

PROFESSIONAL TRAINING REPORT
at
Sathyabama Institute of Science and Technology
(Deemed to be University)

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Technology in Information Technology

By
GOBIGA B
REG. NO. 39120032



DEPARTMENT OF INFORMATION TECHNOLOGY

SCHOOL OF COMPUTING

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI – 600119, TAMILNADU

NOVEMBER 2021



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" by NAAC
(Established under Section 3 of UGC Act, 1956)
JEPPIAAR NAGAR, RAJIV GANDHI SALAI
CHENNAI- 600119
www.sathyabama.ac.in



DEPARTMENT OF INFORMATION TECHNOLOGY

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **GOBIGA B(Reg. No: 39120032)** who carried out the project entitled "**CASE STUDY:GOOGLE CLOUD PLATFORM**" under my supervision from June 2021 to November 2021.

Internal Guide

Dr. R.M.GOMATHI, M.Tech., Ph.D.

Head of the Department

Dr. R. Subhashini, M.E., Ph.D.

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I, **GOBIGA B** hereby declare that the project report entitled **CASE STUDY : GOOGLE CLOUD PLATFORM** done by me under the guidance of **Dr.R.M.GOMATHI, M.Tech.,Ph.D.**, is submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering Degree in Computer Science and Engineering.

DATE:10-11-2021

GOBIGA B

PLACE: CHENNAI

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to **Board of Management** of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. T. Sasikala M.E., Ph.D, Dean**, School of Computing, **Dr. R. Subhashini, M.E., Ph.D. Head of the Department** of **Information Technology** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **Dr. R.M.GOMATHI, M.Tech., Ph.D.**, for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Information Technology** who were helpful in many ways for the completion of the project.

TRAINING CERTIFICATE



NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

GOBIGA B

for successfully completing the course

Cloud Computing

with a consolidated score of **54** %

Online Assignments	22.13/25	Proctored Exam	31.67/75
--------------------	----------	----------------	----------

Total number of candidates certified in this course: **3189**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Aug-Oct 2021
(8 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL21CS62S23352220

To validate and check scores: <https://nptel.ac.in/noc>

ABSTRACT

Cloud Computing is defined as the services offered through remote servers on the internet. These services might include database storage, applications, compute power and other IT resources over the pay-as-you-go pricing approach. The remote server allows users to save, modify, or process data on the internet or cloud-based platform instead of storing it on a local server or their devices. Cloud computing is evolving due to fast performance, better manageability, and less maintenance. It helps organizations to minimize the number of resources and overall infrastructure costs. Additionally, it helps IT teams better focus on the important applications, services, and processes and achieve the company's goals. Typically, the cloud-computing providers offer their services according to the following three standard models: Platform as a Service (PaaS) Software as a Service (SaaS) Infrastructure as a Service (IaaS) Google Cloud Platform (GCP) is a suite of cloud computing services provided by Google. It is a public cloud computing platform consisting of a variety of services like compute, storage, networking, application development, Big Data, and more, which run on the same cloud infrastructure that Google uses internally for its end-user products, such as Google Search, Photos, Gmail and YouTube, etc.

LIST OF TABLES

TABLE NO.	TABLE NAME	PAGE NO.
2.4	Difference between GCP,AWS,Azure	15

LIST OF ABBREVIATIONS

TERM	ABBREVIATION
GCP	GOOGLE CLOUD PLATFORM
VM	VIRTUAL MACHINE
App	APPLICATION
AWS	AMAZON WEB SERVICES
SQL	STRUCTURED QUERY LANGUAGE
PaaS	PLATFORM AS A SERVICE
SaaS IaaS	SOFTWARE AS A SERVICE INFRASTRUCTURE AS A SERVICE

LIST OF FIGURES

FIGURE NO.	FIGURE NAME	PAGE NO
2.1	GOOGLE CLOUD PLATFORM	13
3.1	Cloud platform services	17
3.2	Google cloud family	17
3.3	Google platform services	17
3.3.1	GCP Pricing	19

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE No
	ABSTRACT	6
	LIST OF TABLES	7
	LIST OF ABBREVIATIONS	7
	LIST OF FIGURES	8
1	INTRODUCTION	9
	1.1. Overview: Cloud Computing	9
	1.2. Overview: Google cloud platform(GCP)	10
2.	GOOGLE CLOUD PLATFORM(GCP)	11
	2.1. Why GCP?	11
	2.2. Benefits and key features of GCP	12
	2.3. Advantages of GCP	14
	2.4. Difference of GCP with other cloud services	15
3.	GOOGLE CLOUD PLATFORM SERVICES	16
	3.1. Compute services, Storage services	17
	3.2. App services	18
	3.3. GCP Pricing	18
4.	RESULTS AND DISCUSSION, PERFORMANCE ANALYSIS, METHODOLOGY	19
	4.1. Create an VM instance	19
	4.2. Host your webpage in GCP	23
5	SUMMARY AND CONCLUSIONS	32
	REFERENCES	33

1.INTRODUCTION

1.1. OVERVIEW: CLOUD COMPUTING

US National Institute of Standards and Technology (NIST) defines Computing as: “Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.” Cloud computing is evolving due to fast performance, better manageability, and less maintenance. It helps organizations to minimize the number of resources and overall infrastructure costs. Additionally, it helps IT teams better focus on the important applications, services, and processes and achieve the company's goals.

Typically, the cloud-computing providers offer their services according to the following three standard models:

- Platform as a Service (PaaS)
- Software as a Service (SaaS)
- Infrastructure as a Service (IaaS)

EVOLUTION OF CLOUD COMPUTING: The main reason for interest in cloud computing is due to the fact that public clouds can significantly reduce IT costs. • From an end user perspective cloud computing gives the illusion of potentially infinite capacity with ability to scale rapidly and pay only for the consumed resource. • In contrast, provisioning for peak capacity is a necessity within private data centers, leading to a low average utilization of 5-20 percent.

ADVANTAGES OF CLOUD COMPUTING:

- Lower computer costs
- Improved performance
- Unlimited storage capacity
- Increased data reliability
- Universal information access

- Easier group collaboration

Cloud computing is the on-demand availability of computer resources like Servers: containing Memory, CPU. Different type of Storage: like blob storage, object storage. Databases like structure data, unstructured data, semi-structured data, networking include virtual network, subnet, connecting with the premise, etc. Cloud computing is like your water/ electricity bill; you only pay for what you use. There are four types of cloud deployment models: Public, Private, Community, and Hybrid. Every deployment model is defined according to where the infrastructure for the environment is located. In the public cloud, you can host websites, web apps. Private cloud is for sensitive data. If you have a website and sensitive data, you can go with a Hybrid cloud. Community cloud allows systems and services accessible by a group of organisations. Each cloud deployment model satisfies different organisational needs, so you must choose a model that will fulfil your organisation's needs. Cloud computing has revolutionized the way organizations work, and advancing us to a new technology era. Amazon Web Services, Microsoft Azure, and Google Cloud Platform are the top cloud service providers that dominate the worldwide cloud market.

1.2. OVERVIEW: GOOGLE CLOUD PLATFORM(GCP)

Google Cloud Platform is a set of services that enables developers to build, test and deploy applications on Google's reliable infrastructure. Google cloud platform is a set of modular cloud-based services that allow you to create anything from simple websites to complex applications. Google Cloud Platform (GCP) is a suite of cloud computing services provided by Google. It is a public cloud computing platform consisting of a variety of services like compute, storage, networking, application development, Big Data, and more, which run on the same cloud infrastructure that Google uses internally for its end-user products, such as Google Search, Photos, Gmail and YouTube, etc. The services of GCP can be accessed by software developers, cloud administrators and IT professionals over the Internet or through a dedicated network connection.

2.GOOGLE CLOUD PLATFORM(GCP)

2.1. WHY GCP?

Google Cloud Platform is known as one of the leading cloud providers in the IT field. The services and features can be easily accessed and used by the software developers and users with little technical knowledge. Google has been on top amongst its competitors, offering the highly scalable and most reliable platform for building, testing and deploying the applications in the real-time environment.

Apart from this, GCP was announced as the leading cloud platform in the Gartner's IaaS Magic Quadrant in 2018. Gartner is one of the leading research and advisory company. Gartner organized a campaign where Google Cloud Platform was compared with other cloud providers, and GCP was selected as one of the top three providers in the market.

Most companies use data centers because of the availability of cost forecasting, hardware certainty, and advanced control. However, they lack the necessary features to run and maintain resources in the data center. GCP, on the other side, is a fully-featured cloud platform that includes:

- **Pricing: GCP** leaves all the competition way behind with its highly flexible pricing and is rightly a leader here
- **Scalability:** Scaling down can always be an issue with cloud services. **GCP** lets you scale up and down with extreme ease
- **Custom Machines:** With Custom Machine Types you can easily create a machine type customized to your needs with discount implications up to 50% off
- **Integrations:** Easily use various API's, practice Internet of Things and Cloud Artificial Intelligence
- **Big Data Analytics:** Use Big Query and **Big Data Analytics** to carry out plethora of analytical practices

- **Serverless:** Serverless is a new paradigm of computing that abstracts away the complexity associated with managing servers for mobile and API back-ends, ETL, data processing jobs, databases, and more.

Figure.2.1:GOOGLE CLOUD PLATFORM



2.2. BENEFITS AND KEY FEATURES OF GCP

BENEFITS

Some of the main benefits of Google Cloud Platform are explained below:

Best Pricing: Google enables users to get Google Cloud hosting at the cheapest rates. The hosting plans are not only cheaper than other hosting platforms but also offer better features than others. GCP provides a pay-as-you-go option to the users where users can pay separately only for the services and resources they want to use.

Work from Anywhere: Once the account is configured on GCP, it can be accessed from anywhere. That means that the user can use GCP across different devices from different places. It is possible because Google provides web-based applications that allow users to have complete access to GCP.

Private Network: Google has its own network that enables users to have more control over GCP functions. Due to this, users achieve smooth performance and increased efficiency over the network.

Scalable: Users are getting a more scalable platform over the private network. Because Google uses fiber-optic cables to extend its network range, it is likely to have more scalability. Google is always working to scale its network because there can be any amount of traffic at any time.

Security: There is a high number of security professionals working at Google. They always keep trying to secure the network and protect the data stored on servers. Additionally, Google uses an algorithm that encrypts all the data on the Cloud platform. This gives assurance to the users that their data is completely safe and secure from unauthorized sources.

Redundant Backup: Google always keeps backup of user's data with built-in redundant backup integration. In case a user has lost the stored data, it's not a big problem. Google always has a copy of the users' data unless the data is deleted forcefully. This adds data integrity, reliability and durability with GCP.

KEY FEATURES

The following are some key features of Google Cloud Platform:

- **On-demand services:** Automated environment with web-based tools. Therefore, no human intervention is required to access the resources.
- **Broad network access:** The resources and the information can be accessed from anywhere.
- **Resource pooling:** On-demand availability of a shared pool of computing resources to the users.
- **Rapid elasticity:** The availability of more resources whenever required.
- **Measured service:** Easy-to-pay feature enables users to pay only for consumed services.

2.3. ADVANTAGES OF GCP

There are several advantages of using Google Cloud Platform, such as:

- **Google Cloud Offers Quick and Easy Collaboration:** Multiple users can access the data and simultaneously contribute their information. This is possible because the data is stored on the cloud servers, not on the user's personal computers.
- **Higher Productivity with Continuous Development:** Google is always working on adding new features and functionalities to provide higher productivity to the customers. Therefore, Google delivers frequent updates to its products and services.
- **Less Disruption with Adopting New Features:** Instead of pushing huge disruptive updates of changes, Google provides small updates weekly. This helps users to understand and adopt new features easily.
- **Least or Minimal Data is stored on Vulnerable Devices:** Google does not store data on local devices unless a user explicitly tries to do it. This is because the data stored on local devices may get compromised compared to the cloud's data.
- **Users can access Google Cloud from Anywhere:** The best thing is that a user can easily access the information stored on Google cloud from anywhere because it is operated through web-based applications.
- **Google provides Maximum Security with its Robust Structure:** Google hires leading security professionals to protect user's data. Users get process-based and physical security features made by Google.
- **Users have Full Control over their Data:** Users gain full control over services and the data stored in Google Cloud. If a user does not want to use Google services any longer and wants to delete the cloud data, it can be easily performed.
- **Google provides Higher Uptime and Reliability:** Google uses several resources to provide higher and reliable up-time servers.

2.4. DIFFERENCE OF GCP WITH OTHER CLOUD SERVICES

TABLE 2.4. Difference between GCP,AWS,AZURE

GOOGLE CLOUD	AWS	AZURE
It uses GCE (Google Compute Engine) for computing purposes.	AWS EC2 offers core compute services.	It uses virtual machines for computation purposes.
It uses Google Cloud Storage for storage purposes.	It uses Amazon S3 for storing the data.	It uses a storage block blob that comprises blocks for storing the data.
It offers the lowest price to the customers to beat other cloud providers.	AWS pricing is generally keen to have inscrutable. The overall structure of granular pricing is a bit complex.	Like AWS, Azure pricing structure is also difficult to understand unless you have considerable experience.
It uses Cloud Test labs for App Testing purposes.	It uses a device farm for App Testing purposes.	It uses DevTest labs for App Testing purposes.
It uses Subnet as a virtual network.	It uses VPC as a virtual network.	It uses VNet as a virtual Network.
It follows the Cloud Load Balancing configuration.	It follows the Elastic Load Balancing configuration.	It follows the Load-Balancer Application Gateway configuration.

3. GOOGLE CLOUD PLATFORM SERVICES

Figure 3.1.Cloud platform services

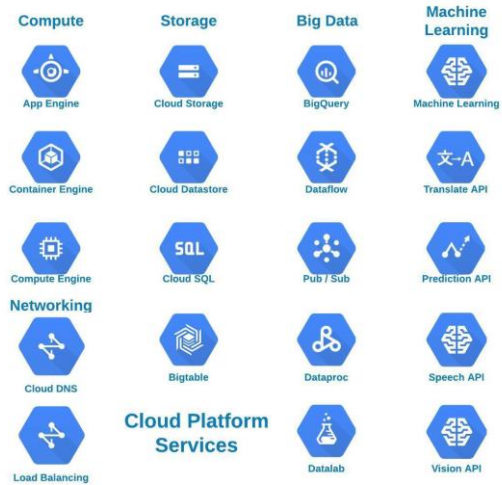


Figure 3.2.Google cloud family

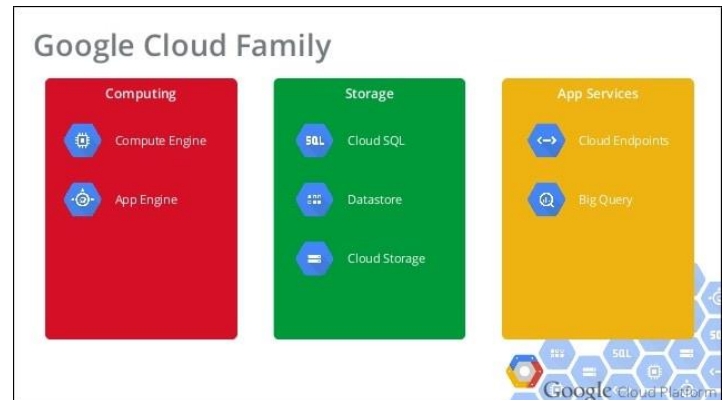


Figure 3.2.Google platform services



3.1. COMPUTE AND STORAGE SERVICES

COMPUTE SERVICES

- Cloud Platform offers both a fully managed platform and flexible virtual machines, allowing you to choose a system that meets your needed.
- Use App Engine, a Platform-as-a-Service, when you just want to focus on your code and not worry about patching or maintenance.
- Get access to raw virtual machines with Compute Engine and have the flexibility to build anything you need.

STORAGE SERVICES

GCP has the following storage services:

- **Google Cloud Storage:** It is an online data storage web service that Google provides to its users to store and access data from anywhere. The service also includes a wide range of features like maximum performance, scalability, security and sharing.
- **Cloud SQL:** It is a web-service that enables users to create, manage, and use relational databases stored on Google Cloud servers. The service itself maintains and protects the databases, which helps users focus on their applications and other operations.
- **Cloud Bigtable:** It is known for its fast performance and highly manageable feature. It is a highly scalable NoSQL database service that allows collecting and retaining data from as low as 1 TB to hundreds of PB.

3.2. APP SERVICES

- App services include BigQuery , Cloud Endpoints, Caching, Queues.
- Use Google APIs and services to quickly enable a wide range of functionality for your application.
- You don't need to build these from scratch, just take advantage of easy integration within Cloud Platform.

3.3. GCP PRICING

When it comes to pricing, Google Cloud Platform is the cheapest solution in the market. GCP is not only low on price but also offers more features and services than other providers.

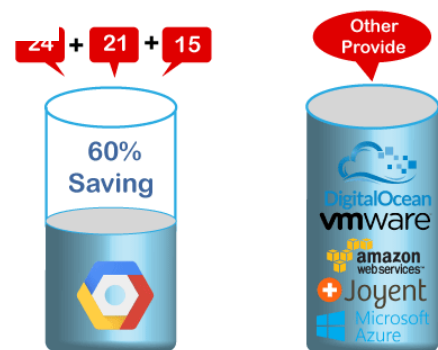
When comparing GCP with other leading competitors, it has more benefits over them. Google provides its users a massive 60% savings,

Figure 3.3.1.GCP Pricing

including:

- 15% rightsizing recommendation
- 21% list price differences
- 24% of sustained usage discounts

Some of the main benefits of GCP pricing are:

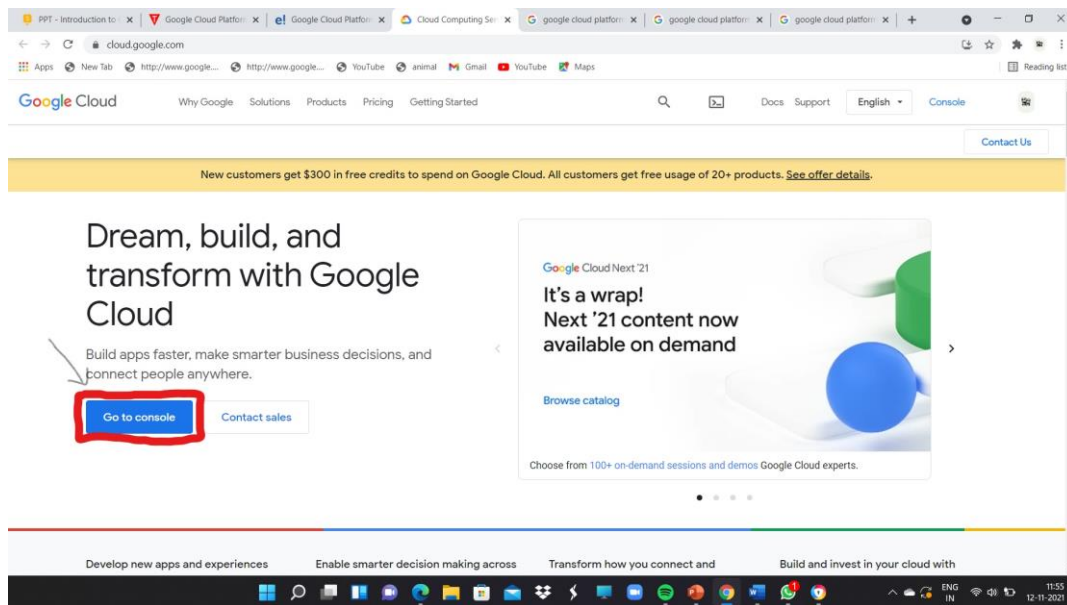


- **No Hidden Charges:** There are no hidden charges behind the GCP pricing. Google's pricing structure is straightforward and can be easily understood.
- **Pay-as-you-go:** Google offers its customer 'use now, pay later' option. So, users will have to pay only for those services which they want to use or already using.
- **No Termination Fee:** Users are free to stop using Google services whenever they want, and there will not have to pay any termination fee. That means the moment users stop using Google services; they stop paying for it.

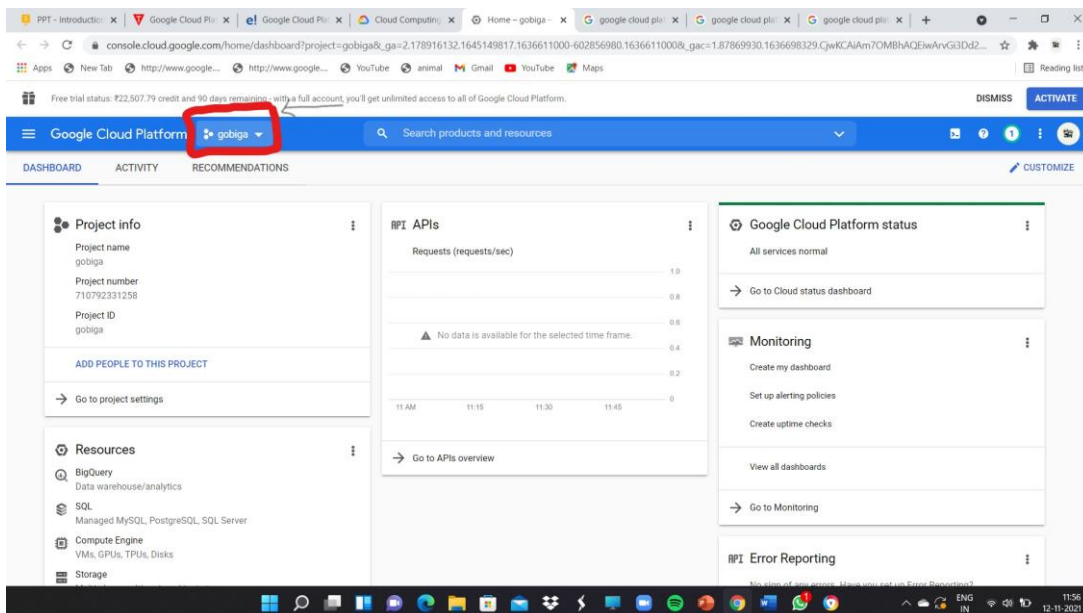
4. RESULTS AND DISCUSSION, PERFORMANCE ANALYSIS, METHODOLOGY

4.1. CREATE AN VM INSTANCE

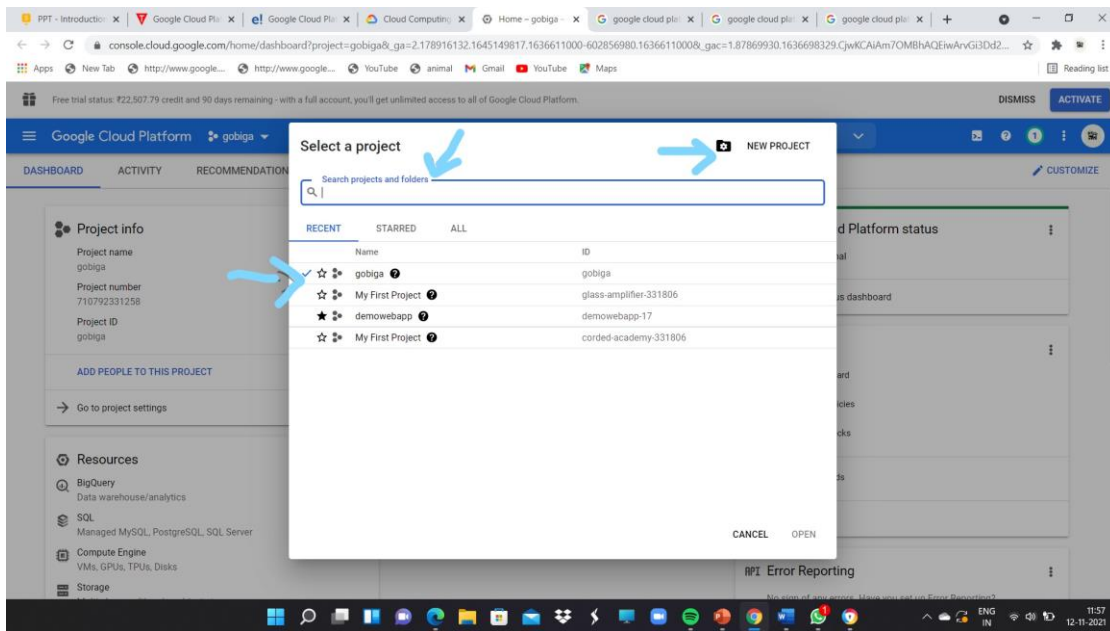
- **Step 1:** Once you have an account, click on this link to open the below shown web page. Go ahead and click on Go To Console.



- **Step 2:** Following web page should open. On top left corner you will have a drop down option. It has a by default project selected. Click on it to explore more options.

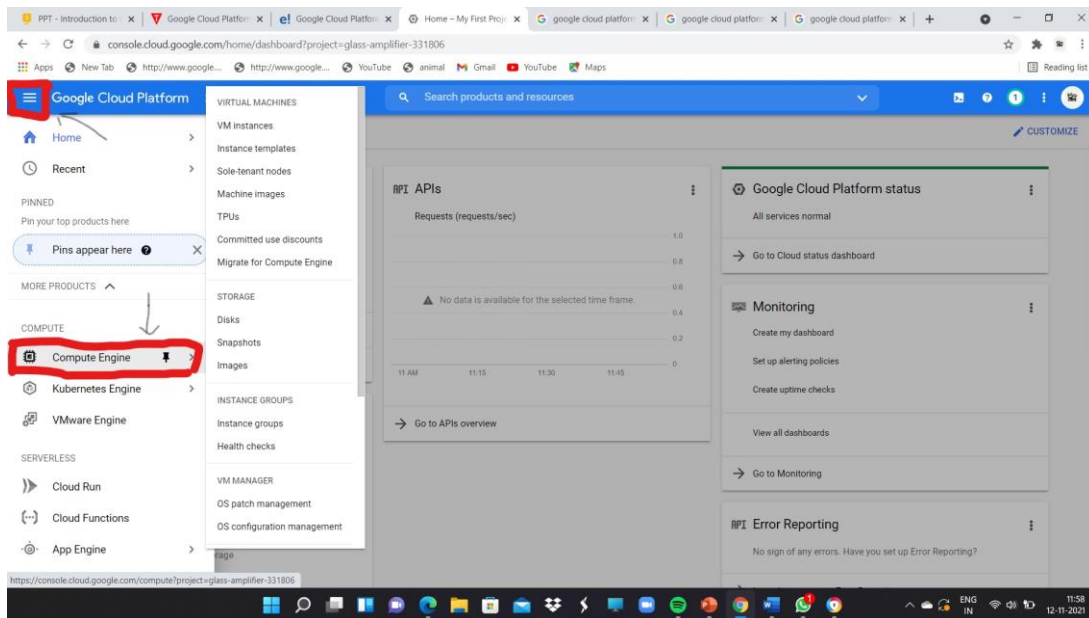


- **Step 3:** The Web page that appears next, lets you select an existing project which you can by searching in the search tab or can click on plus sign to add a new one. When you add a new project, first timers will require to set billing



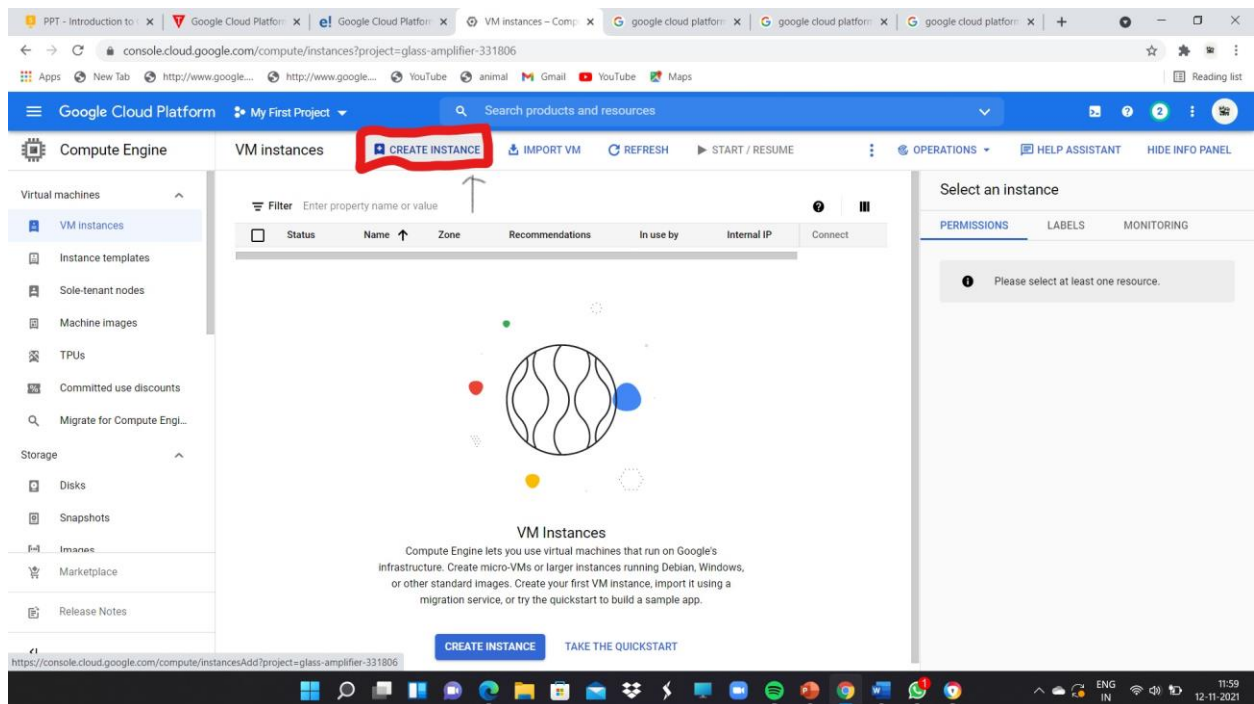
option which is two step simple process.

- **Step 4:** Next click on drop down option on the top left corner and select the Compute Engine Option.

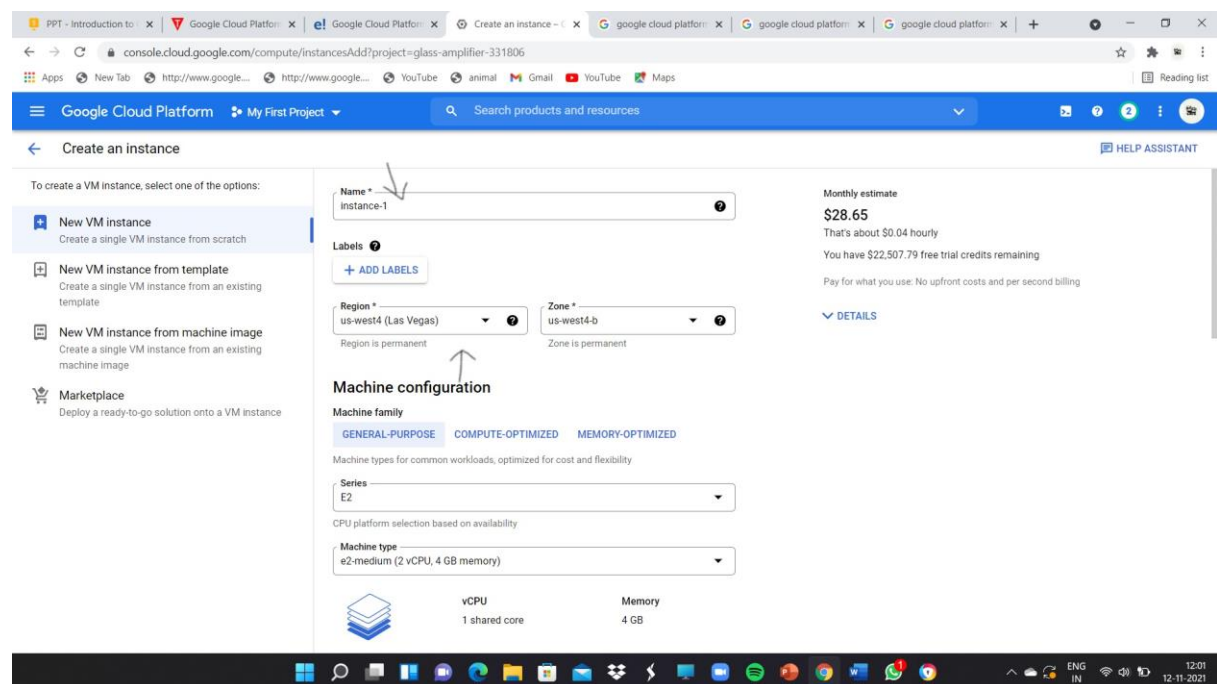


- **Step 5:** Now, click on create instance to create the same.

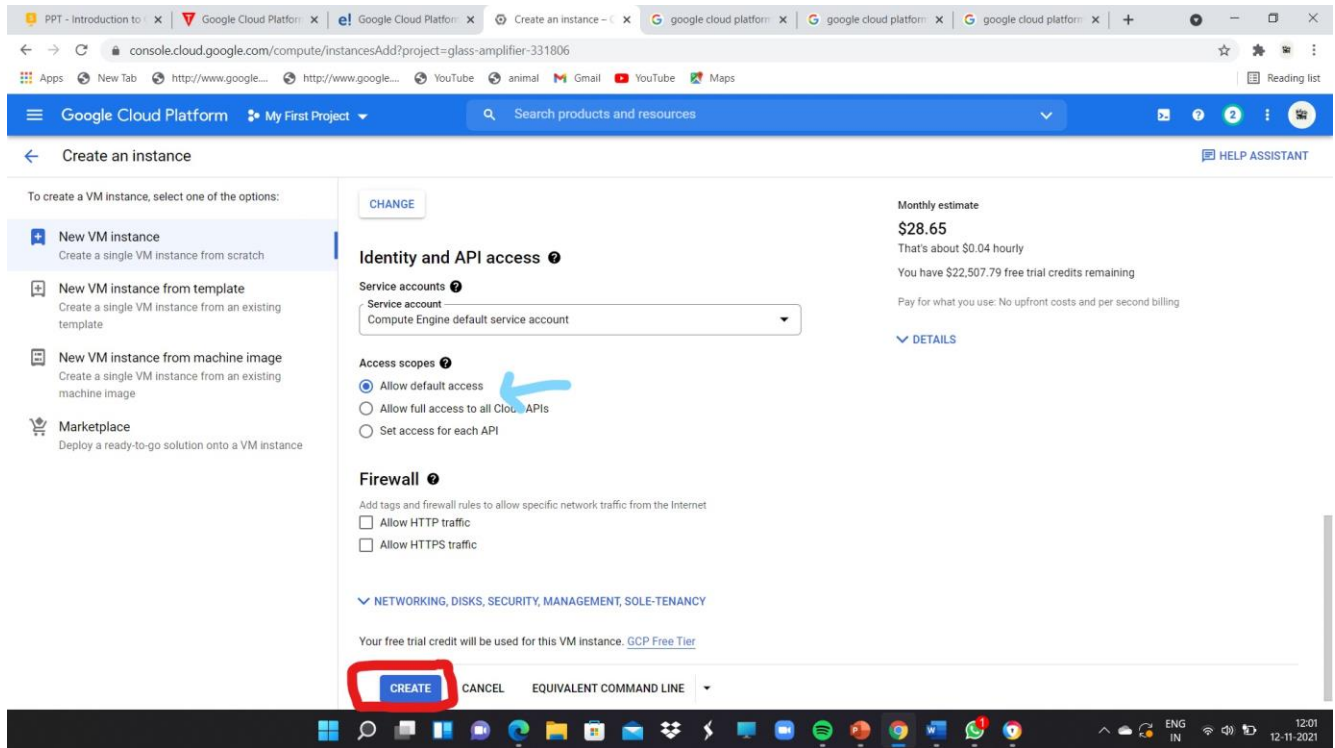
- **Step 6:** Next go ahead and fill in the details for your instance. You may



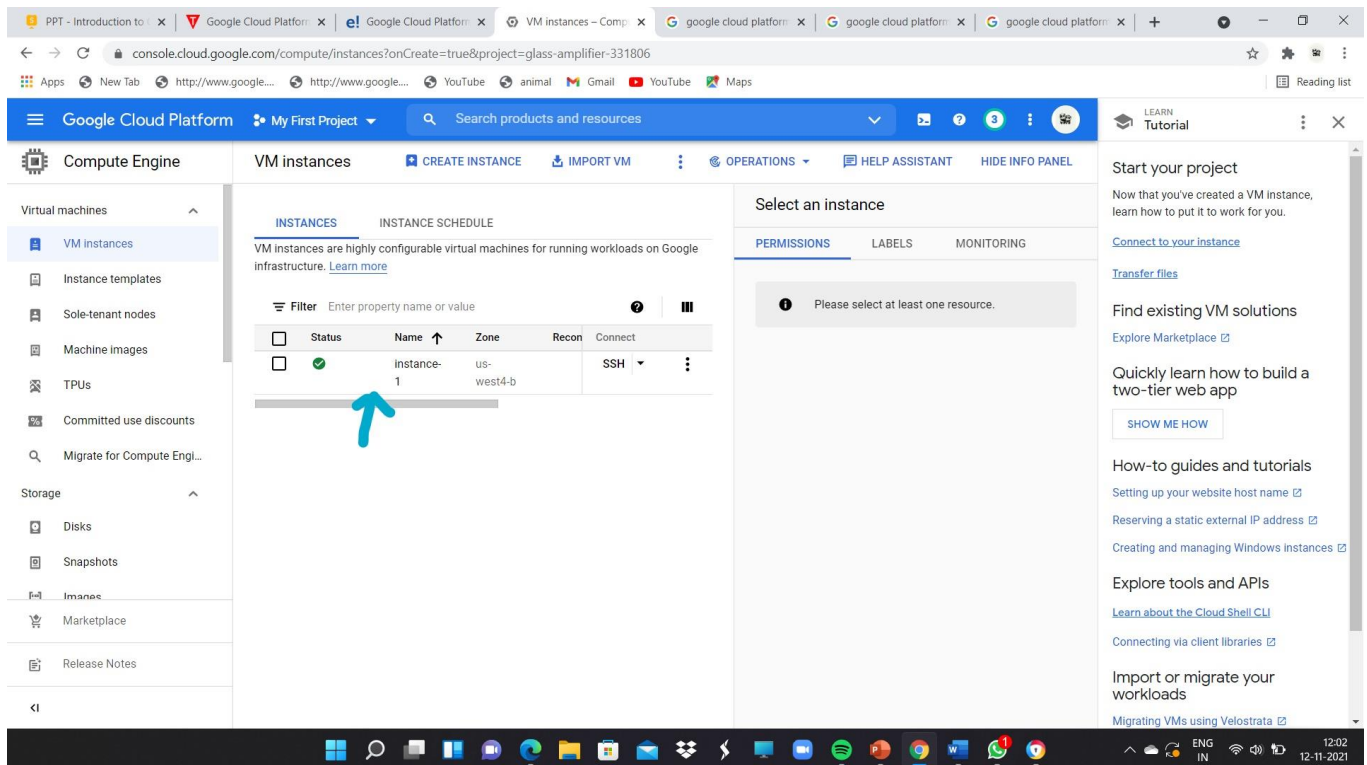
customise your instance specifications to suit your needs. Note that the cost for instance may vary as per the location and memory you choose. You are free to explore that part of the concern.



- **Step 7:** Fill in the details and then click on create.

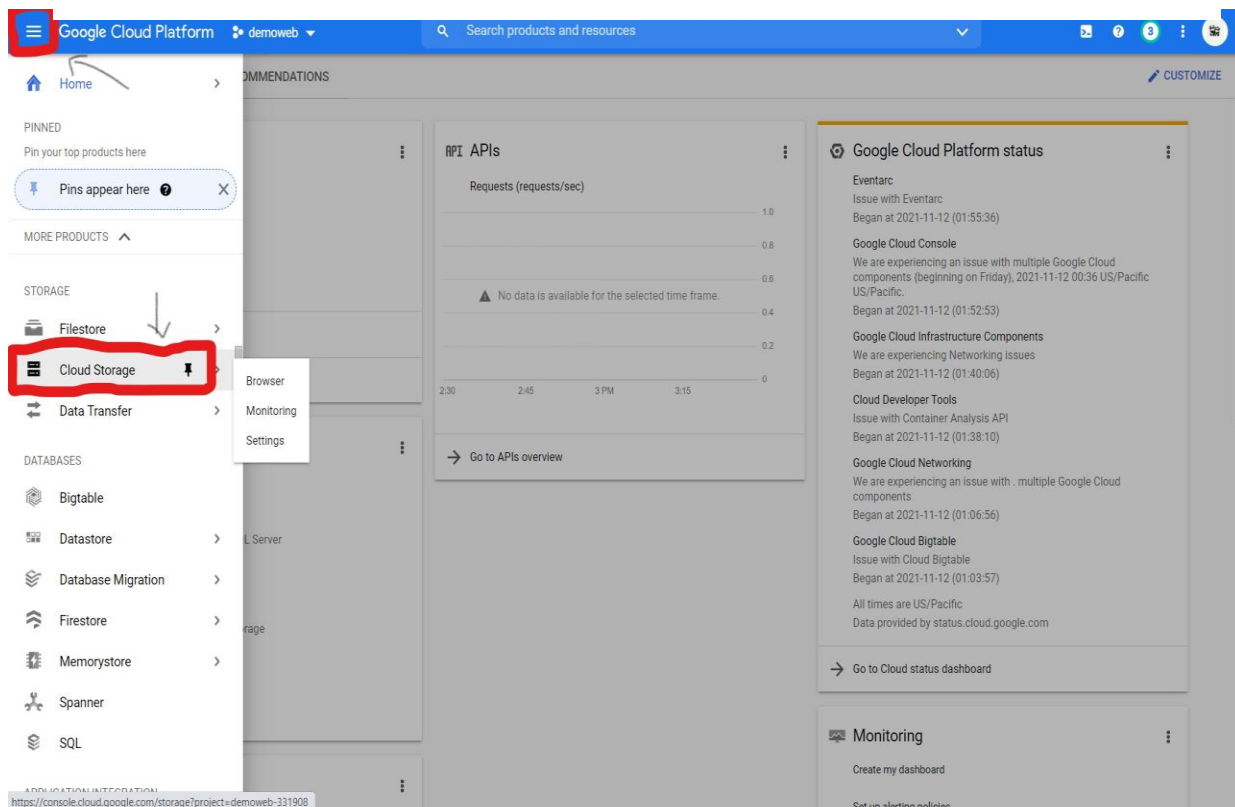
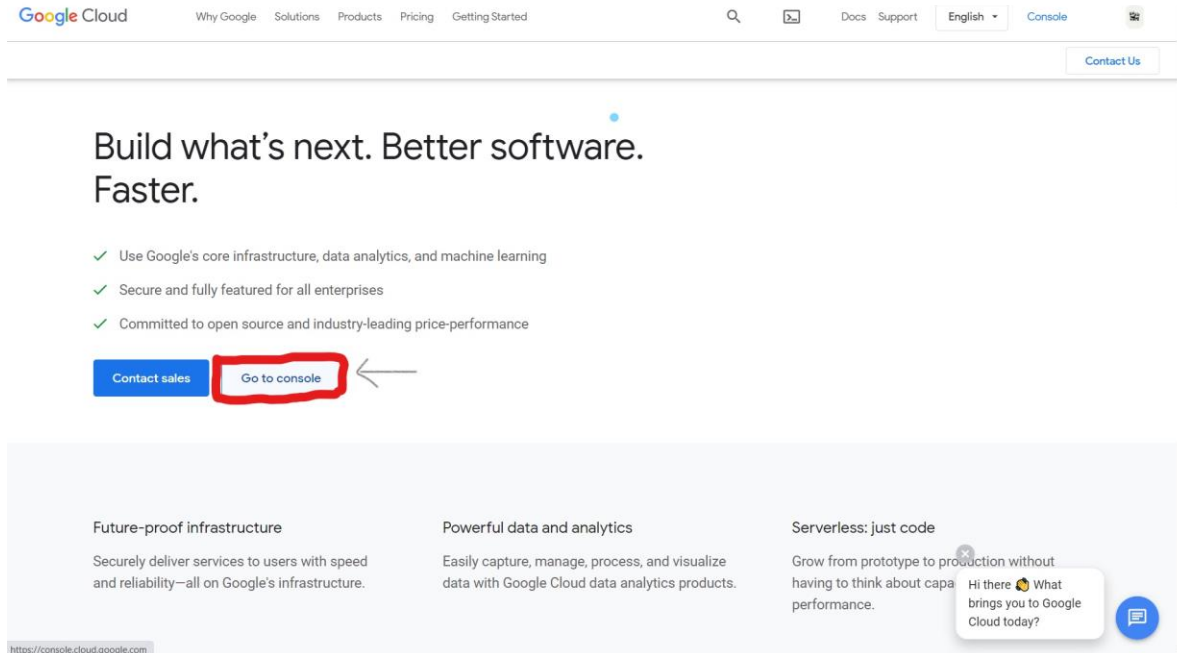


- **Step 8:** And there you go, you have an instance for your use.



4.2. HOST YOUR WEBPAGE IN GCP

1. In the Google Cloud Console, go to the Cloud Storage **Browser** page.



2. Click **Create bucket**.

Free trial status: ₹22,507.79 credit and 90 days remaining - with a full account, you'll get unlimited access to all of Google Cloud Platform. DISMISS ACTIVATE

Google Cloud Platform gobiga Search products and resources

Cloud Storage Browser **CREATE BUCKET** DELETE REFRESH

Filter Filter buckets

☐	Name ↑	Created	Location type	Location	Default storage
☐	demoweb17	Nov 11, 2021, 7:13:07 PM	Multi-region	asia (multiple ...	Standard
☐	demowebpag	Nov 11, 2021, 7:06:08 PM	Multi-region	asia (multiple ...	Standard
☐	demowebpg	Nov 12, 2021, 3:19:41 PM	Multi-region	us (multiple re...	Standard
☐	exampledemo17	Nov 11, 2021, 9:04:50 PM	Multi-region	asia (multiple ...	Standard
☐	lifestylewebpage	Nov 11, 2021, 8:56:44 PM	Multi-region	asia (multiple ...	Standard

Select a bucket

PERMISSIONS LABELS

Please select at least one resource.

Now viewing project "gobiga" in organization "No organization"

https://console.cloud.google.com/storage/create-bucket?project=gobiga

3. On the **Create a bucket** page, enter your bucket information. To go to the next step, click **Continue**.

- For **Name your bucket**, enter a name that meets the bucket name requirements.
- For **Choose where to store your data**, select a Location type and Location where the bucket data will be permanently stored.
- For **Choose a default storage class for your data**, select a storage class for the bucket. The default storage class is assigned by default to all objects uploaded to the bucket.

Note: The **Monthly cost estimate** panel in the right pane estimates the bucket's monthly costs based on your selected storage class and location, as well as your expected data size and operations.

- For **Choose how to control access to objects**, select whether or not your bucket enforces public access prevention, and select an **Access control model** for your bucket's objects.

Note: If public access prevention is already enforced by your project's organization policy, the **Prevent public access** toggle is locked.

- For **Choose how to protect object data**, configure ****Protection tools**** if desired, and select a ****Data encryption**** method.

4. Click **Create**.

5. In the list of buckets, click the name of the bucket that you created.

The *Bucket details* page opens with the *Objects* tab selected.

6. Click the **Upload files** button.

The screenshot shows the Google Cloud Platform interface. At the top, there's a navigation bar with 'Google Cloud Platform' and a search bar. Below it, the 'Cloud Storage' section is active. The 'Bucket details' page for 'demowebpg' is displayed. The 'OBJECTS' tab is selected. The 'UPLOAD FILES' button is highlighted with a red rectangle. The page shows bucket metadata like Location (us), Storage class (Standard), and Public access (Public to internet). A table of objects is visible with one entry 'full stack/'.

7. In the file dialog, browse to the desired file and select it.

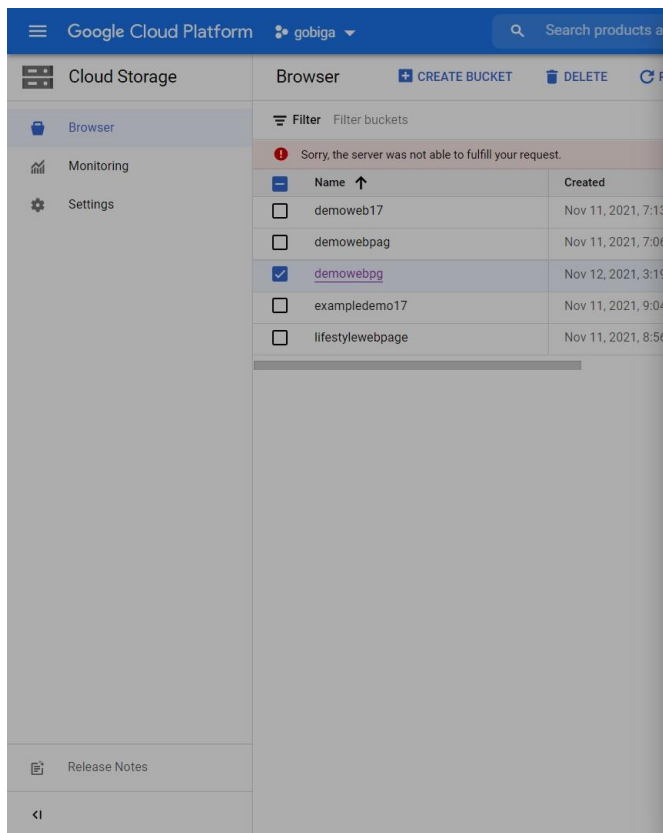
8. In the list of buckets, click the name of the bucket that you want to make public.
9. Select the **Permissions** tab near the top of the page.
10. Click the **+ Add** button.

The screenshot shows the Google Cloud Platform console interface. On the left, the 'Cloud Storage' sidebar is visible with options like 'Browser', 'Monitoring', and 'Settings'. The main area displays a list of buckets. The bucket 'demowebpg' is selected, and its details are shown on the right. The 'Permissions' tab is active, showing 'Public access' set to 'Public to internet' and 'Access control' set to 'Uniform: No object-level ACLs enabled'. The '+ ADD PRINCIPAL' button is highlighted with a red box.

Name	Created	Location type	Location	Default storage
demoweb17	Nov 11, 2021, 7:13:07 PM	Multi-region	asia (multiple ...)	Standard
demowebpag	Nov 11, 2021, 7:06:08 PM	Multi-region	asia (multiple ...)	Standard
demowebpg	Nov 12, 2021, 3:19:41 PM	Multi-region	us (multiple re...)	Standard
exampledemo17	Nov 11, 2021, 9:04:50 PM	Multi-region	asia (multiple ...)	Standard
lifestylewebpage	Nov 11, 2021, 8:56:44 PM	Multi-region	asia (multiple ...)	Standard

The *Add principals* dialog box appears.

11. In the **New principals** field, enter allUsers.



Add principals to "demowebpg"

Add principals and roles for "demowebpg" resource

Enter one or more principals below. Then select a role for these principals to grant them access to your resources. Multiple roles allowed. [Learn more](#)

New principals

all

allUsers

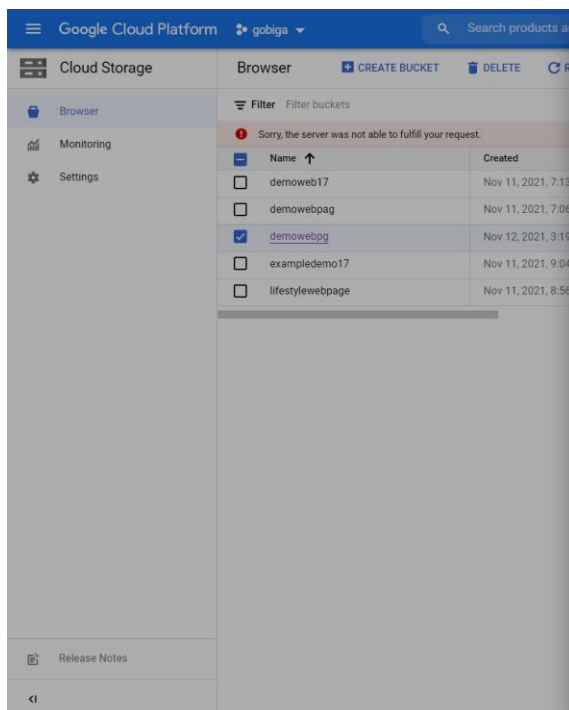
allAuthenticatedUsers

+ ADD ANOTHER ROLE

SAVE CANCEL

12. In the **Select a role** drop down, select the **Cloud Storage** sub-menu, and click the **Storage Object Viewer** option.

13. Click **Save**.



Add principals to "demowebpg"

Add principals and roles for "demowebpg" resource

Enter one or more principals below. Then select a role for these principals to grant them access to your resources. Multiple roles allowed. [Learn more](#)

New principals

allUsers

Select a role

Filter type to filter

Cloud Deploy

Cloud Migration

Cloud Storage

Cloud Storage Legacy

Dataflow

Dataproc

Firebase

Firebase Dynamic Links

Storage Admin

Storage Object Admin

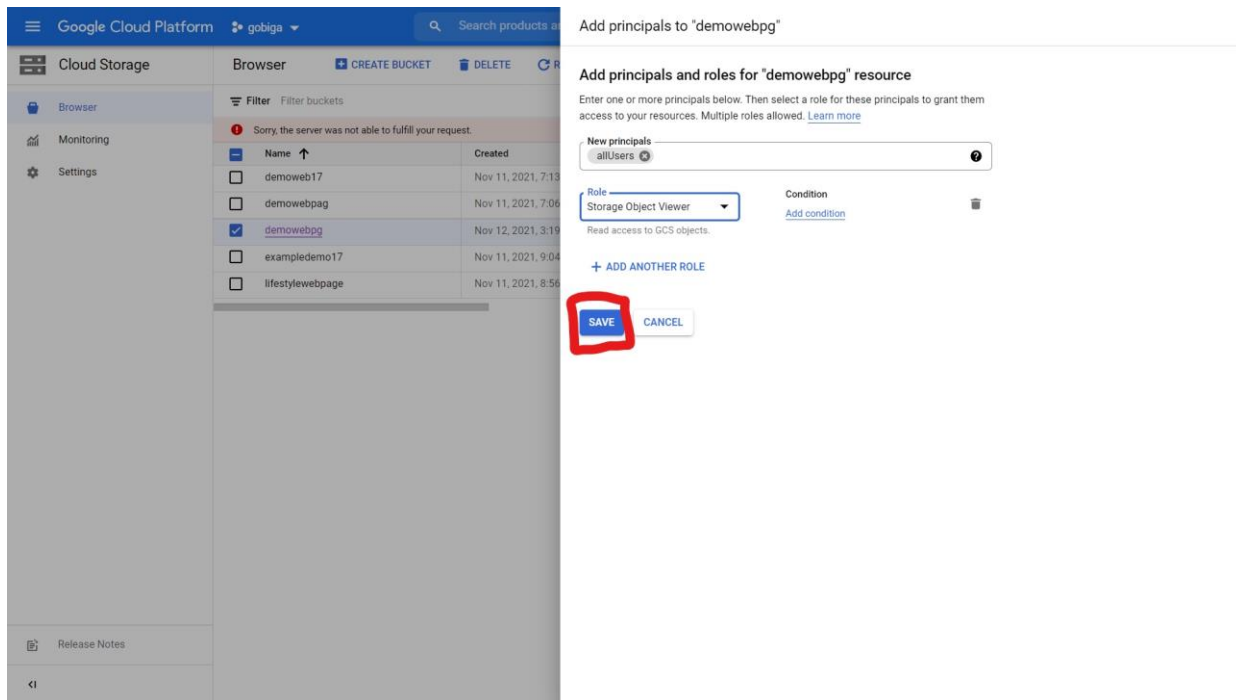
Storage Object Creator

Storage Object Viewer

MANAGE ROLES

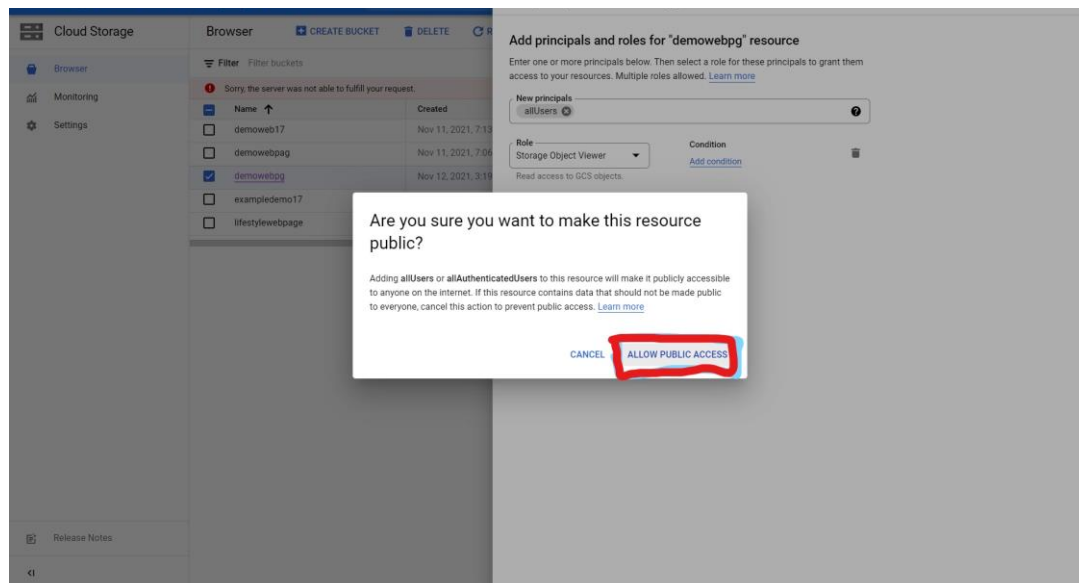
Storage Object Viewer

Read access to GCS objects.



14. Click **Allow public access**.

Once shared publicly, a **link** icon appears for each object in the *public* access column. You can click this icon to get the URL for the object.



15. Then click onto the website home page link, a public url is created. On clicking it, your webpage is ready to go. It can be accessed by anyone around the world by clicking on the public url.

The screenshot shows the Google Cloud Platform interface. On the left, there's a sidebar with 'Cloud Storage' selected. The main area is titled 'Bucket details' for the 'demowebpg' bucket. It shows a list of objects with columns: Name, Size, Type, Created, Storage class, Last modified, and Public. The 'class2.html' file is highlighted with a red box and an arrow. Other files include .DS_Store, .git/, .vscode/, burger.jpg, hero.jpg, heroShape.svg, herobgpattren.svg, iceCream.jpg, jason-dent-S53ekmu8KxE-unsplash, logo.png, man.png, pizza.jpg, restaurant.jpg, restaurant1.jpg, restaurant2.jpg, restaurant3.jpg, restaurant4.jpg, style.css, and event/.

The screenshot shows the 'Object details' page for the 'class2.html' file. It has tabs for 'LIVE OBJECT' and 'VERSION HISTORY'. Below the tabs are buttons for 'DOWNLOAD', 'EDIT METADATA', 'EDIT PERMISSIONS', and 'DELETE'. The 'Overview' section shows details like Type (text/html), Size (5.4 KB), Created, Last modified, Storage class, and Custom time. The 'Public URL' field is highlighted with a red arrow and contains the URL: <https://storage.googleapis.com/demowebpg/full%20stack/class2.html>. Other fields include Authenticated URL, gsutil URI, Permissions, Protection, and Encryption type.

Order food from
favourite restaurants
near you.

Order Now



Your food will be prepared safely with an experienced chef, without compromising on the quality and hygiene.

Explore our menu



Burgers

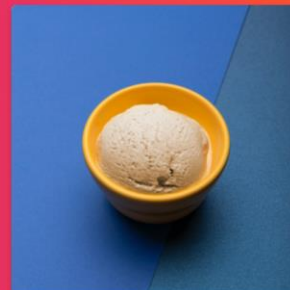
Burger King, McDonalds, Burger Place

+3



Pizza

Pizza Hut, Domino's Pizza +3



Ice Creams

Baskin Robins, Ibaco +3

Order From 100s of
restaurants



Stay Updated

email@email.com

Get Updates

Stay Updated

email@email.com

Get Updates

When a man's stomach is full it makes no difference whether he is
rich or poor.

zomato

Pricing
Terms and condition
Partnership
Career
Contact

5.SUMMARY AND CONCLUSION

In conclusion, cloud computing is recently new technological development that has the potential to have a great impact on the world. It has many benefits that it provides to its users and businesses. For example, some of the benefits that it provides to businesses, is that it reduces operating cost by spending less on maintenance and software upgrades and focus more on the businesses itself. But there are other challenges the cloud computing must overcome.

Google Cloud Platform is primarily a public cloud provider, though Google has dramatically increased its focus on hybrid and multi-cloud workloads using Anthos, allowing users to manage workloads on GCP and Google Kubernetes Engine as well as on AWS and Azure. Google continues to gain market share among enterprises and will likely remain a strong competitor in the public cloud market.

REFERENCES

- NPTEL Cloud Computing course
- <https://www.javatpoint.com/google-cloud-platform>
- <https://www.edureka.co/blog/google-cloud-platform-tutorial/>
- <https://cloud.google.com/storage/docs/hosting-static-website>