SG436

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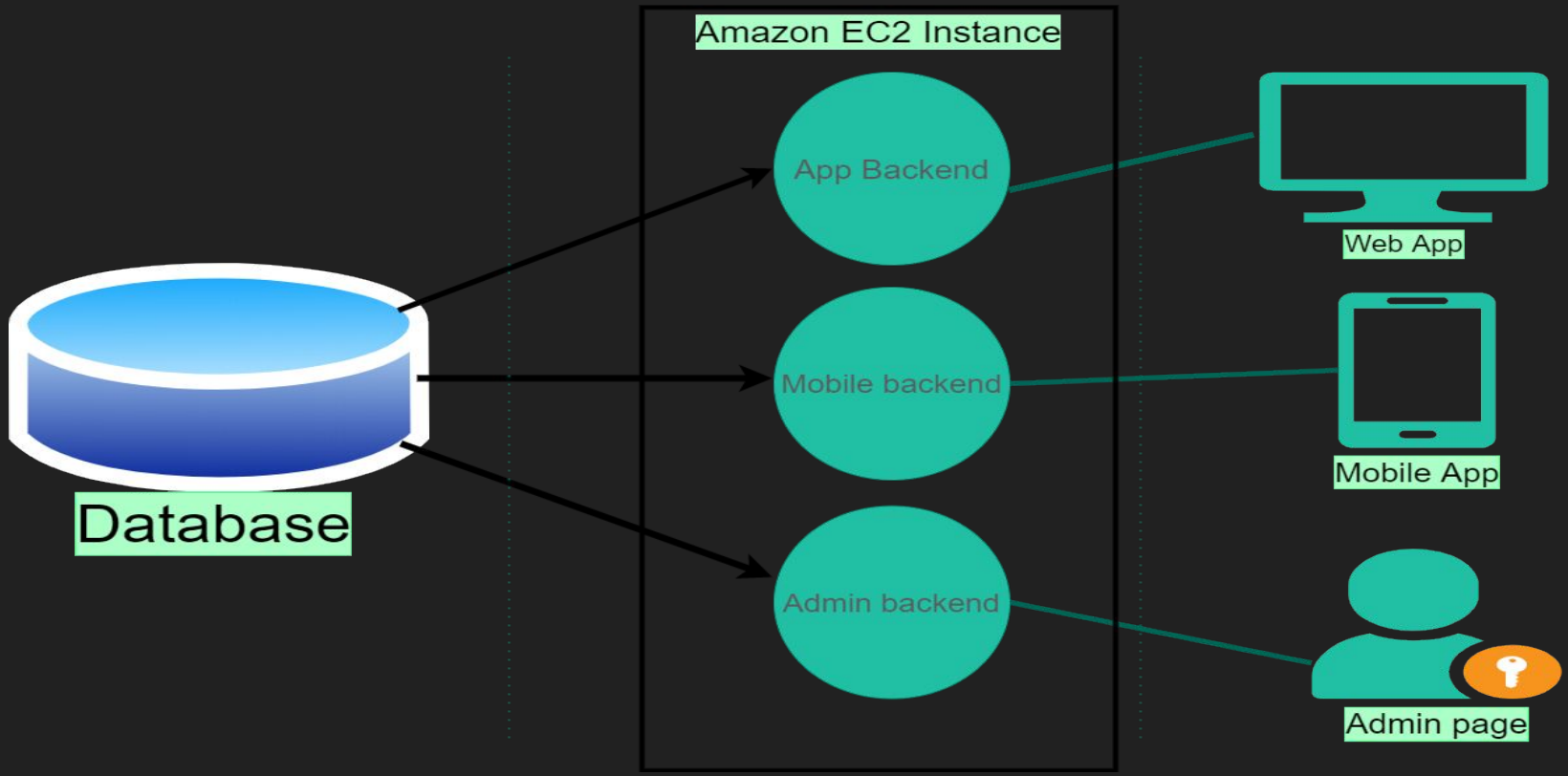
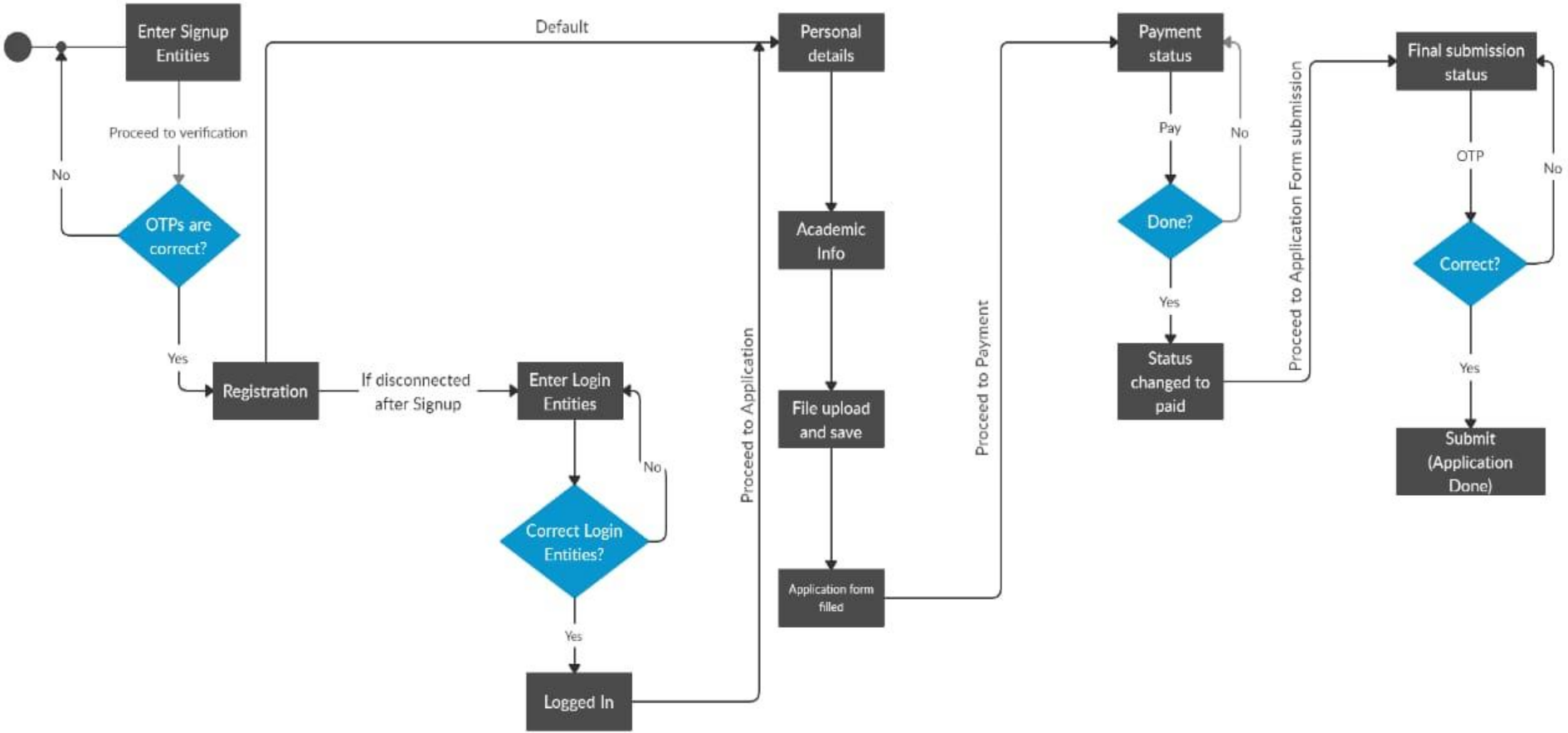
1. Web Application Demo
2. Aya Demo in Android

Our System’s Overview




Enter Signup Entities
Proceed to verification
No
OTPs are correct?
Yes
Registration
Default
If disconnected after Signup
Enter Login Entities
No
Correct Login Entities?
Yes
Logged In
Proceed to Application
Personal details
Academic Info
File upload and save
Application form filled
Proceed to Payment
Payment status
Pay
No
Done?
Yes
Status changed to paid
Proceed to Application Form submission
Final submission status
OTP
No
Correct?
Yes
Submit (Application Done)

1. App size

- We reduced the app size to 4.7 MB from 8.7MB
- We can also make use of Android App Bundles while uploading it to playstore
- Our system also provides a feature called progressive apps by google. It will allow a candidate to download a light weight app on any platform. It does not require any installation.

2. Data flow between Mobile App and Server

The data is secured using SSL/TLS layer. We are not storing data to database directly, we are using an intermediate server.

WHY?

- Reduce the app size by reducing preprocessing of data at local app.
- App does not have direct access to database

3. How to secure from intruders?

- There will be only selected admins, who can access the database, and admin page.
- The server will be on AWS which will allow traffic on specific ports
- We will make use of UFW(Uncomplicated FireWall) on EC2
- For MongoDB database only admins will have full access. There are separate rules for clients(Web app and Android App) and Admin

More security

- Session management using cookies
- The password are stored in hash form
- Setup UWF to save from various types of attacks.

What next?

Host everything on AWS or Heroku

To implement new suggestions...

Authentication

- Aadhar Verification
- Mobile Number Verification
- Email Verification

Note:- All the verification process will be done at the time of signup itself.

Non Repudiation

To ensure that the candidate cannot deny his/her submission for the exam , the system will ask an OTP sent to the Mobile Number associated with their Aadhar, before the final submission.

Confidentiality

Many times the candidate fills their application form by going to the nearest cyber-cafe. In this case a hacker present in the same network, can assess all the information filled by the candidate.

To ensure that ,the data cannot be read by anyone else between the server and the client, data is transmitted over SSL/TLS layer.

Thanking You