



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES,
DEHERADUN**

SESSION: 2023-24

CLOUD APPLICATION DEVELOPMENT

**TITLE: A Secure and Efficient Messaging and Document
Sharing Collaborative Platform**

WEEK 2

SUBMITTED BY-

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Project Title:

A Secure and Efficient Messaging and Document Sharing Collaborative Platform

Architecture style:

In This Application the architectural style that would be used would be Client-server Architecture. In this type of Architecture, the server would serve the requests of the client, i.e. the client is connected the central device/ central server over any network such as over the Internet. The client would send some request to the server and the server would then perform some action upon the request such as fetch some data or update some data and then return the requested information back to the client.

The server is the central node here and is responsible for making all communication with the client/user. It is responsible for processing all the requests sent by the client.

Client-Server Architecture enables scalability and flexibility for the Messaging and Document sharing application. The server-side architecture for this Application has some characteristics of MIMD as server can handle multiple requests from different clients simultaneously and also can process it simultaneously.

Security features can also be provider through this, As the server can be secured by using security techniques such as encryption, authentication and authorization features.

Client-Server Architecture is suited for this application:

1. Firstly the Client device would connect to the Server through/over some network.
2. The client/user will then send some request over to the server.
3. The Server then receives the request and then processes the request and performs necessary actions required for it.
4. After processing the request the server send the information to the client.
5. The client receives the response from the server

Ques 1: As a final output of the project, you are expected to upload your designed applications on public cloud (AWS/Azure) and hence need to analyse and explain which application platform will be following, and why?

Seeing the Requirements, both Azure and AWS are fully capable to host this application. Ultimately the choice would depend upon the factors such as Budget, any specific features, expertise, etc. For this Application the Platform I would prefer would be AWS (Amazon Web Services), this is because:

1. Scalability: AWS provides a highly robust and scalable infrastructure, which would certainly be helpful to make accommodate extra users.
2. Budget: AWS has a unique flexible pricing model that makes to suitable for our application.
3. AWS supports WebSocket through Amazon API Gateway.
4. AWS has multiple data centre located around the world providing with lower latency and also redundancy.
5. AWS provides in-house services such as database services, storage, network services, hence making it easier to deploy the application here.
6. AWS also provides security features, which would be useful in securing the server, some of the services it provides are WAF, VPC, IAM, etc.
7. Data storage: AWS provides us with the highly scalable data storage service, i.e S3 storage, which can be used for scalable and reliable storage
8. AWS integrates with other cloud providers as well as on-premise environments, making it simple to move data and applications between them.