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Subject- Cloud Application Development

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**Online Voting System**

This project is web based on Django framework project that uses different or following technologies for the complete deployement of the project on AWS. It will be

This requires AWS deployement:

1. **Scalability**- As, this application requires high availability because all the users will be using this portal. So, it requires minimal downtime and high availability. Load can also be balanced through the load balancer.
2. **Real time availablity**- It gives us real time availability because it need real time for the users to avail the real time access.
3. **Monitring and measurement**- not a necessity in our project.

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

I will be deploying this project on AWS because I have a hands on experience on AWS and I am having a current free tier has the required services which we will be using for the proper deployement of my project i.e. using EC2 instance for the Server Hosting, using S3 buckets for the file which will be handling all the dynamic data of the users, IAM which will be used for the security purposes like Authentication.

**TECHSTACK-** The technology we are going to use in this project is:

1. Language on which project is based upon?

It is based on Python(Django framework)

1. Database Support

It is connected with Sequelite.

1. AWS Services:

* EC2 instance or Lambda Function
* Elastic Beanstalk(if required)
* Cognito or IAM(Security Groups, Roles, KMS etc)
* S3 bucket(if necessary)

Some of the AWS prerequisites that we will require for the deployement of the Django framework deployement on AWS are as follows:

* Python 3.7
* pip
* virtualenv
* awsebcli

**Basic Idea of Deployment of our Web Application on AWS?**

The deployement of our application will take place on AWS EC2 instance which will be using the public IP of the user portal so that the IP address can be used by the users so, that he can choose the repective candidate they want to vote for and the Admin or root user also requires the portal which will also be accessed by the public IP SSH client which will connect the whole application. S3 bucket will also play a role if being a necessity for the database requirements data collections as every time the user will create a user id for the voting process for the following leader the user data will be stored at S3 Bucket. Security will also be a main aim for our project as IAM (Identity Access and Management) will allow us more securely conduct the voting process authenticating and verifying the public user id. Elastic load balacing can also be a factor which will be required so, that we can handle the load balancing and have a clone if site is down can redirect to another webpage.

**Architectural Style of My Project?**

Our project is based upon parellel processing in which multiple users are accessing the portal on the same time which requires the deployement of the website. It will parellely process the data for multiple entities dynamically on the web content and will show the multiple output as per the time allocated for the voting process. It can be used for multiple users which are accessing the same functunality of the voting process on the same time for the same leader candisate and that candidate may be multiple. So, the multiple users are giving the access to many users for their portal. MIMD based architecture best suits as per the needs of the web application because the inputs from multiple users are going to be act as the ballot for the multiple users that can be accessed within portal and the captured inputs from the multiple users may be acted as the template to release the multiple data. After the multiple data or the desired candidate is chosen from every field they are released as per the adequate result. Multiple users will produce the multiple data.