way that is befitting their status. Due to the low height clearance of the cars and the practical length of the site, curved driving ramps connect each floor in a sine wave curve, allowing clients to drive in with the old, drive out with the new.

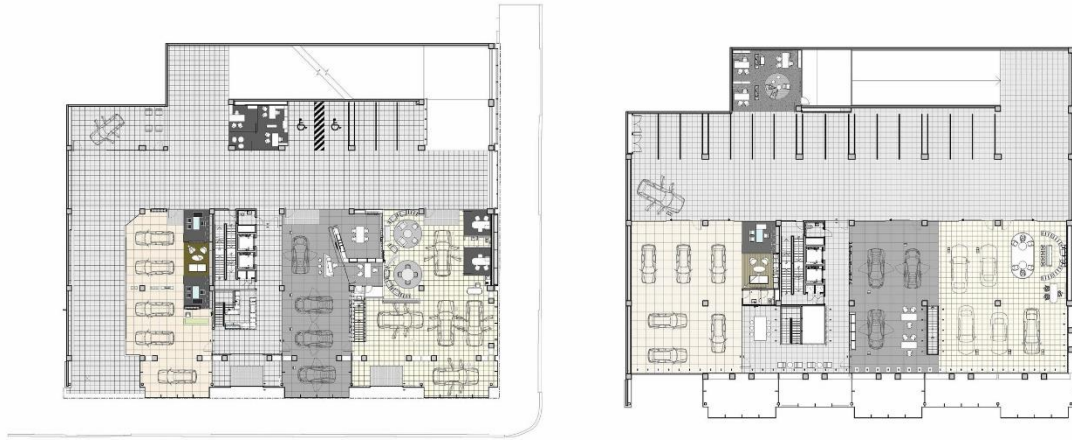


Fig: 3.8.a

Flooring - Marble flooring is used in most of the interior space. It is durable, and it is a crystalline structure that makes it vulnerable to stress and impact that can cause cracking. mate finished grey tile have better friction than glossy.

Ceiling - The basic ceiling height of the showroom is 3, 700 to 4, 875 mm or more than the height of the road 2800mm or more.

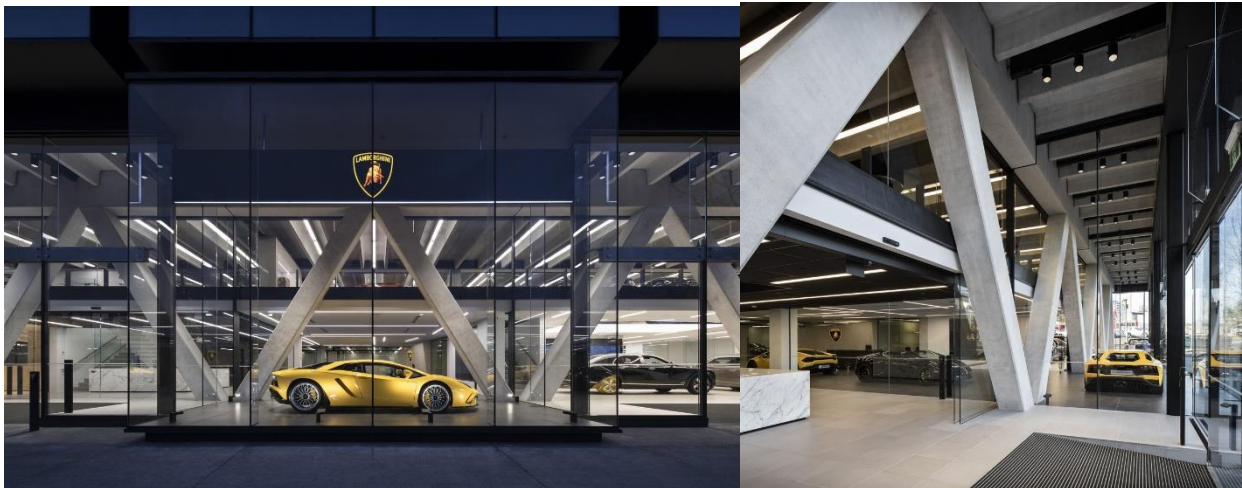


Fig: 3.8.b

Partitions - Used glass partitions that connect every space together even the service area also visible to the customers. A wooden partition with black laminate finished is used between the conference area and the MD's room.



Fig: 3.8.c

Types of lights – LED strip lights are used in the parking area to highlight the runway, chandelier and Track light are used to highlight and emphasis the car. Collaboration with Targetti New Zealand led to the development of a multi-task light, a bespoke, centralized system controlling power, data, sprinklers and lighting in one linear fitting inspired by under-car-hood engineering.

3.9 BMW CAR SHOWROOM – CHINA.

Architects: Cross boundaries

Area: 4800 m²

Year: 2015

Design Team: Irene Solà, Sidonie

Client: Chongqing Baocheng

Country: China

The new BMW store in Chongqing's New North Zone is the 5th BMW dealership design project completed by Cross boundaries. Of the dealership's 20,000 sqm, Cross boundaries designed the public area of 4,800 sqm: sales and customer relations, cars and lifestyle showcase, lounge, office, café, cinema and children area. Following BMW's visual identity for its dealership stores, the design creates clear distinction between corporate showcase and customer service, each with a specific material and color palette. Although only responsible for the space's interior design, Cross boundaries' analysis provoked changes to the architecture and relocated two main staircases.

Cross boundaries extract a trail pattern from the speed of cars and apply it throughout the building. Behind the reception is a feature wall resembling car grills, with custom-made twisted metal slats luring visitors to the brand space through its dynamic openings. The trail lines are aligned with the heights of different functions. They flow from space to space to serve the

the required needs – becoming a countertop, a podium or a shelf - creating smooth and coherent transitions along visitors' movement in the building. The pattern spreads subtly to the wooden shelves with white panels and openings.

While the openings give a strong visual connection between spaces, the shelves create a backdrop for each space, where functions are clearly defined, without sacrificing openness. Display areas are compressed, which hold passerby's gazes on products showcase and attract people to hover around. This is done by raising the floor and lowering a back-lit ceiling. Following BMW's visual identity for its dealership stores, the design creates a clear distinction between corporate showcase and customer service, each with a specific material and color palette. Polished metal and glossy surfaces on the first floor boast BMW's industry leadership and corporate image. On the two mezzanine floors above are areas reserved for the brand's car owners and VIP. Contrary to first floor's strong brand identity, the mezzanines use a warmer material as wood for a secluded, high value atmosphere that sets people at ease.

Although only responsible for the space's interior design, Cross boundaries' analysis provoked changes to the architecture and relocated two main staircases, allowing a completely open void within the space. This gesture intensifies visitors' first impression of the space, thereby allowing them to have a complete experience of the BMW store.

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Flooring - Marble flooring is used in most of the interior space. It is durable and it is a crystalline structure that makes it vulnerable to stress and impact that can cause cracking. Wooden flooring gives a warm feel.

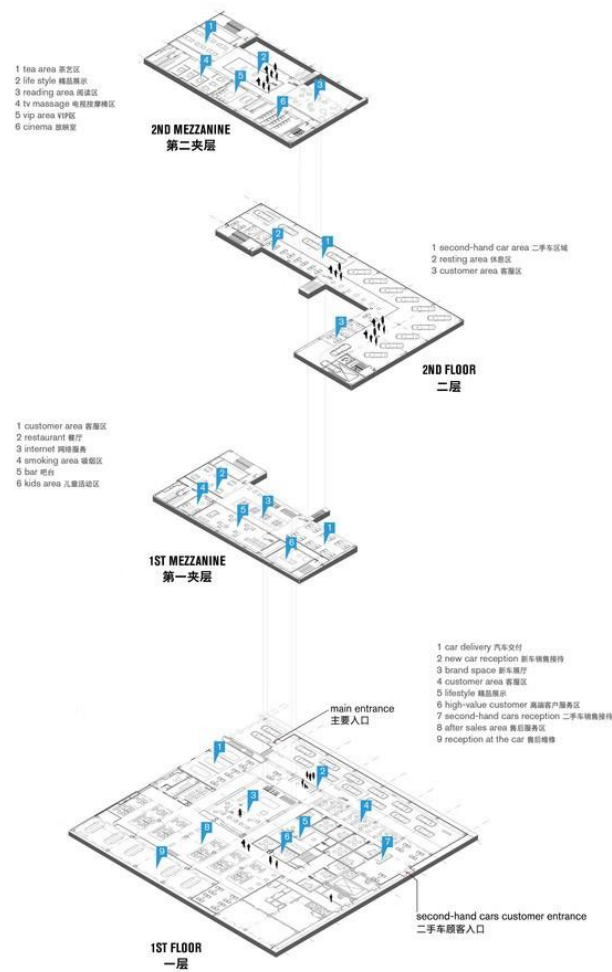


Fig: 3.9.a

Ceiling - Used gypsum board and aluminum for false ceiling in the interior space.

Wall treatments - Behind the reception is a feature wall resembling car grills, with custom-made twisted metal slats luring visitors to the brand space through its dynamic openings. The trail lines are aligned with the heights of different functions. The pattern spreads subtly to the wooden shelves with white panels and openings. Glass partitions are used in the employee working spaces.



Fig: 3.9.b

Types of Lighting - In this design spotlights are mostly used to brighten the space and track lights are used to highlight the display cars. chandeliers are used in the discussion areas and in other spaces.

Types of displays -The showroom display vehicle is the vehicle that the dealership considers the best looking, best equipped, best representative of that model. Create the illusion of a larger interior space without compromising on display space with our Mirror Video Walls. With high brightness LED options for bright environments or long-distance applications as well as customizable video wall formats.

Pattern That Flows Through Space and Functions - Cross boundaries extracts a trail pattern from the speed of cars and applies it throughout the building.

4 LIVE CASE STUDY

4.1 NEXA CAR SHOWROOM:

Architects: Akashparlikar

Year: 2015

Client: Dev Singania

Area: 4800 m²

Design Team: Akashparlikar

City: Kerala Country: India

NEXA is your one-stop destination for Maruti Suzuki premium & luxury Sedan and Hatchback cars in India. Nexa is a premium retail chain of Maruti Suzuki that offers a limited selection of upscale vehicles. Nexa showrooms provide a luxurious ambiance, personalized attention, and a premium buying experience. Maruti Suzuki's premium sales channel. Nexa's car range includes everything from a premium hatchback to a premium sedan and from a compact SUV to a smart cross-over. Some of the models available at Nexa include Baleno, Ciaz, S-Cross, Ignis, XL6. Nexa showrooms provide a luxurious ambiance, personalized attention, and a premium buying experience.

Nexa is a premium car dealership of Maruti Suzuki. It has a network of over 370 showrooms across more than 200 cities in India. Nexa showrooms are monochrome black-and-white, with lighting that spotlights the car.

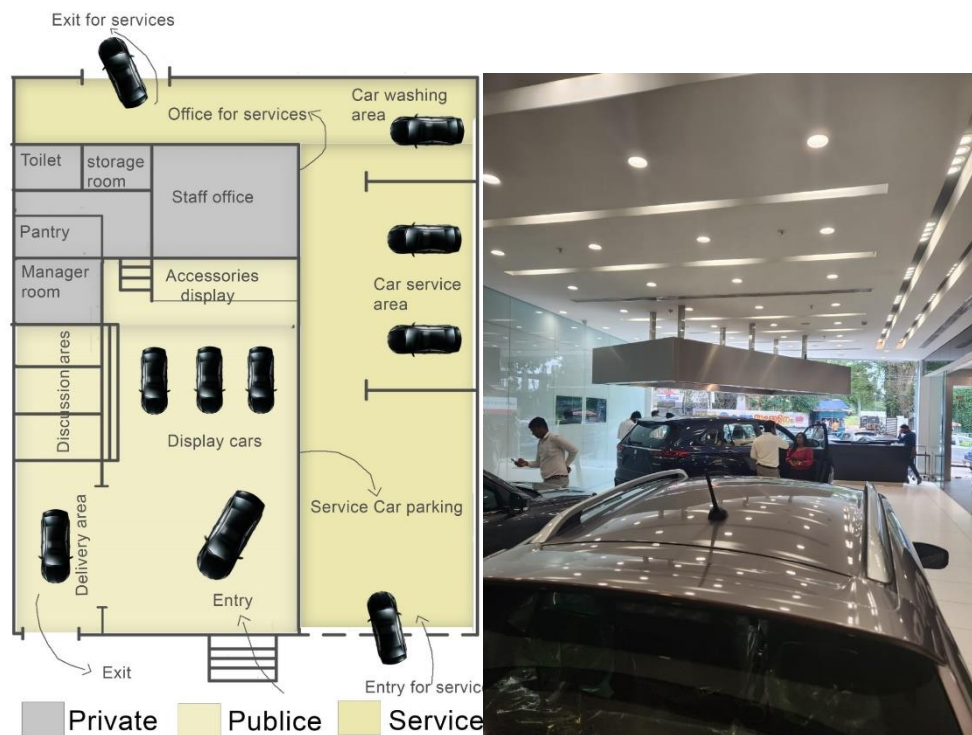


Fig: 4.1.a

Flooring: Jack-up flooring used. Ceramic white tile is used and a aluminum beading is done to differentiate the other spaces like discussion area, accessories area wooden flooring is done.

Ceiling: Used gypsum board for false ceiling in the interior space. Advantages of gypsum board include low cost, ease of installation and finishing, fire resistance sound control, and availability. PVC light printed Stretch ceiling.

Lighting (Thrust area) : In this design spotlights are mostly used to brighten the space and track lights are used to highlighted the display cars. In the delivery area used and a suspended light: LED light with aluminum finish.

partitions: Aluminum framed structure partition with wooden boarded which act as a shelf for keeping magazines and newspapers that also act as a display unit. This partition is hollow and connected with other spaces.

wall treatment: White and black glossy laminates are used, and mirror laminates are used in the delivery area that makes the small place longer.

Types of displays: Standalone display this display will tell details about the car which is stand near to this displays. Digital display this will shows the new models of the car and their function's. Name board display this shows the car's brand and the showroom name. Accessories displayed are placed in a cupboard and that cupboard is full of accessories of car's cupboard acts as a display unit.

Air conditioning: Air conditioning is blown out in the horizontal direction along the ceiling surface from the air outlet that is stored through thrusts that are hidden in the false ceiling.



Fig: 4.1.b

4.2 MARUTI SUZUKI:

Year: 2017
City: Chennai

Client: Suzuki corporation
Country: India

The Company is engaged in the business of manufacturing and sale of passenger vehicles in India. Maruti Suzuki Arena is a chain of car dealerships owned and operated by Maruti Suzuki India Limited. The Arena showrooms sell a wide range of cars, including hatchbacks, sedans, SUVs, and MPVs. Maruti Suzuki is known for manufacturing cars with robust build quality and low maintenance requirements. Maruti Suzuki Arena showrooms have modern interiors and interactive displays. Customers can register for seamless processing of their transactions through the Navigation Portal. They can also explore the entire product portfolio through interactive Product Vision touch screens at the showroom.

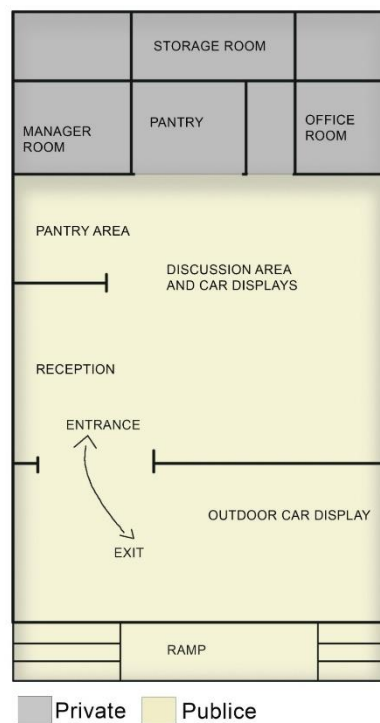


Fig: 4.2.a

wall treatments are very simple and that make the space more elegant. That highlights the logo of this car showroom. The types of light and mainly the suspended light which is squared frame that is different from all the other lights.

Flooring : Jack -up flooring used Ceramic white tile used and black ceramic mate finish tile is used for differentiate the space delivery area and the other private spaces. Green carpets and grass carpets are used to create a outdoor feel.

Ceiling: Used gypsum board it is easy to instal and sound eliminating and wooden false ceiling in the outdoor and the indoor.

wall treatment: White gypsum board and polycarbonate sheets are placed in the reception back wall and the car logo were highlighted. Ceramic glossy tiles were placed in the pantry space wall.

Lighting (Thrust area) : In this design spotlights are mostly used to brighten the space and for also highling the cars. In the main car display area an aluminum square framed structure suspended from the true ceiling which has a spotlight in the corners of the suspended frame. Streched fabric suspended light is used above the newly launched cars.

Digital display from the ceiling. jackets are hung in a hanger that acts as a display. island display car accessories are placed in it. Standalone display which has all the info about the car which is next to it. Color pallet for cars that is hung in the wall pin board display. The display shelf has all the accessories.

Air conditioning: Air conditioning is blown out in the horizontal direction along the ceiling surface from the air outlet that is stored through the ducts that are hidden in the false ceiling.



Fig: 4.2.b

4.3 AUDI CAR SHOWROOM:

Year: 2015

City: chennai

Location :No 535, Anna Salai, Fanepet, Nandanam, Chennai, Tamil Nadu

Client: Audi

Country: India

This German luxury brand is known for technology and style as much as its performance, well-crafted interiors, and its trademark Quattro all-wheel-drive system. Nearly every model is a solid performer with a high-grade interior. Ride and handling are accomplished, and the cabins are quiet. Audi is a German luxury brand known for its technology, style, performance, and interiors. The brand's Quattro all-wheel-drive system is also a trademark. Audi offers 16 car models in India, including 8 SUVs, 6 sedans, and 2 coupes. There are 71 Audi dealerships in India as of October 30, 2023.

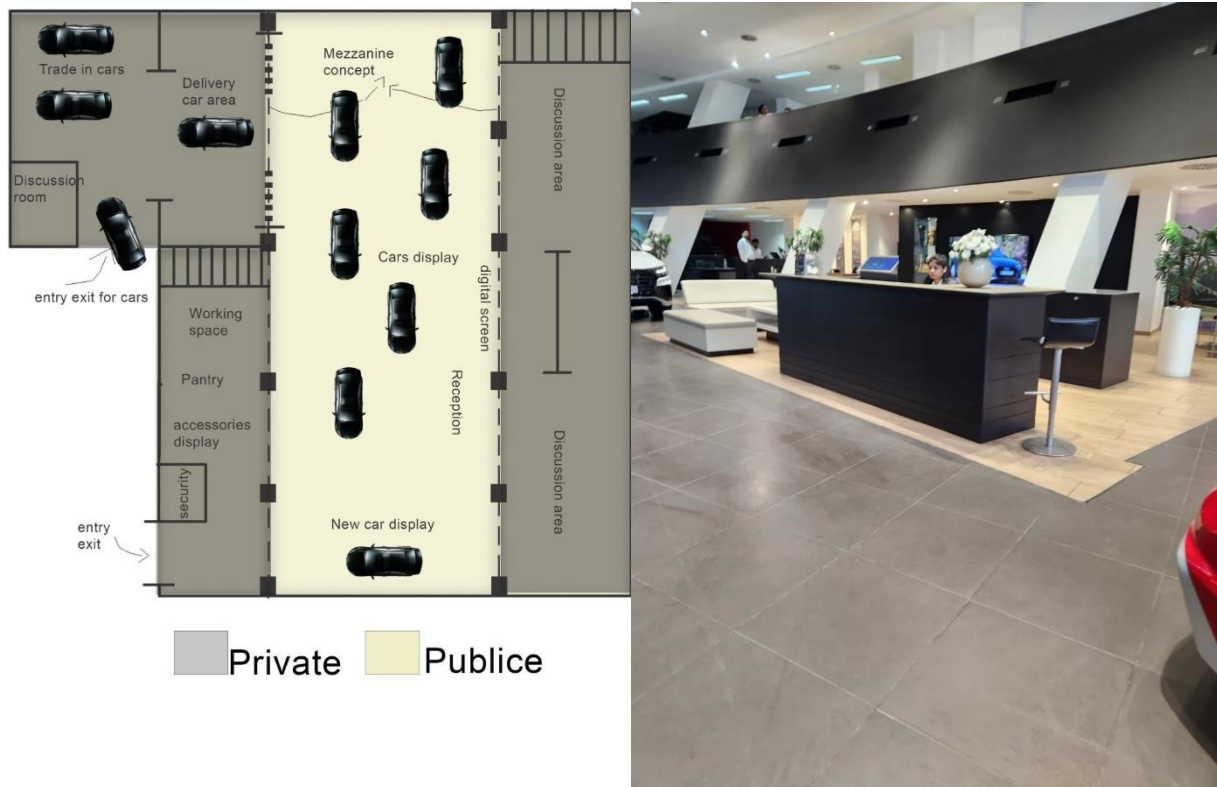


Fig: 4.3.a

When we entered this showroom, the newly launched car was placed for display below that there is a Plain white glossy ceramic tile flooring. This is the main car display area and every car near there is a stand-alone display which tells the details. This is the reception of this showroom, a black laminated wooden reception table. wooden flooring separates the spaces and a white cushion sofa used for waiting area there are an LCD advertising screen to engage them.

The concept of keeping all the public spaces to the first floor that does not into the private space in the showroom. Different types of displays are used, and it will attract and helps the customers to select the car based on their taste.

Flooring : Used mate finished ceramic tilesinside the main car display area and woodenflooring are used under the mezzanine spaces and concrete flooring in trade cars area.

Ceiling : Used gypsum board for false ceiling in the interior space. It is easy toinstal and sound eliminator.

Lighting : In this design spot lights are mostly used to brighten the space and Pendent light are

used in the pantry area and LED lights are used in the work space. Floor light is used for highlight the new cars and fabric stretched ceiling light are used in car delivery area.

LCD advertising screen That shows the different types of cars and them function. Self which displays the achievement the car or the showroom. Stand alone display which stands near the car and it has all details about the car. Nameboard display that has the name of the specific car's brand. touchable tab which makes the customers involve in the process of buying. Transparency LCD showcase Transparent LCD's combine physical and digital displays to create an eye-catching feature where all the information is showcased in one place.

Air conditioning: Air conditioning is blown out in the horizontal direction along the ceiling surface from the air outlet that is stored through the ducts that is hidden in the false ceiling.



Fig: 4.3.b

5 SITE STUDY AND ANALYSIS

5.1 SITE CONTEXT:

Coimbatore, also known as Kovai, is a major city in the Indian state of Tamil Nadu. It's the second largest city in the state, after Chennai, and the 16th largest urban agglomeration in India. Coimbatore is also famous for foundry and automobile industries, manufacturing of textile industry equipment's, spares, motor pump sets, wet grinders and varied engineering goods and services.

The site, which is located in coimbatore mettupalayam road since coimbatore serves as the main hub for car sales and service. NH47 knows as metupalayam road is a busy artery road which serves best place for car showroom. The site is near the highway road so that it is easy for test driving the cars.

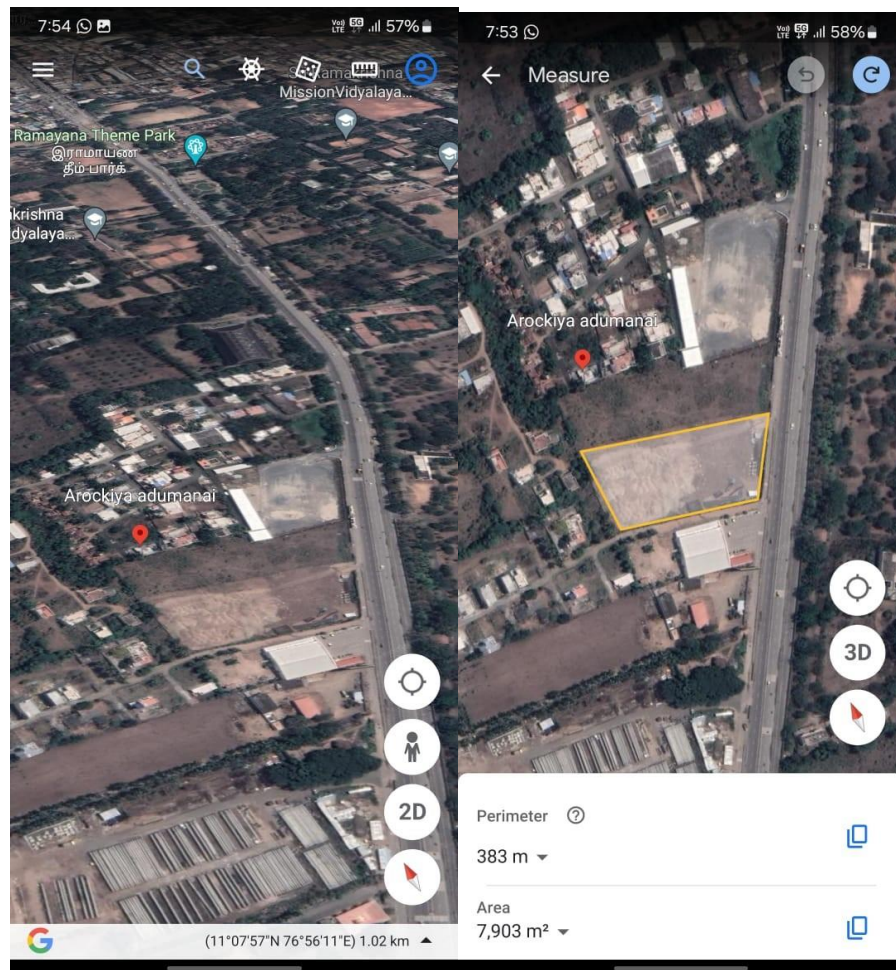


Fig: 5.1.a

5.2 SITE ANALYSIS:

Coimbatore has a tropical wet and dry climate. It experiences hot and humid summers from March to June with temperatures ranging from 25 °C to 38 °C. The monsoon season starts from July and lasts till October.

Located in Tamil Nadu, Coimbatore experiences a tropical climate with hot and humid weather throughout the year. The best time to visit is from October to March when the temperature ranges from 20-30°C.

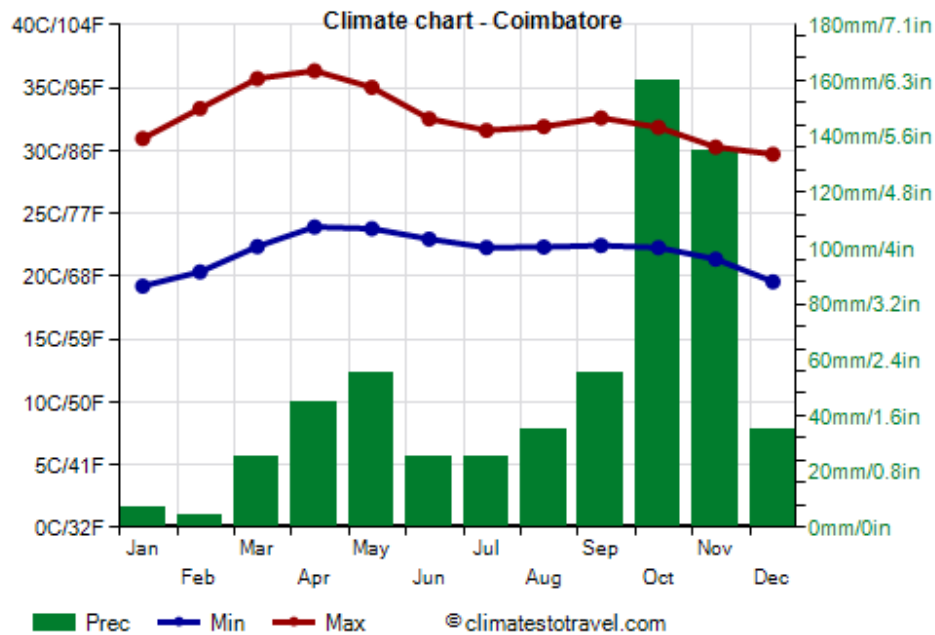


Fig: 5.2.b

6. STANDARDS AND AREAS STATEMENTS

6.1 CAR STANDARDS:



Fig: 6.1.a

6.2 PARKING STANDARDS:

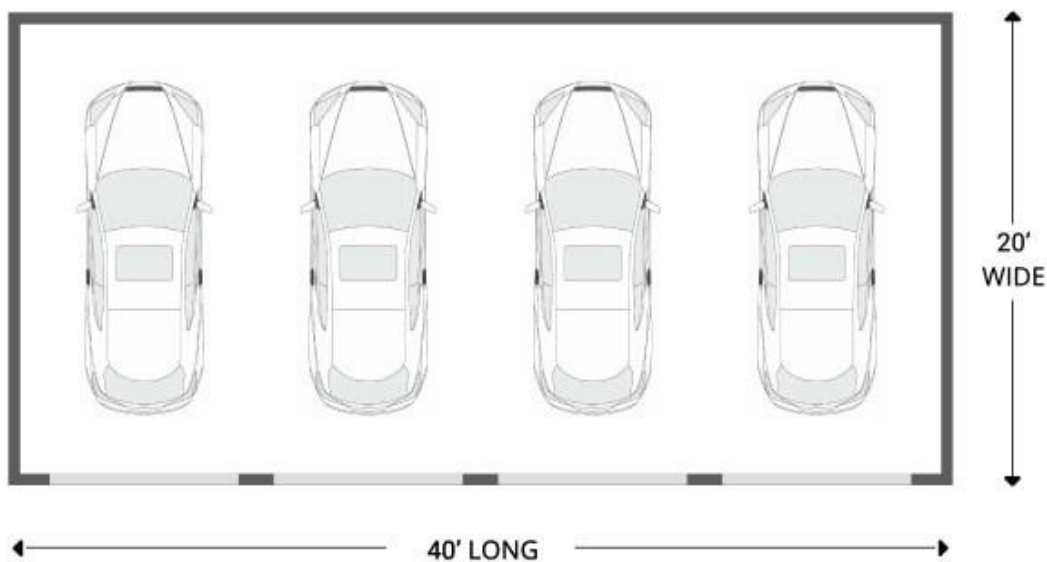


Fig: 6.2.a

Garage Size Guidelines (pretty close to scale)
lakecountryremodeling.com

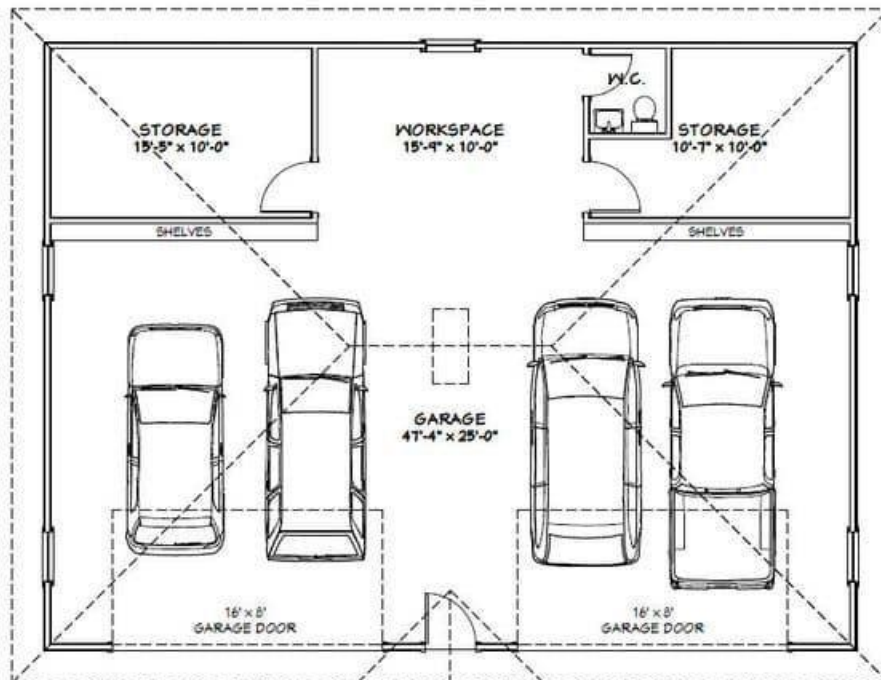
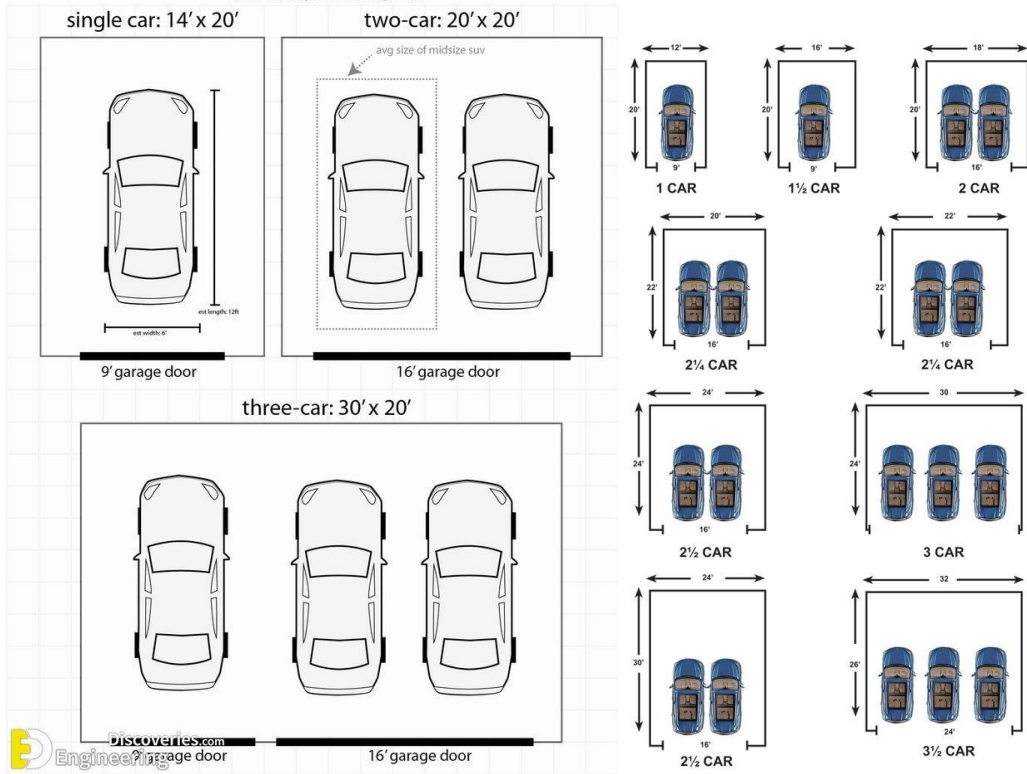


Fig: 6.2.b

6.3 CAR RAMP STANDARDS:

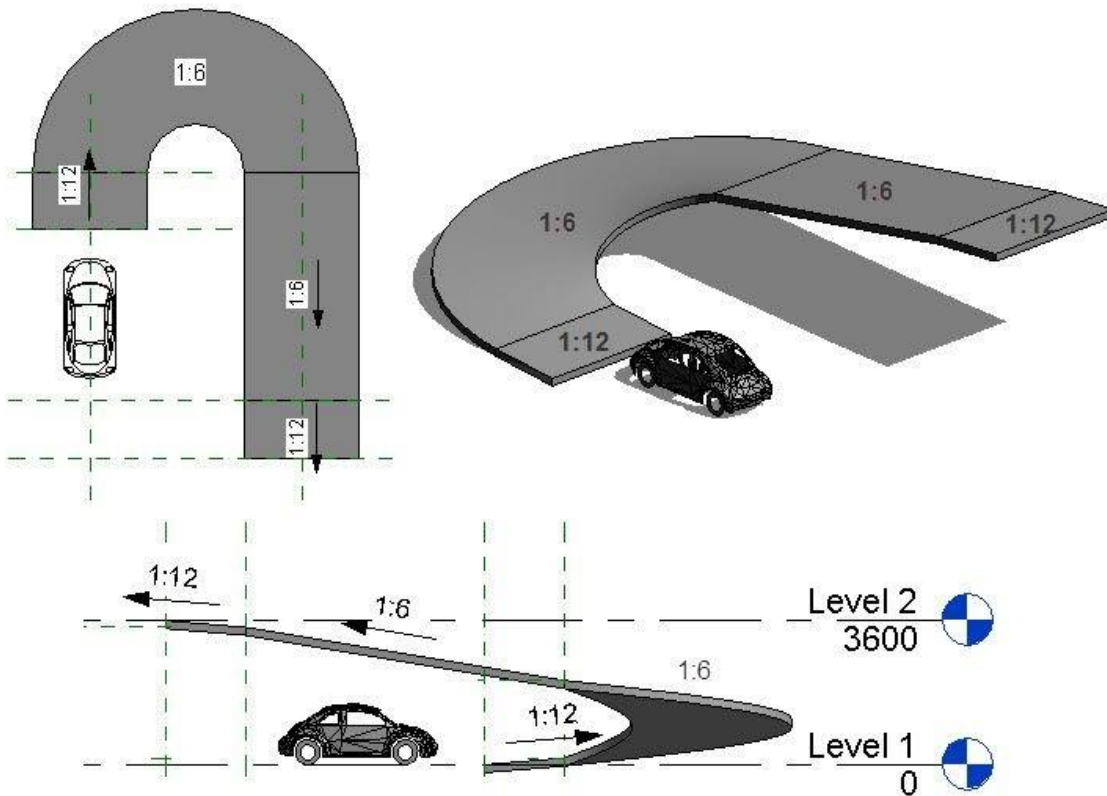
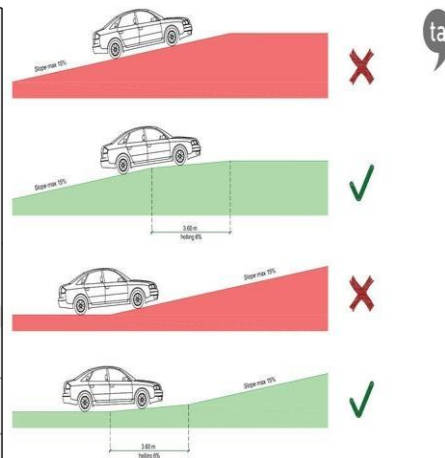
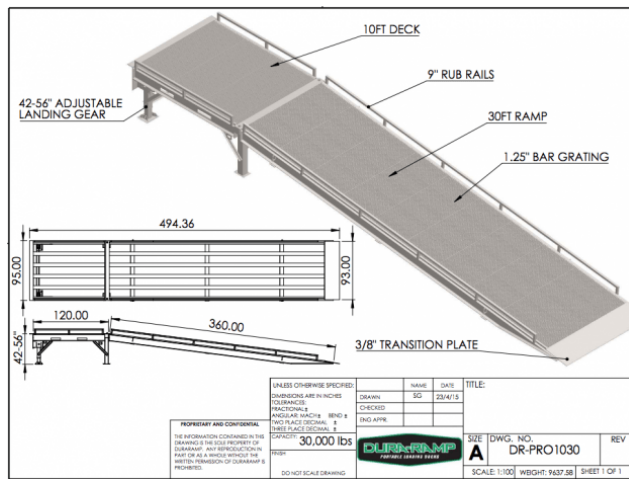


Fig: 6.3.a

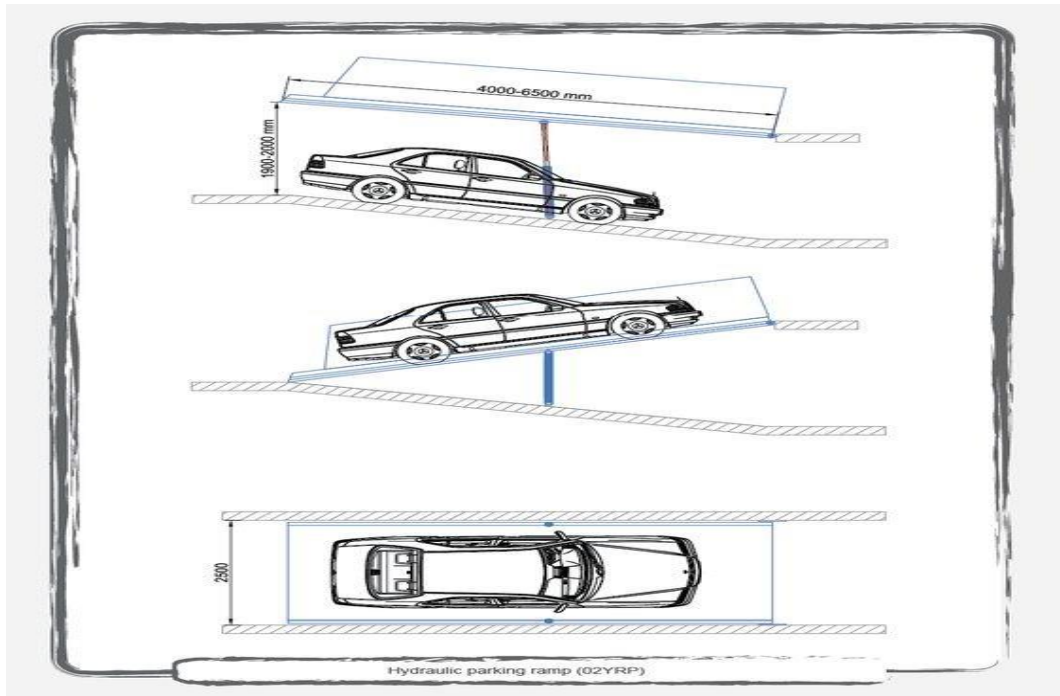


Fig: 6.3.b

6.4 MANAGER ROOM:

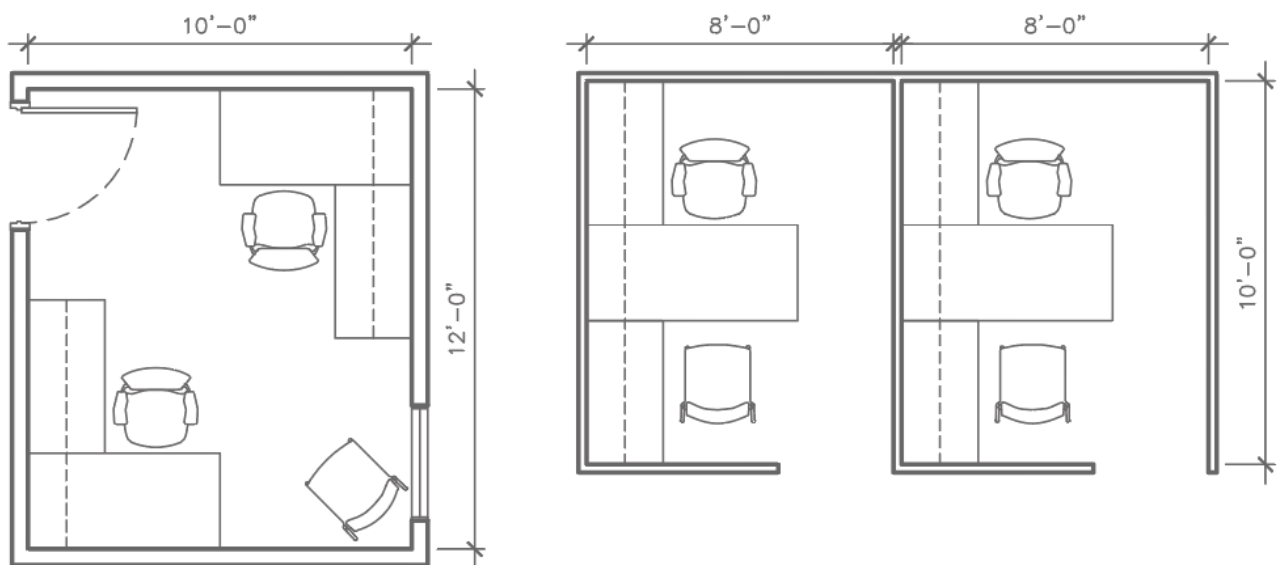


Fig: 6.4.a

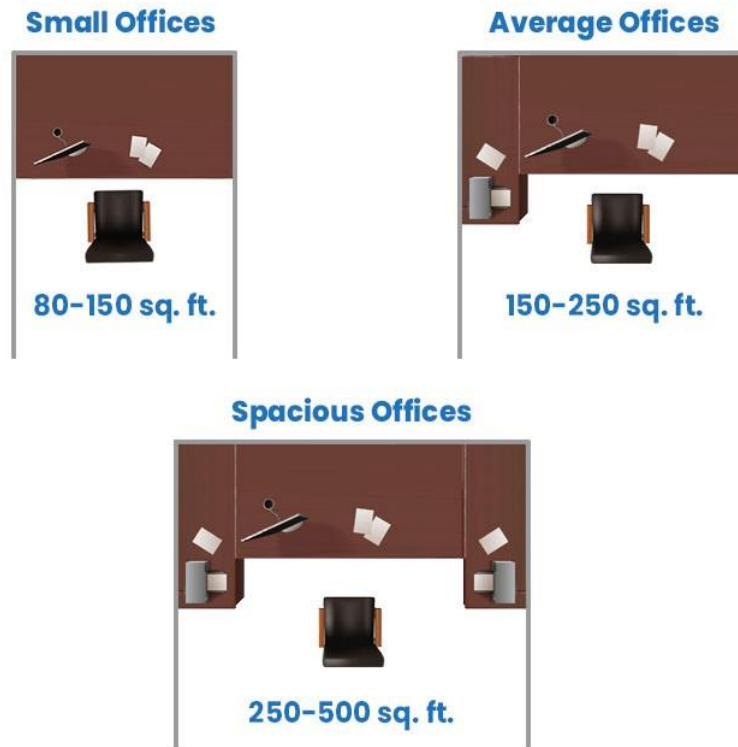


fig: 6.4.b

6.5 WORK SPACE:



Fig: 6.5.a

Office Space for 10 People

450 to 650 square feet

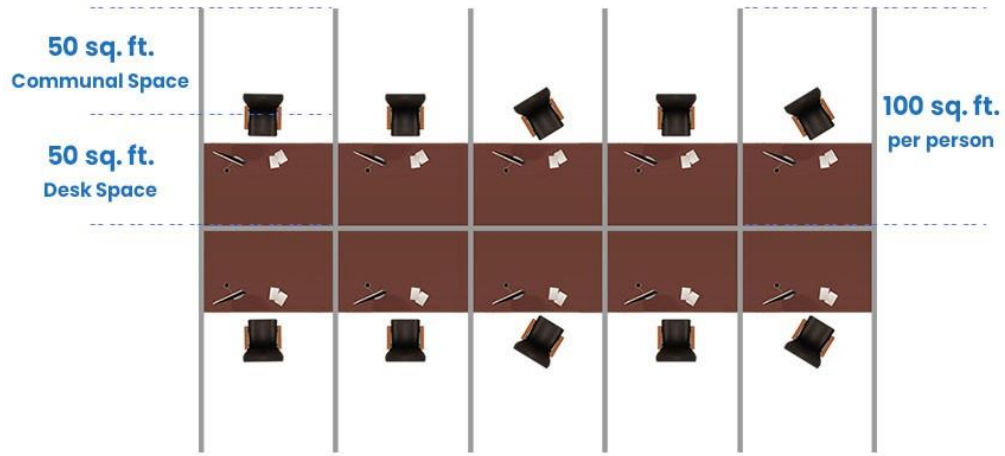


Fig: 6.5.b

6.6 CONFERENCE:

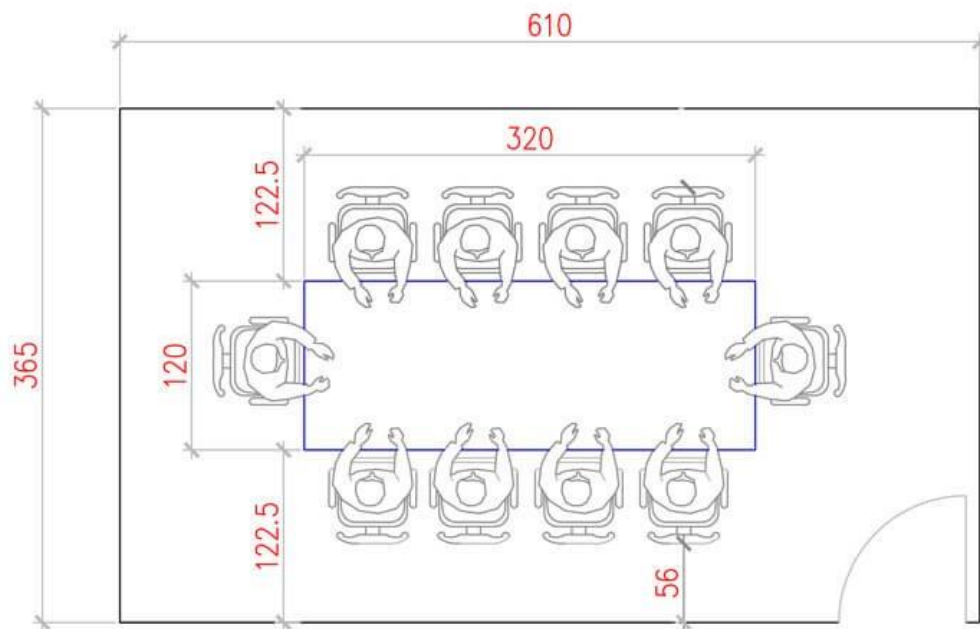


Fig: 6.6.a

6.7 TOILET:

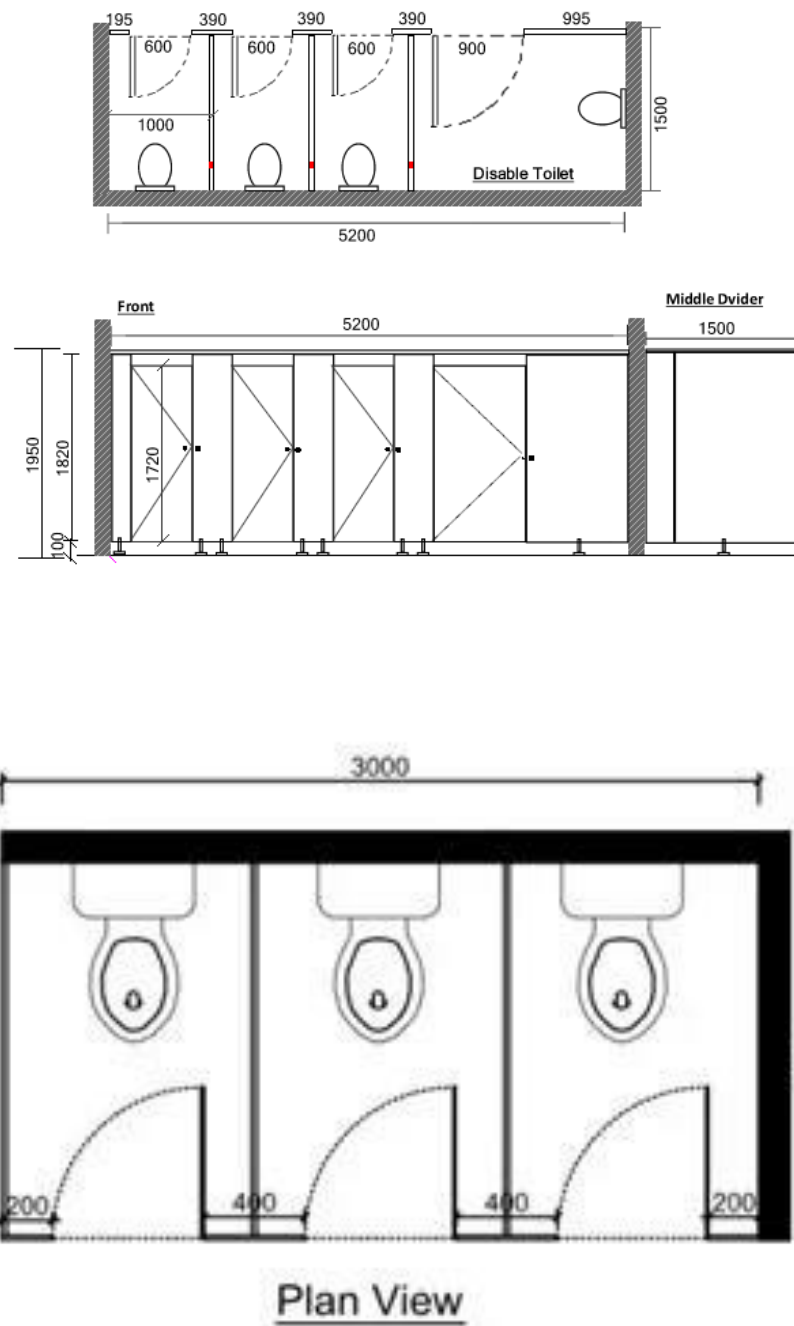


Fig: 6.7.a

6.8 AREA STATEMENT:

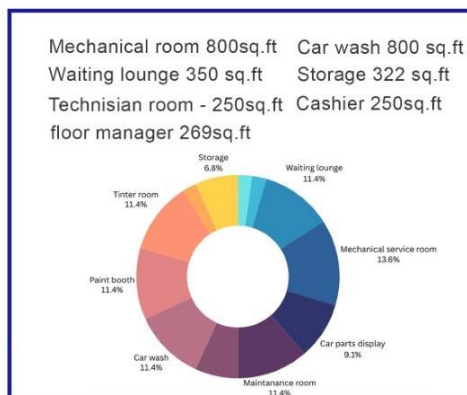
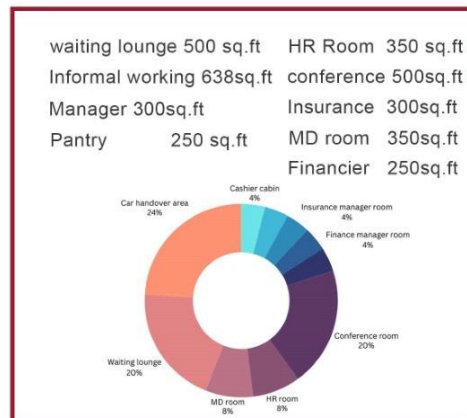
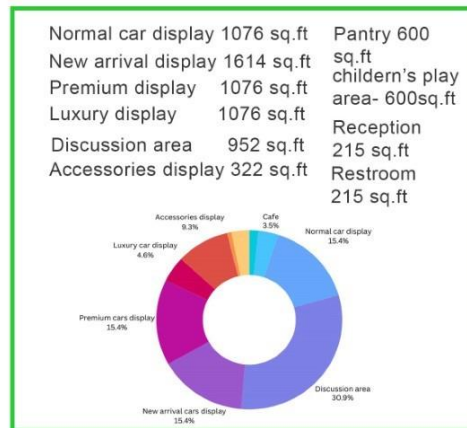
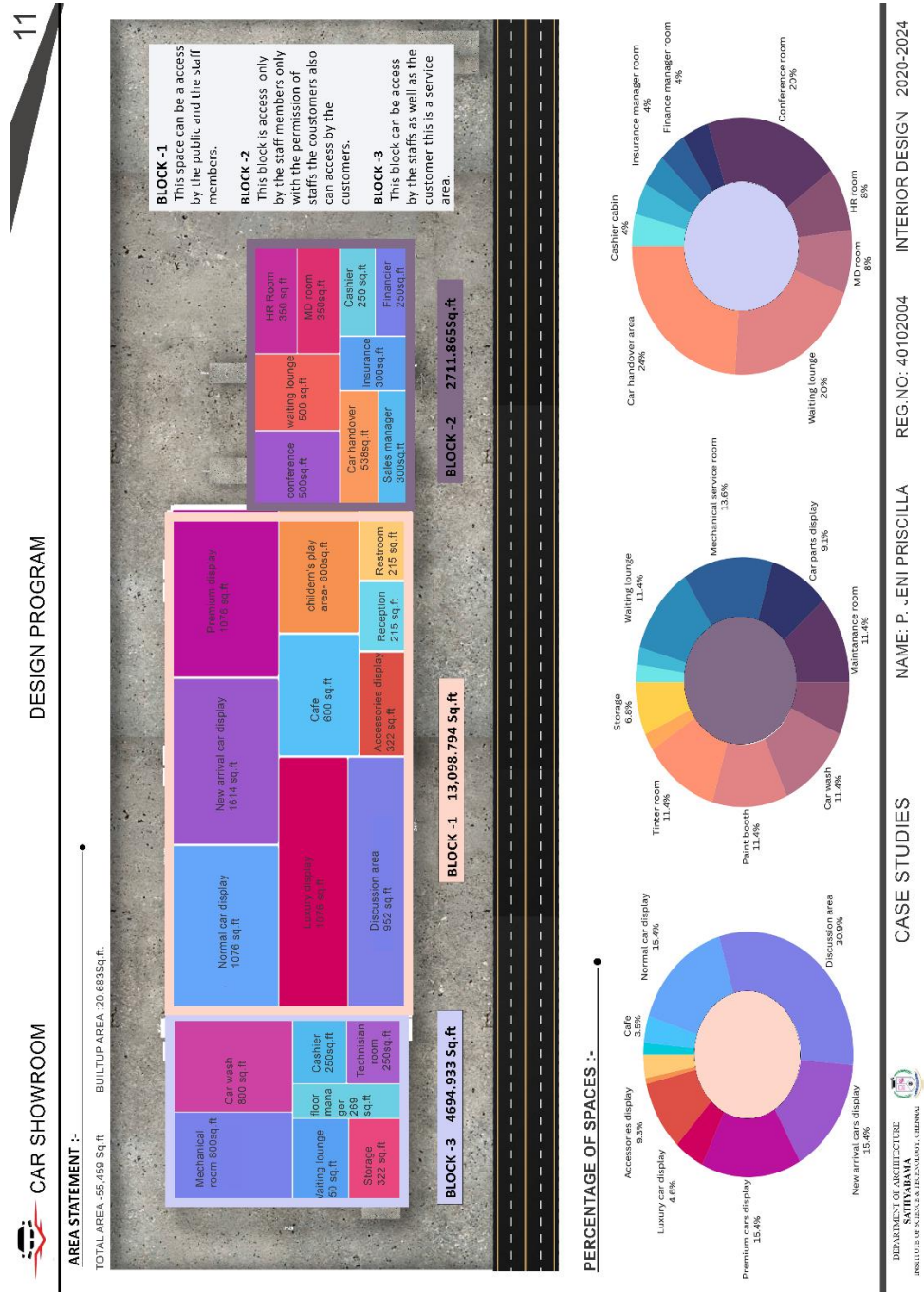


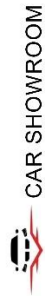
Fig: 6.8.a

7.1 DESIGN PROGRAM AND ANALYSIS:

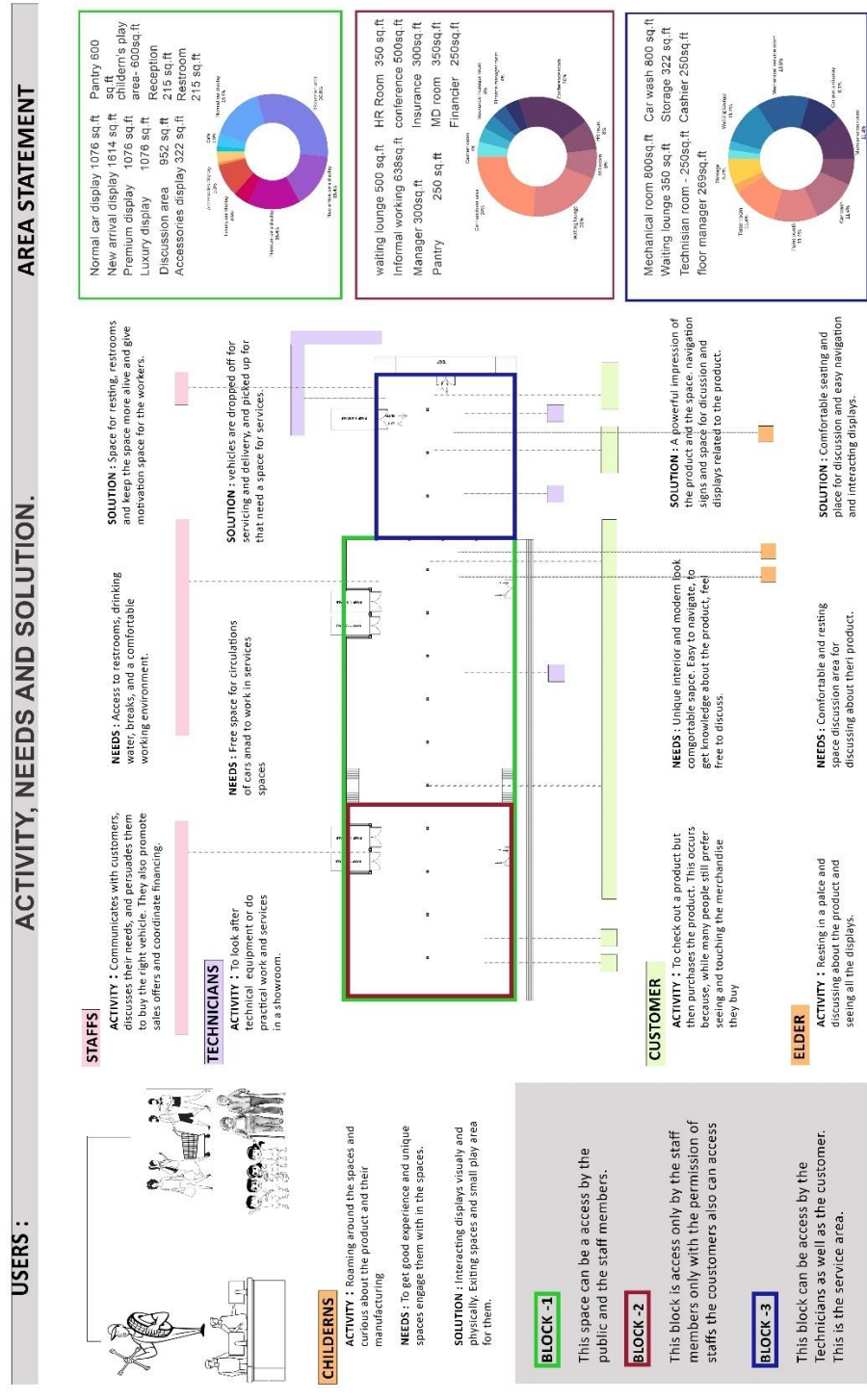


7.2 DESIGN APPROACH:

15



USER ANALYSIS & AREA STATEMENT



8.1 CONCEPT:

CAR SHOWROOM

CONCEPT & THEME

12

DE DE CONSTRUCTIVISM STYLE

Deconstructivism is a movement belonging to **contemporary architecture**, and was developed to oppose the ordered rationality of modernism. Its non-linear style and defiance in the face of symmetrical shapes propelled the creation of buildings with a unique visual appearance. Deconstruction doesn't actually mean "demolition;" instead it means "breaking down" or analyzing something. Deconstructivism is a postmodern architectural movement, which appeared in the 1980s. It gives the impression of the fragmentation of the constructed building, commonly characterised by an **absence of obvious harmony, continuity, or symmetry**.

DE DE CONSTRUCTIVISM ELEMENTS :

- Contrast of shapes and forms.

- Simple metal frame doors

- Broken intersecting lines

- Window frames often hidden in the walls.

- a combination of incongruous colors and shades

- Materials

COLORS :

- White is the dominant color used in this concept adding extra colors like yellow, blue, red, violet, silver and gold colors which are mostly uses in cars.

DE CONSTRUCTIVISM IN INTERIOR :

The philosophy behind deconstructivism in architecture is to question the traditional architectural concepts of **shape, function and structure**. They also create more expressive, engaging buildings that reflect their culture and social context.

- 1 Furniture
- 2 Partitions
- 3 False ceiling
- 4 Lighting
- 5 Patterns and textures
- 6 Zoning spaces.

=

DEPARTMENT OF ARCHITECTURE
SATHYABAMA

NAME: P. JENI PRISCILLA

REG NO: 40102004

INTERIOR DESIGN 2020-2024

8.2 MOOD BOARD:



CAR SHOWROOM

MOOD BOARD

13

PUBLIC SPACE

PRIVATE SPACE

SERVICE SPACE

COLORS

MATERIALS

PUBLIC SPACE

Acrylic sheet



MDF board with laminates



Marble flooring



Gypsum board

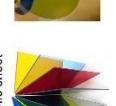


Metal sheet



PRIVATE SPACE

Acrylic sheet



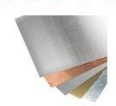
Gypsum board



Rubber flooring

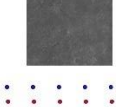


Metal sheet

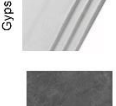


SERVICE SPACE

polished marble



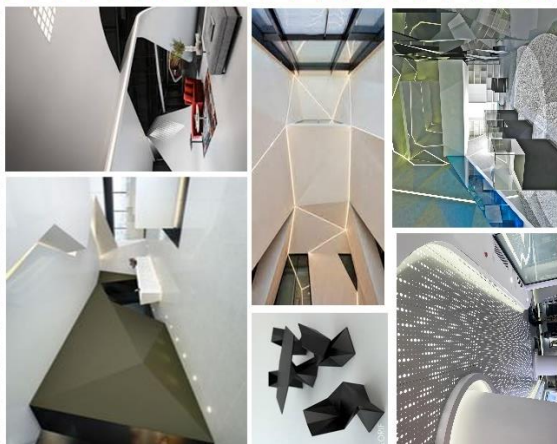
Gypsum board

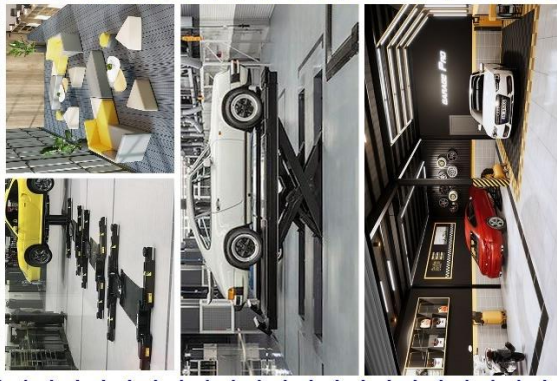


polished concrete



INTERIOR



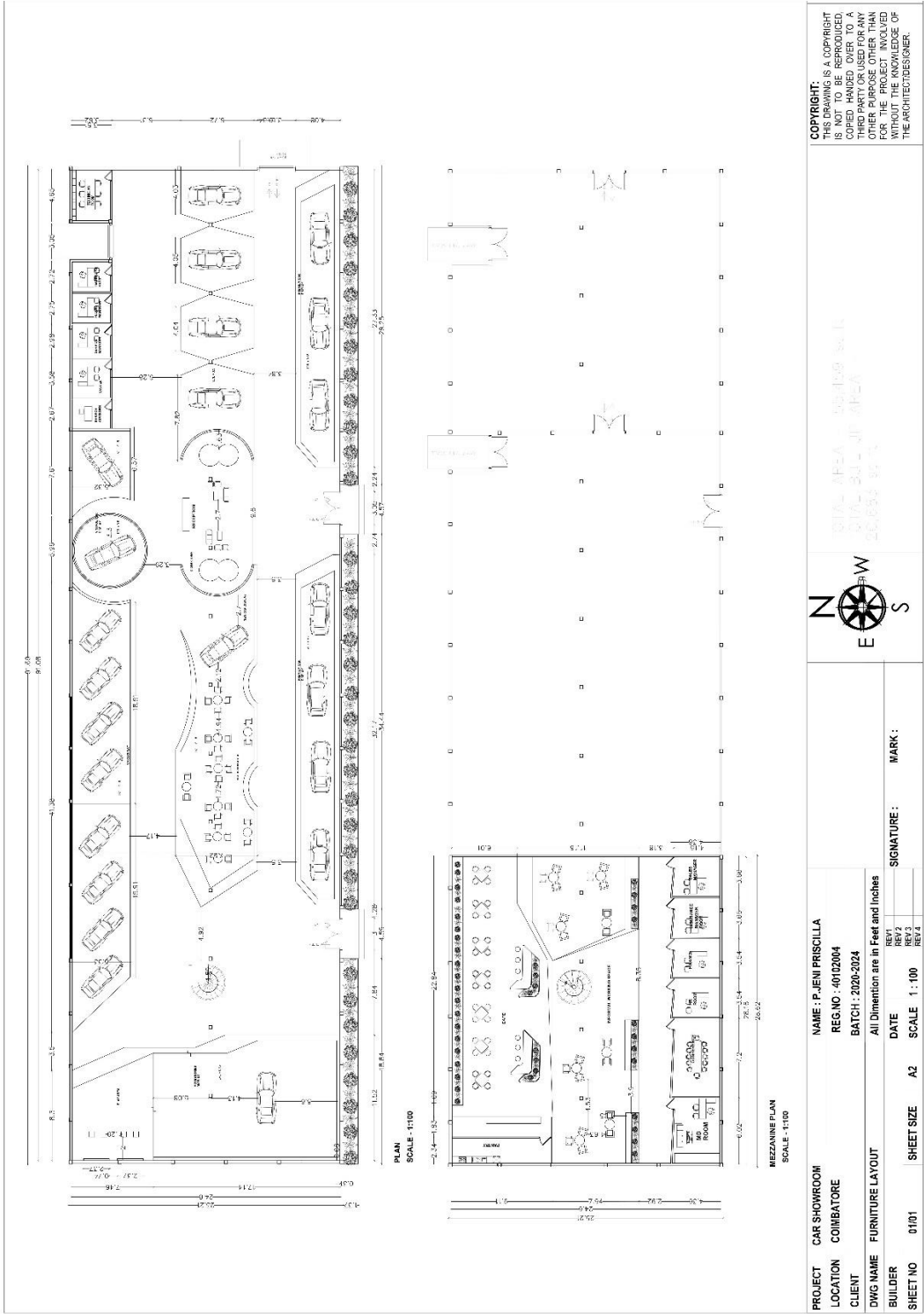


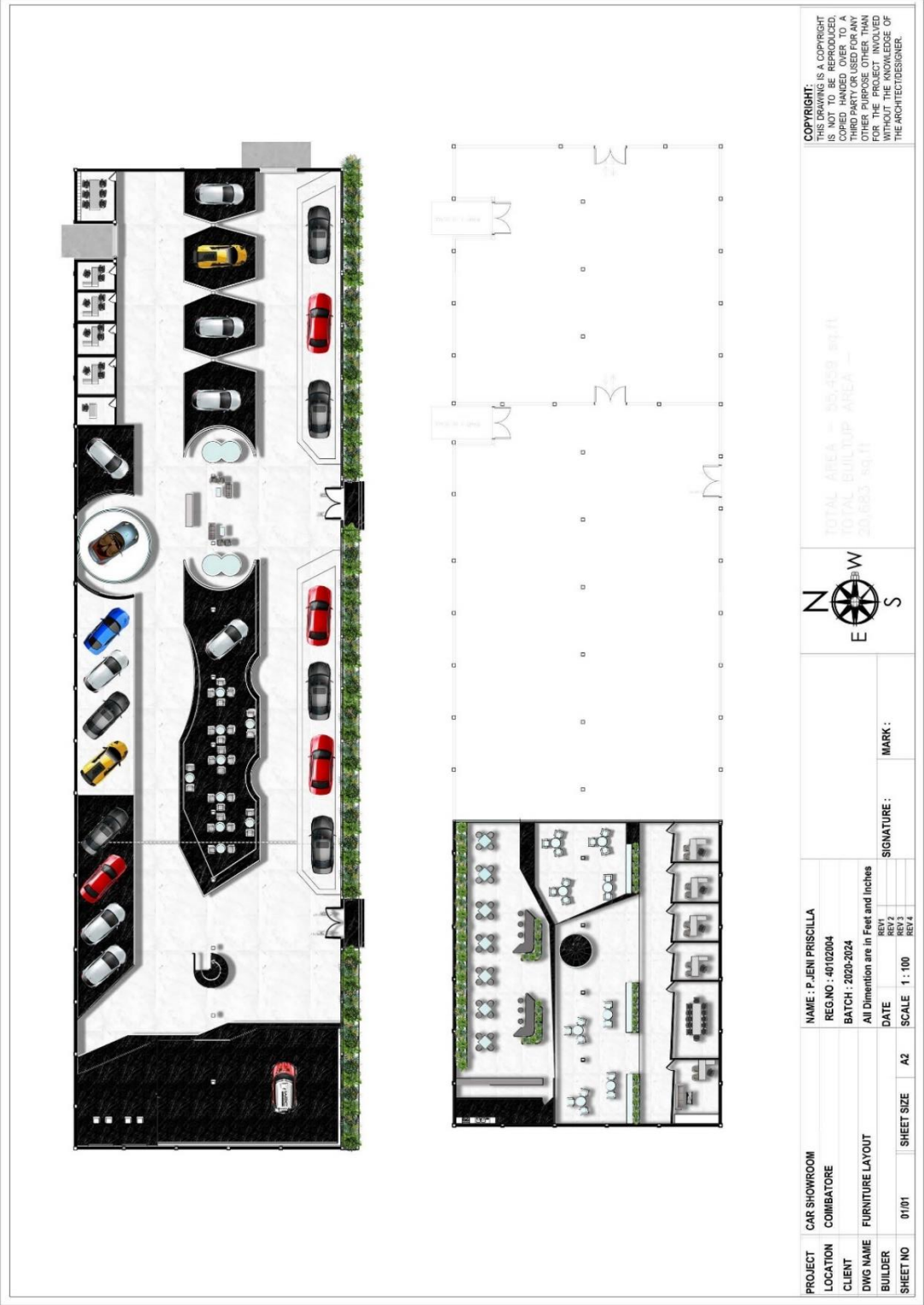
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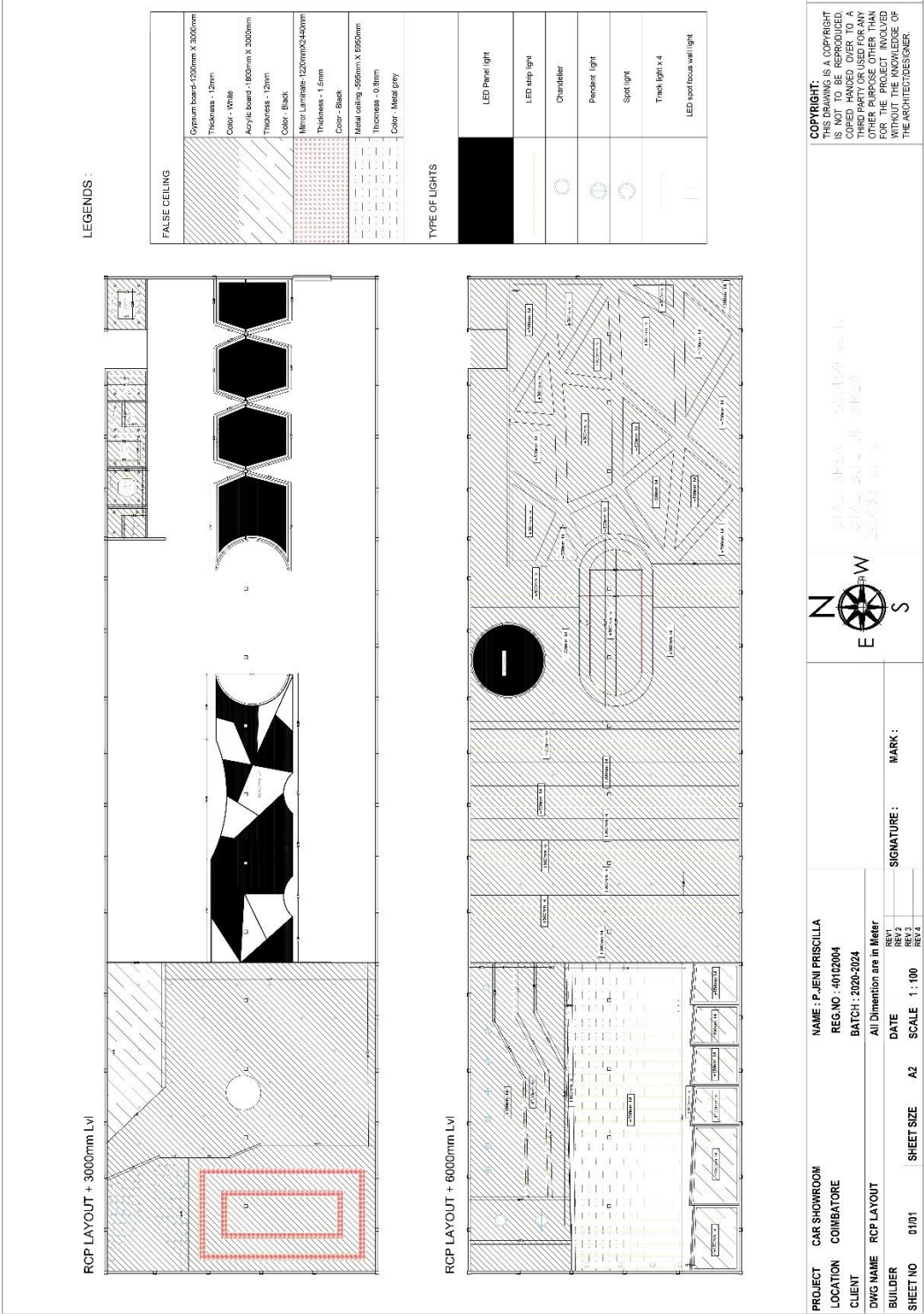


8.3 FLOOR PLAN RENDER:

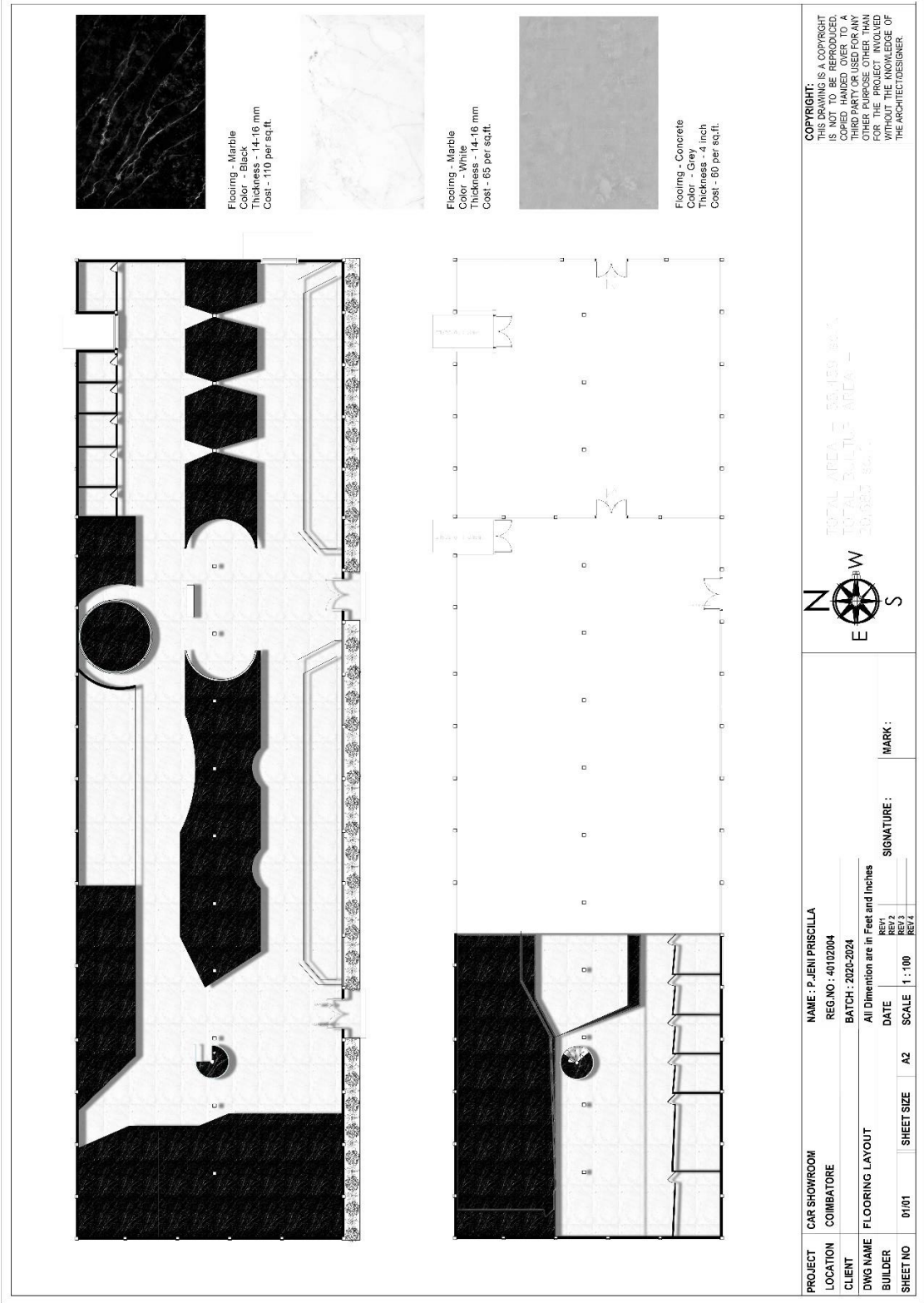




8.4 RCP LAYOUT:

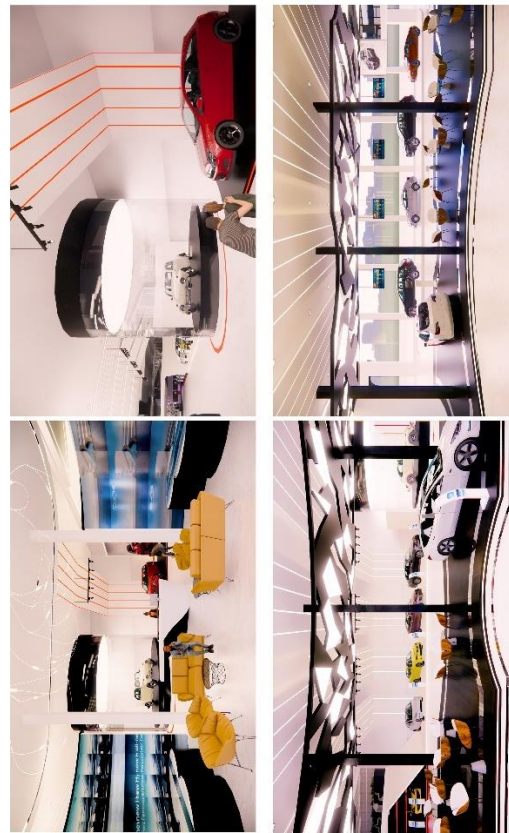
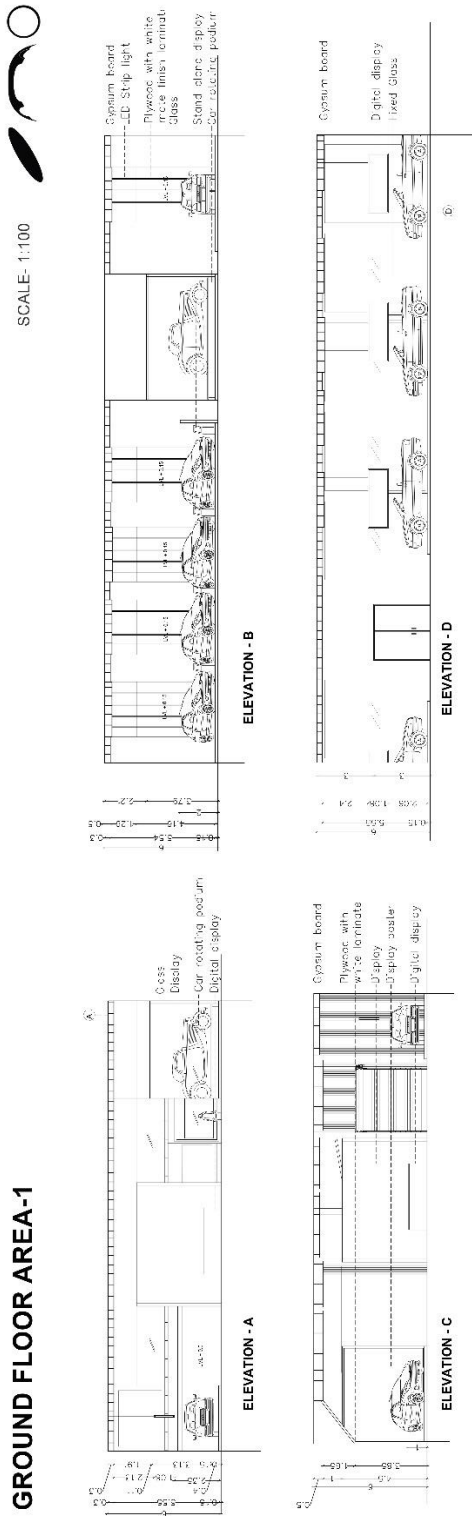


8.5 FLOORING LAYOUT:



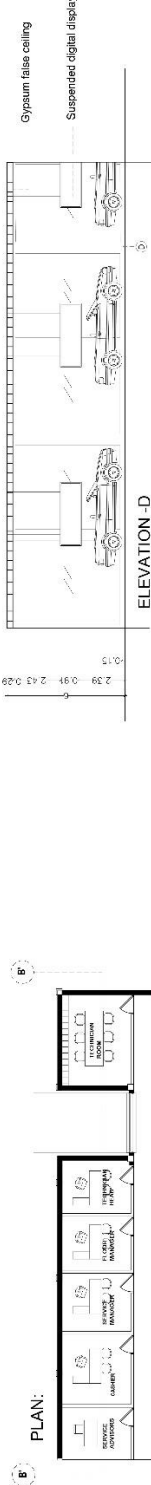
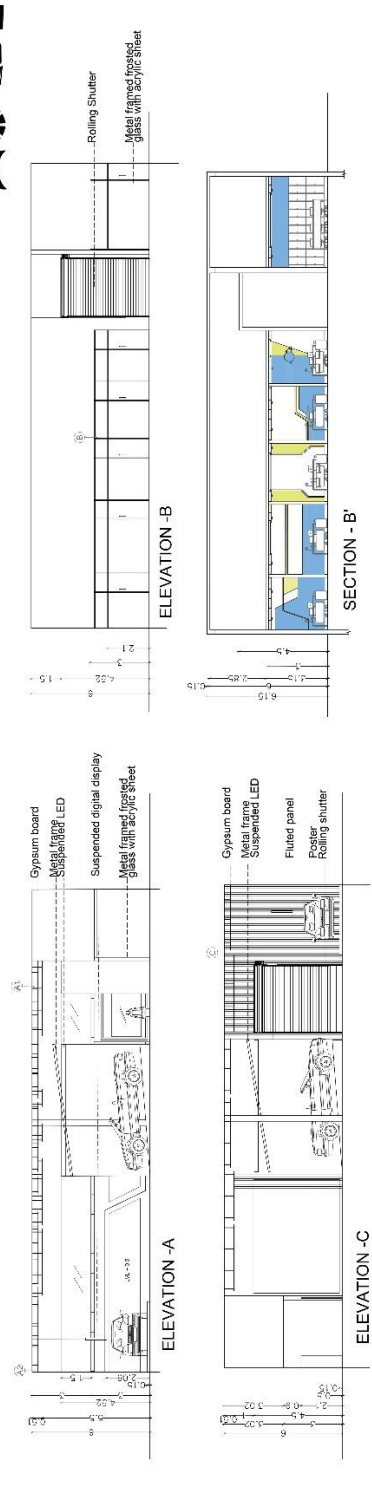
8.6 ELEVATION AND SECTIONS:

GROUND FLOOR AREA-1

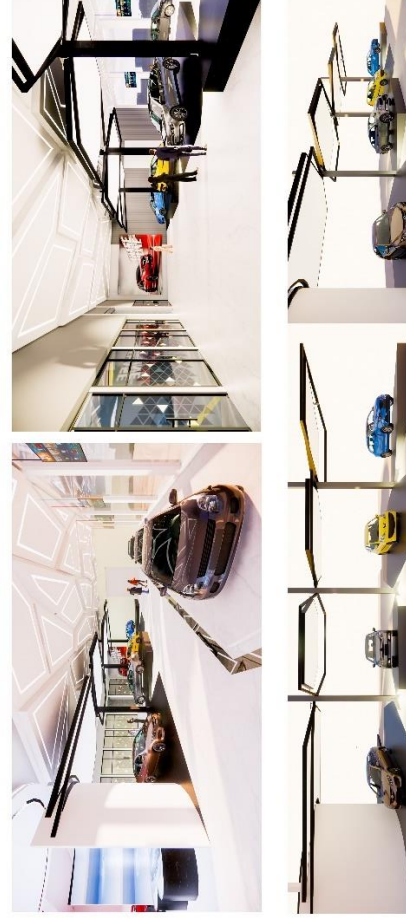


GROUND FLOOR AREA-2

SCALE: 1:100

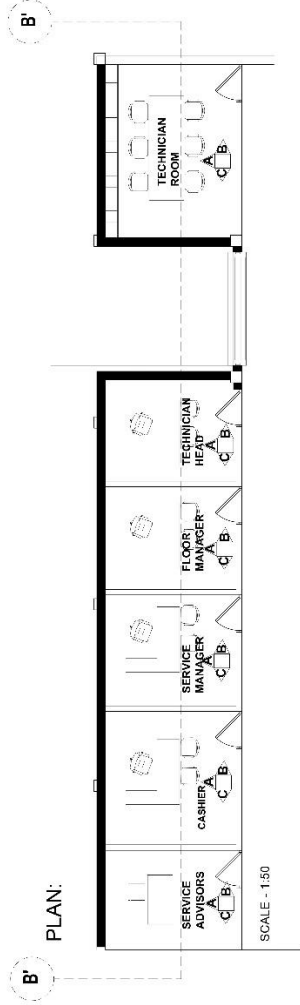


VIEWS :

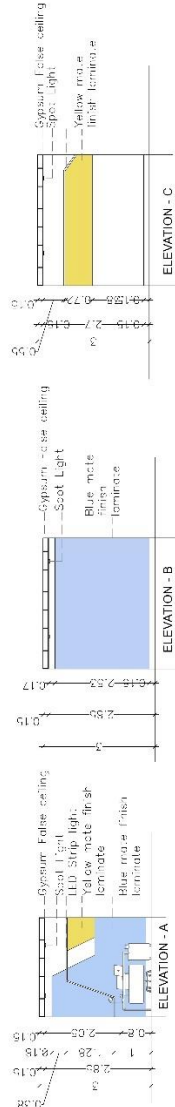


GROUND FLOOR AREA-2

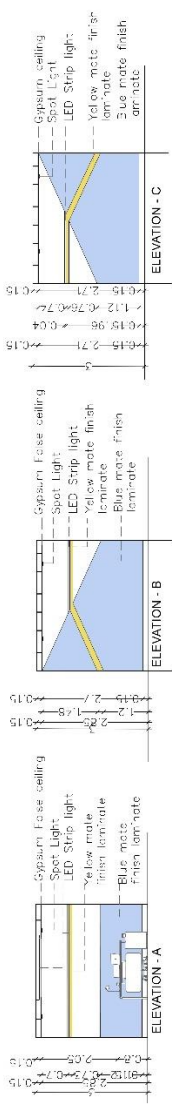
DETAIL OF SECTION -B



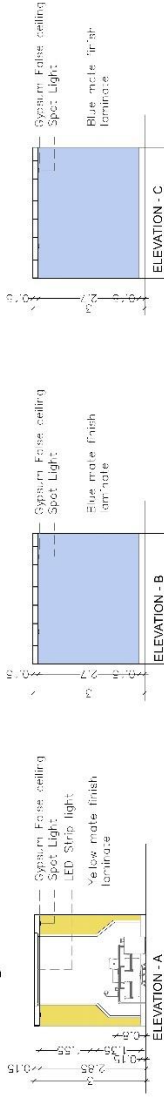
Service Advisor's cabin



Cashier cabin



Service manager



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SCALE - 1:50



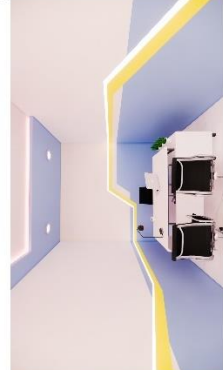
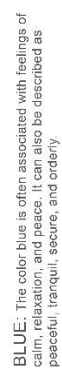
BLUE: The color blue is often associated with feelings of calm, relaxation, and peace. It can also be described as peaceful, tranquil, secure, and orderly.

YELLOW: The color yellow can trigger feelings of happiness, joy, and communication. It's also associated with creativity, wisdom, and intelligence.



SCALE - 1:50

— 100 —



INTERIOR DESIGN

2020-2024

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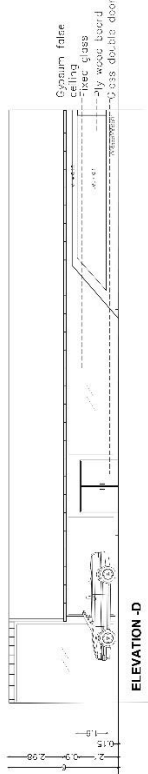
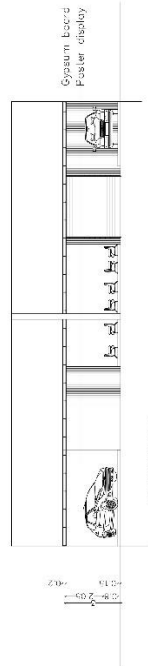
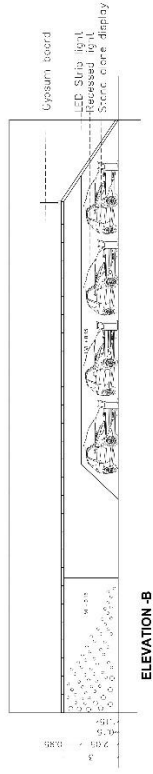
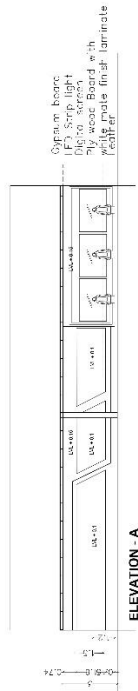
NAME: P. JENI PRISCILLA


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SATHYABAMA
INSTITUTE OF SCIENCE & TECHNOLOGY, CHENNAI

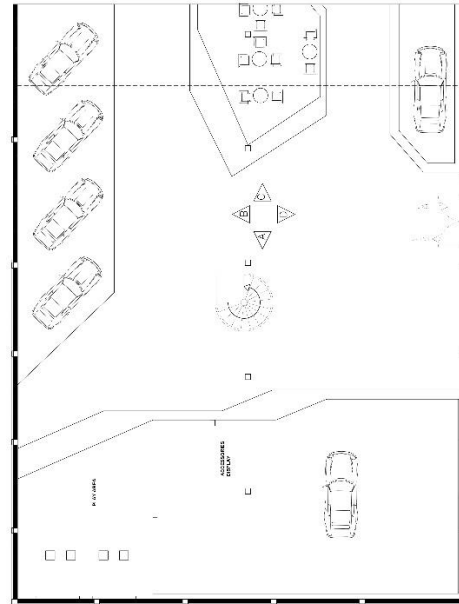
DEPARTMENT OF ARCHITECTURE
SATHYABAMA
INSTITUTE OF SCIENCE & TECHNOLOGY, CHENNAI

GROUND FLOOR AREA-3

SCALE- 1:100



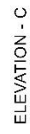
PLAN :



VIEW :



SCALE- 1:100



VIEWS :



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REG.NO: 40102004

INTERIOR DESIGN

2020-2024

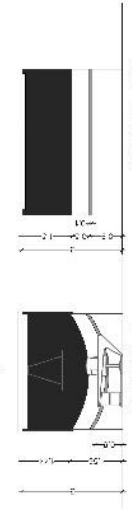
SCALE- 1:50

SCALE- 1:50

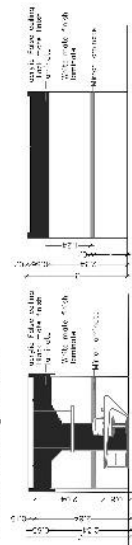
PLAN:



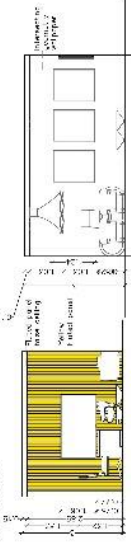
Insurance manager room



ELEVATION - A
Finance manager room

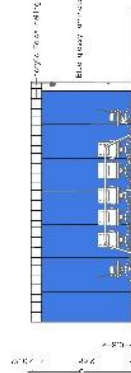


MD Room



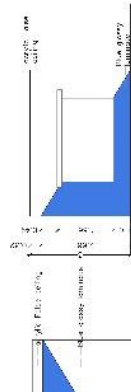
VIEWS:

Conference room



ELEVATION - A

8-NOLLYS373



LLN-115777

ELEVATION - 6

Conference room



MD Room



Finance manager room



HR Room



Insurance manager room



Sales manager cabin



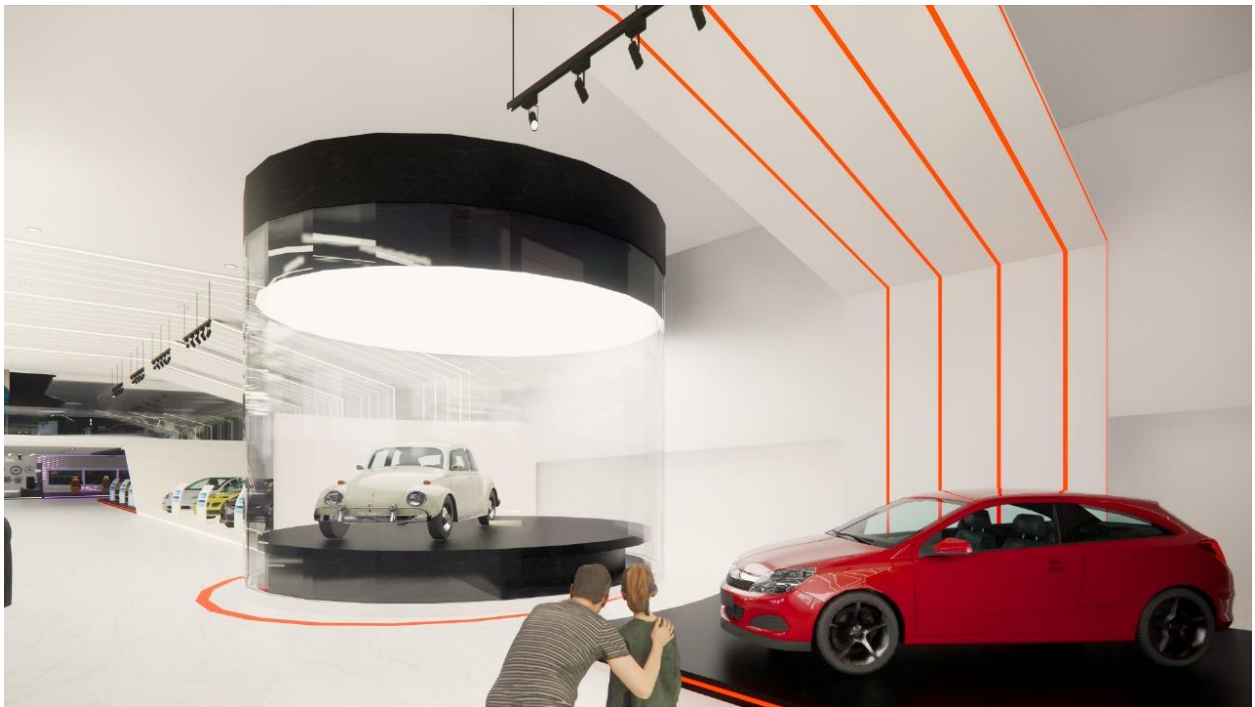
8.4 ELEVATION AND SECTIONS

8.4.1 LOBBY:

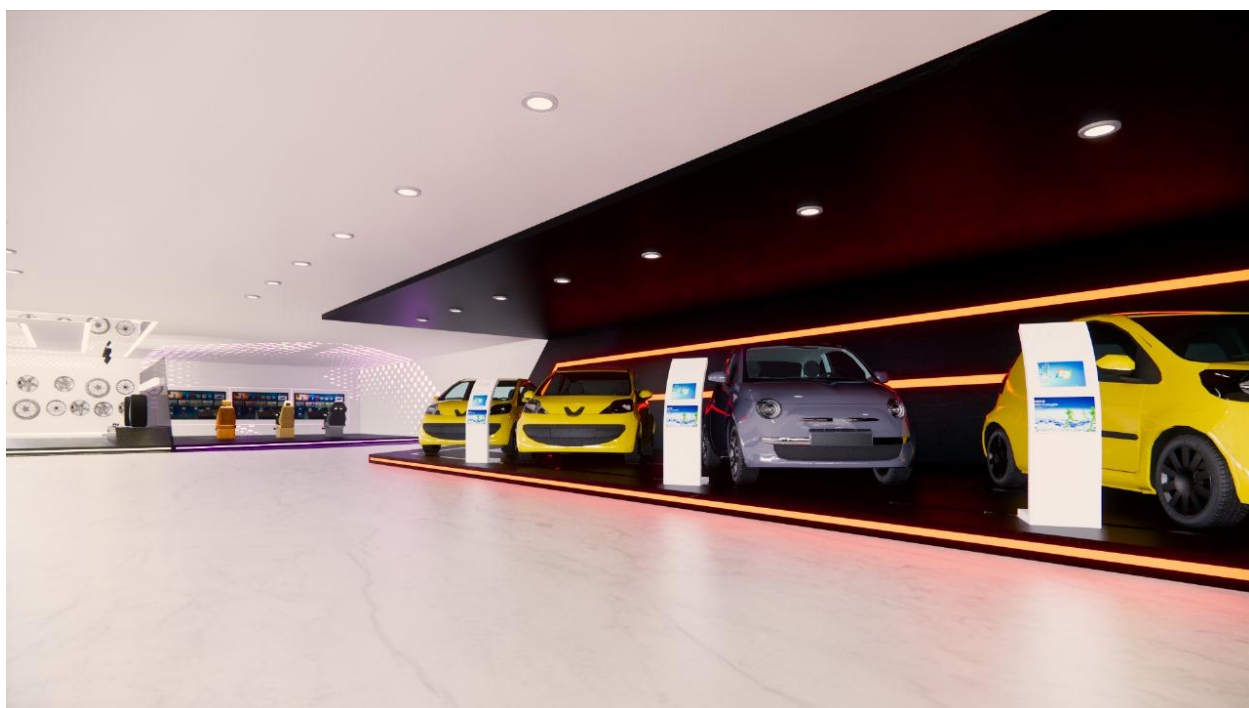


8.4.2 CAR DISPLAY:











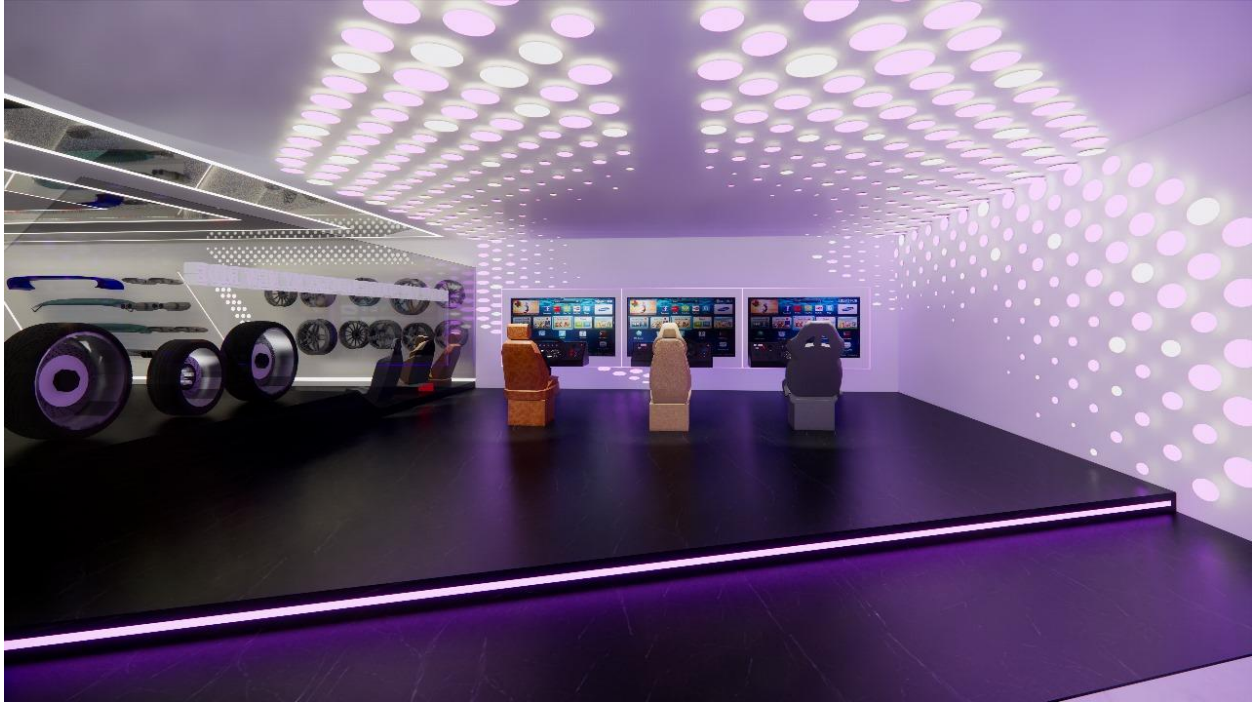
8.4.3 ACCESSORIES DISPLAY:





8.4.4 PLAY AREA:





8.4.5 CAFÉ AREA:

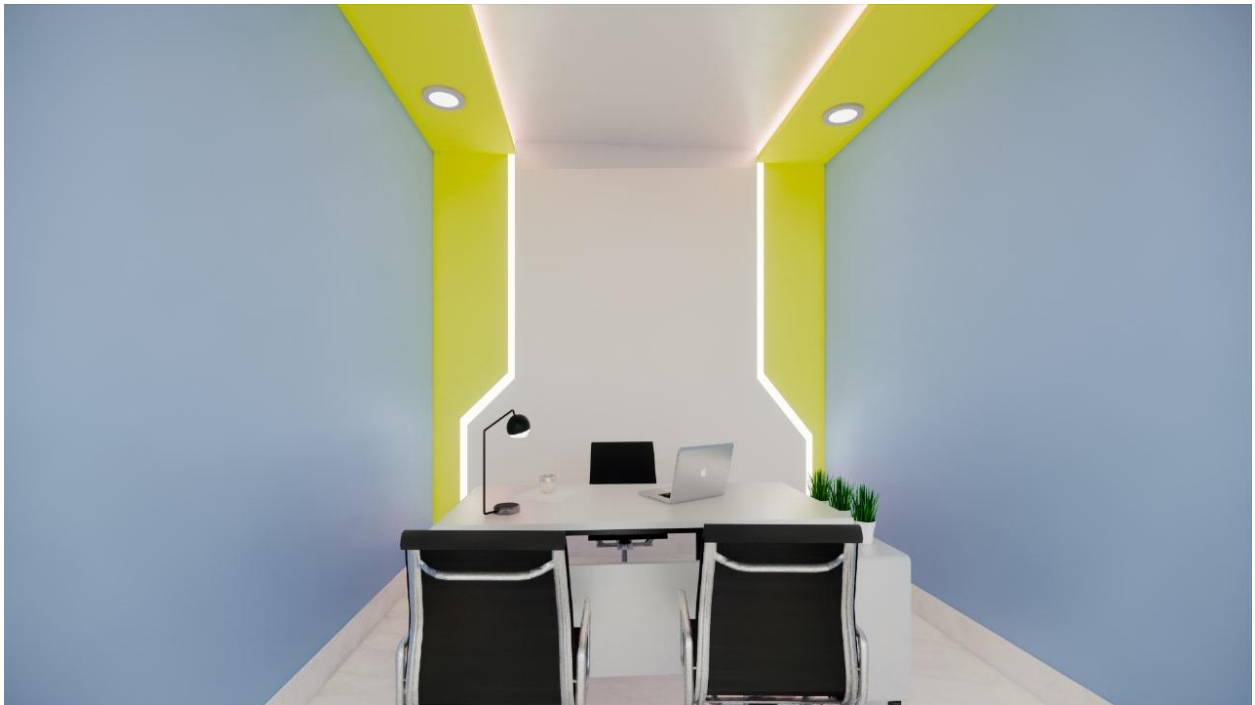


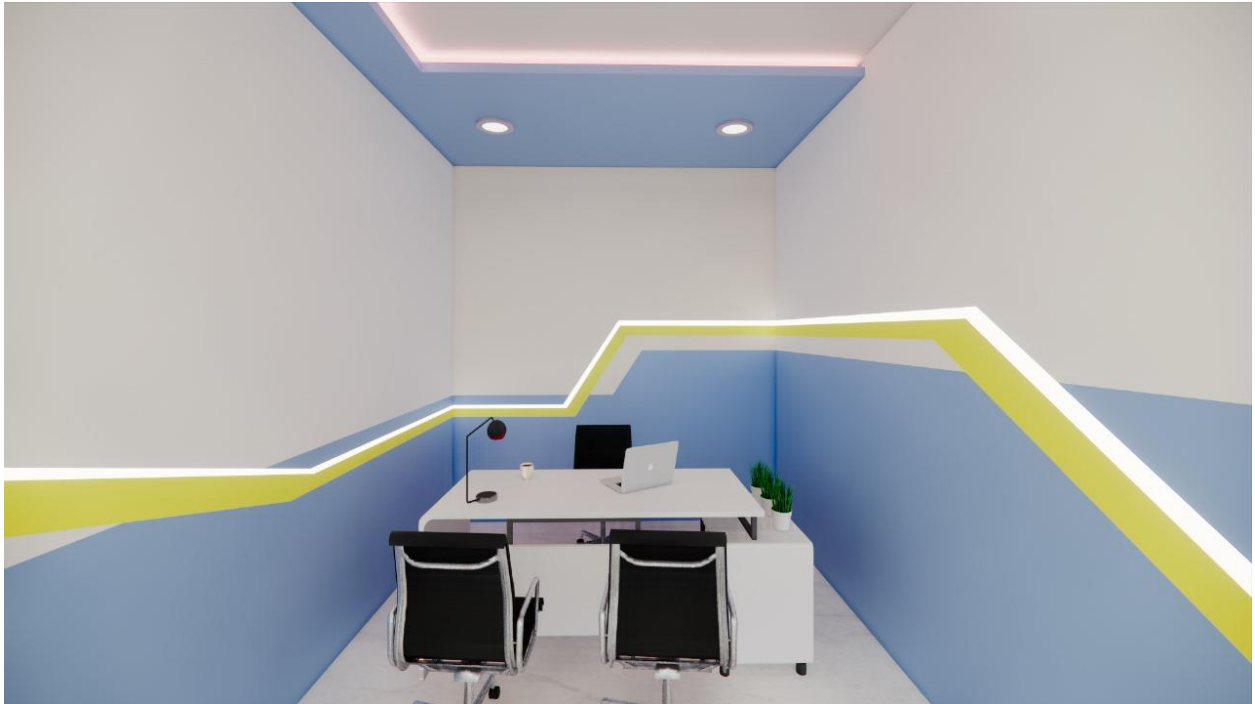




8.4.6 TECHNICIAN CABIN:









8.4.7 OFFICE:

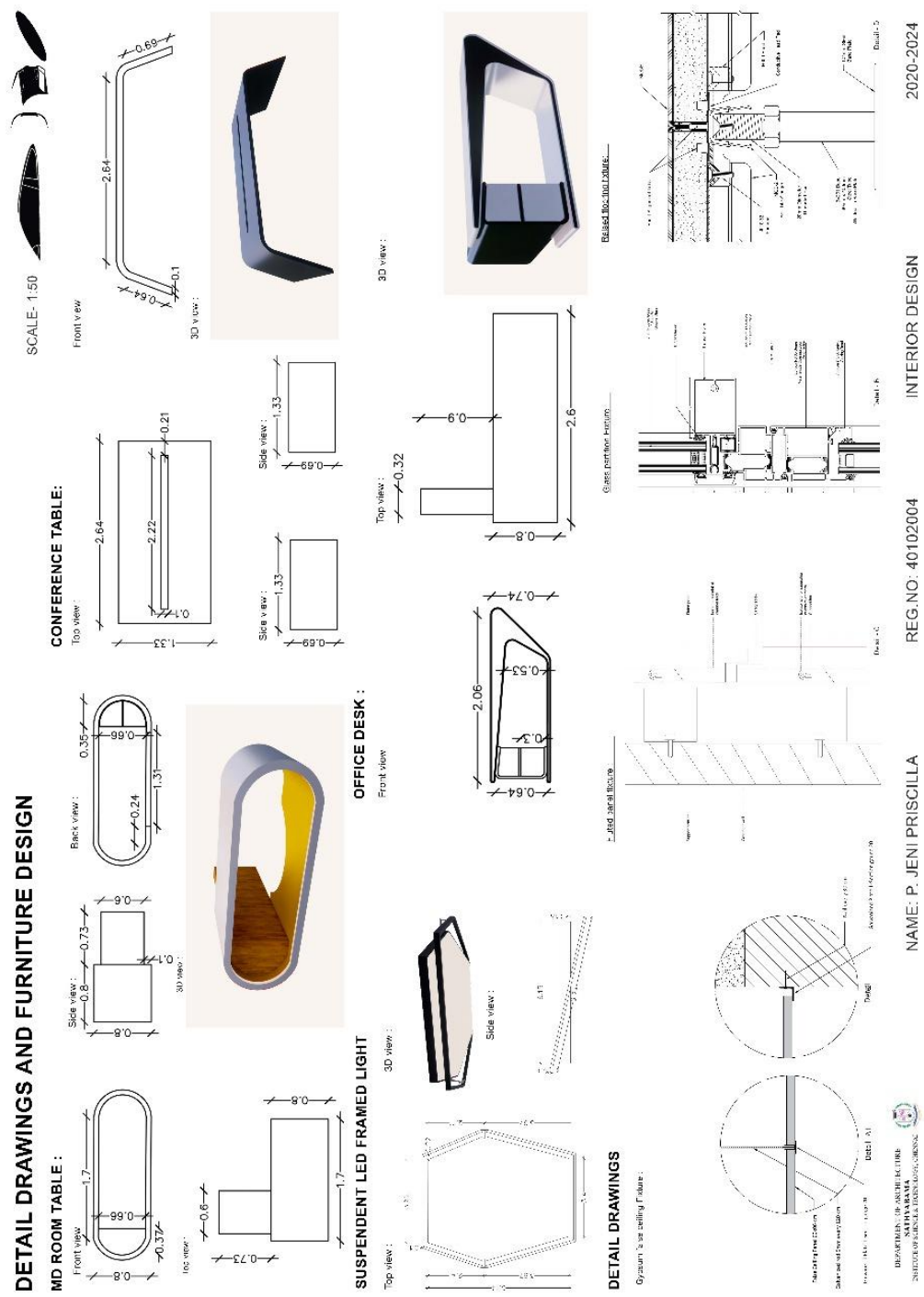








8.7 FURNITURE DESIGN:



9 REFERENCE

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