How cloud has enabled you to embrace and access new technology in your projects?

Before going deep down about my project that how cloud has enabled me to embrace and access new technology, we must know about what cloud is and what cloud computing is.

What is cloud computing?

The cloud is a nebulous and evolving term that refers to a range of services delivered through the Internet. Cloud computing is storing and accessing data remotely instead of relying on local services or private datacenters.

It was necessary for organizations to purchase and maintain their own servers before cloud computing existed. This required buying enough server space to prevent downtime and outages, and to accommodate peak traffic volumes. Today's cloud service providers enable businesses to reduce their reliance on onsite servers, maintenance staff, and other costly IT resources.

There are three types of cloud computing deployment models: private cloud, public cloud, and hybrid cloud.

Private Cloud:

Private clouds are dedicated cloud environments for a single business entity, with physical components stored on-premises or at a vendor's datacenter. Because private clouds are dedicated to just one business, this model provides a high degree of control. A private cloud infrastructure typically consists of on-site computing resources, advanced security protocols, and the ability to extend computing resources as needed in a virtual environment.

Public Cloud:

In a public cloud, data and applications are stored and accessed through the internet. They are completely virtualized, allowing users to take advantage of shared resources as required. Because these resources are delivered over the web, the public cloud deploy model enables organizations to scale more easily-

the ability to pay for cloud resources on a need-to-know basis is a huge advantage over local servers.

Hybrid Cloud:

A hybrid cloud combines the benefits of both private and public cloud computing, allowing organizations to utilize the benefits of shared resources while maintaining critical security measures. The hybrid cloud model allows companies to store confidential data internally and access it via applications running in the public cloud. To comply with privacy regulations, for example, an organization could store sensitive user data in a private cloud and perform resource-intensive computation in the public cloud.

When I was in my 3rd year of my college, I have very less knowledge about cloud and how it actually works and what are the available cloud resources are there. At the time of pandemic, the physical offices, classes everything has been shifted to the virtual mode. While working from Home, People were getting depressed, suffering from anxiety, mental illness and many more health-related issues. There was no any platform like meet, zoom etc to communicate with people and hangout with friends virtually in India. So what we thought is basically why don't we had a platform that people can come connect and collab together with a better user experience and make there work in a productive manner.

At that time, we decided to let's get started with the planning phase. We started planning by preparing SDLC. When it gets started, we have been through lots of difficulties that how it going to happen and how it will implement and so on. We started learning about different technologies whether it is frontend, backend or server side. Initially we made a team where we divided our works like who is going to work on frontend, similarly for backend and server side.

After onward, we decided to put a model where it feels like you are working on your own offices and class rooms. So, for that SVG Images comes to our mind and made different models for our platform which gives you feel to work on your own office. Till now everything was going fine, then after we have added a feature which give an avatar to all the users which is so unique. We Have added a feature like video - audio calling, movement of avatar from one place

to another in the model. We have used different API's for different features. some how we did and built our project. But, after building the project what is forgot is how to deploy our code or project live so that any one can access our platform so that people can get our project and use the service. Then Cloud comes to our mind but nobody have worked on it, no-body knows it well. For cloud, there are also different types of cloud platform available so which one should we use and which one is better. Aws is one of the cloud platform which we decided to work with. We walkthrough it some days and started learning about how it works and to be implemented. There are also many tools and resources to work for. We started learning about different tools and technologies in an AWS cloud. Why we have chosen AWS because the dashboard is so user friendly and it is some what easy to use.

We learnt different tools like EC2 instance, s3 bucket, VMs and so on. We Created our own VM and deployed our project. We have used nginx server for the proper communication between user and database from Aws. We also have used RDS database in an Aws cloud because at that time we only have the knowledge of MySql database so we decided to go with this one.

AWS Cloud provides different types of advantages like:

1. **Scalability**
2. **Accessibility**
3. **Reliable**
4. **Shared Infrastructure**
5. **Cost-effective**
6. **Easy Maintenance, etc.**

we also have hosted our project on the public domain as www.covirtual.in which is live and ready to use by the users itself. We have deployed our project successfully in an Aws cloud.

You can have a look below I attached some images belongs to my project or you can also visit to www.covirtual.in and Signup there and get a hands-on experience with the platform.

pic:- Covirtual Dashboard

pic:- Covirtual BreakRoom

We also have added a Break Room feature were people can chill or hangout and connect with new people in there free time sitting any corner of the world.

Amazon Web Services (AWS) cloud is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centers globally.

Aws cloud provides different types of resources and products like AI/Ml, Web Apps, Databases, Storage, Analytics, etc.

Conclusion:

With this cloud technology overview, we get hands-on experience with how it works to bring you the best and most efficient software services from across the world. The choice of the ideal cloud computing infrastructure employed by a provider usually depends on the budgeting, the purpose, and the nature of the service. With modern developments and the latest cloud computing technology trends, one can expect cloud services to play a much more significant role in our daily lives in the coming years.