Online Airport System

System Description:

- The online airport system is being designed to provide convenience to the airport staff, which includes technicians, traffic controllers and a manager admin, to better manage the operational activities which are essential for the proper functioning of services. The online airport system primarily stores the following information:

- **Airport Staff Details:** This includes the attributes of the airport staff such as Name, SSN, Address, Phone Number, Designation and Salary of each staff member. Further, as per the designation, the airport staff have been specialized into further categories like Technicians, Traffic Controllers and Other employees.

- **Flight details:** This includes relevant information about the flights like arrival times, departure time, flight model, passenger capacity, airplane weight and FAA test details

- **Admin details:** The online airport system has an admin whose primary function is to manage the staff, adding/removing new user staff.

- **Airport details:** This includes relevant information about the airport such as airport capacity, flight landing frequency, flight departure frequency.
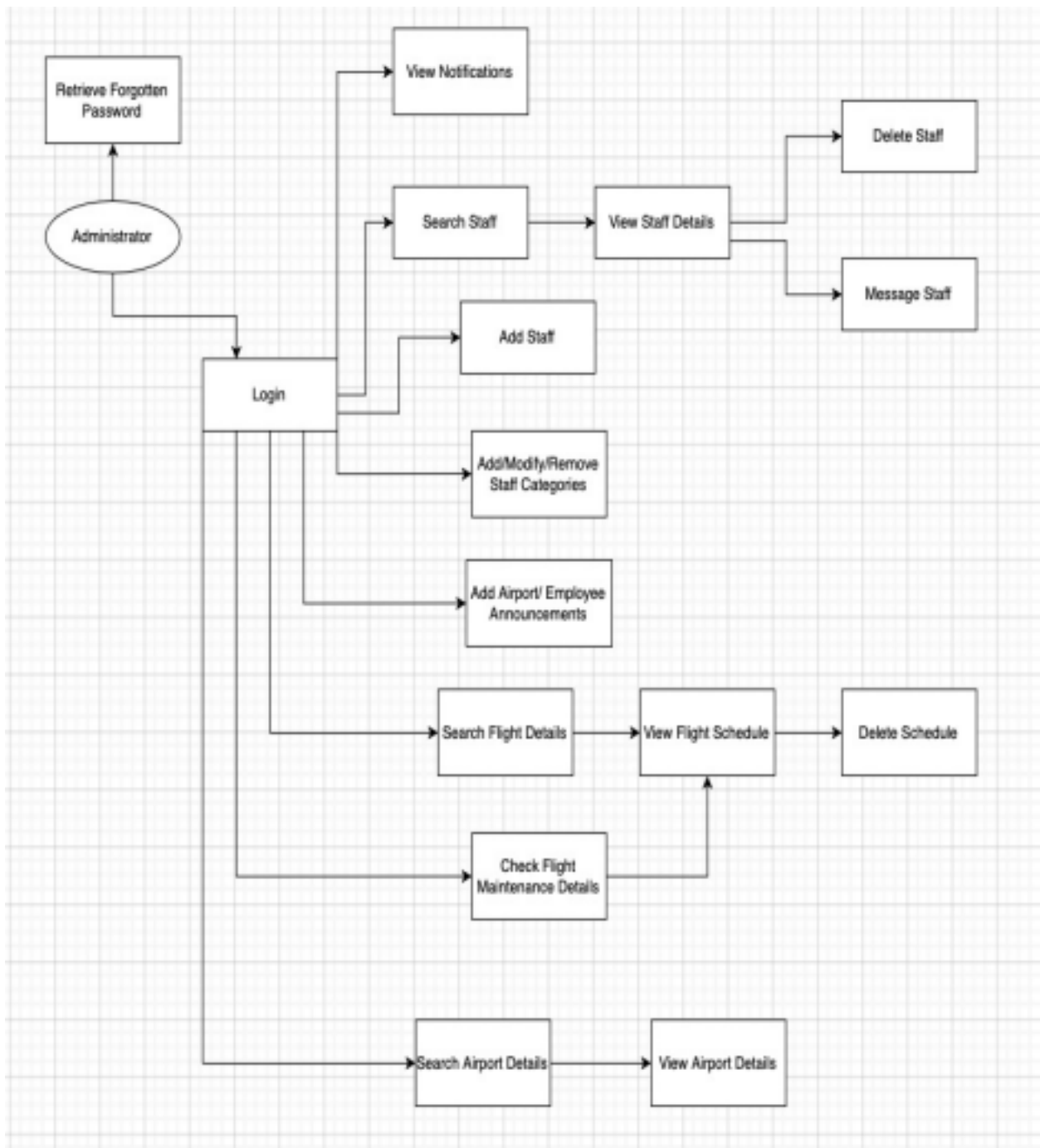
(ASSUMPTIONS AND DEPENDENCIES)

- The airport staff adds the Airplane details in the system after logging in.
- The staff can also schedule/update airport maintenance.
- The staff performs the airplane tests. Keeps track of them and updates them in the system.
- The admin can retrieve the forgotten password of any user

● The admin can also add any staff or airport related announcements ● The admin can send messages to the staff and the staff can view them
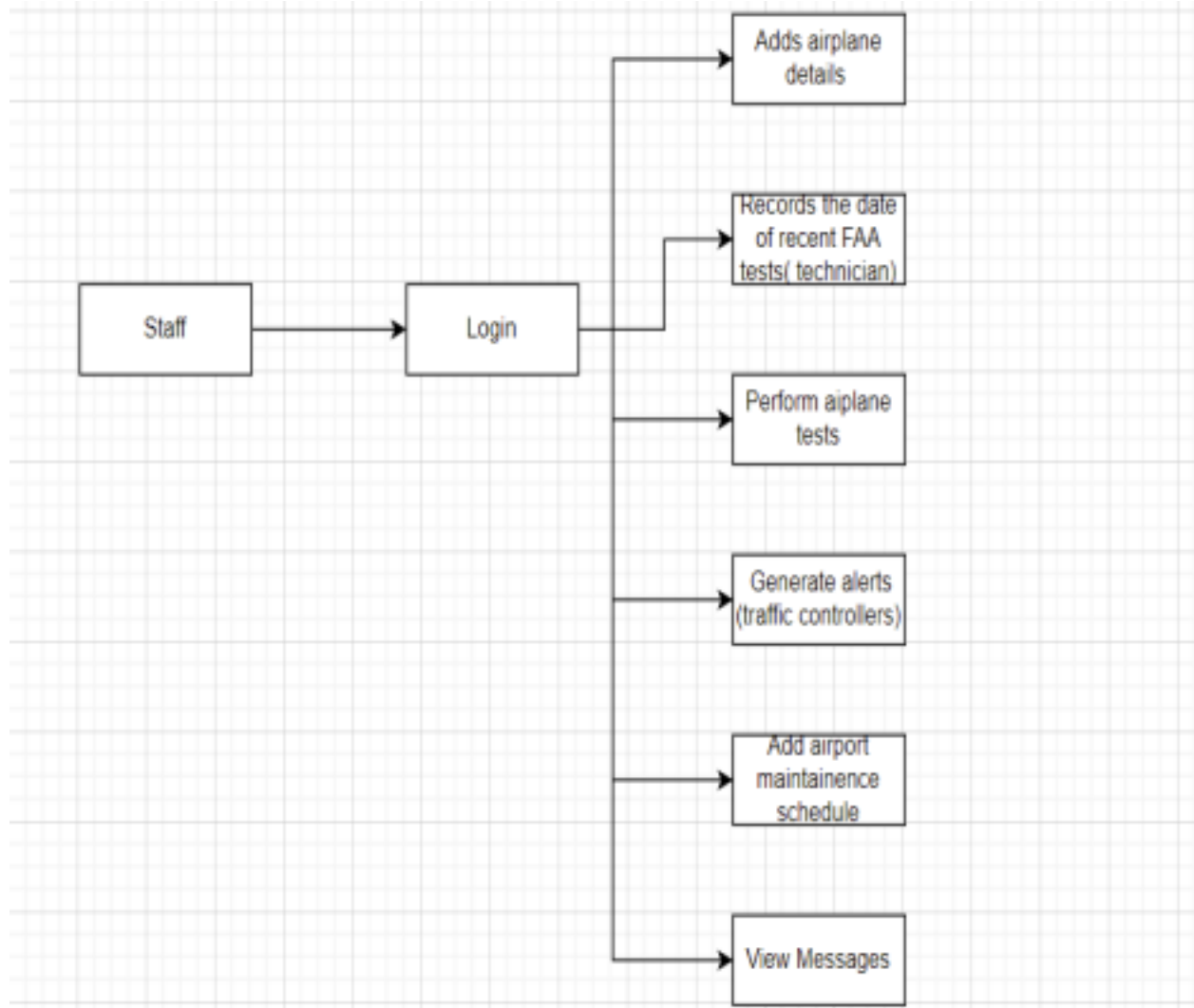
Context Diagram

● Admin

Retrieve Forgotten Password

Administrator

View Notifications

Search Staff → View Staff Details → Delete Staff

View Staff Details → Message Staff

Add Staff

Login

Add/Modify/Remove Staff Categories

Add Airport/ Employee Announcements

Search Flight Details → View Flight Schedule → Delete Schedule

Check Flight Maintenance Details

Search Airport Details → View Airport Details

4

● Staff

Functional Requirements:

- **Login Functional Requirements:**

  - FR01: The system shall allow the user to log in.
  - FR02. The system shall verify the username and password.
  - FR03. The system shall not allow the user to log in with an invalid username or password.
  - FR04. The system shall display an error message when invalid username or password are entered
  - FR05. The system shall be able to remember usernames and passwords.

- FR06. The system shall allow users to create accounts.
- FR07. The system shall not allow users to take usernames which are already taken
- FR08. The system shall enable users to log out of their accounts
- FR09. The system shall automatically log out due to inactivity
- FR10. The system shall lock the account if an incorrect username and password is entered

- **Browsing Functional Requirements:**

  - FR11: The system shall display the login page
  - FR12: The system shall allow the user login successfully after entering the correct credentials
  - FR13: The system shall display the airplane after its registration number is entered by the user
  - FR14: The system shall store the details of the airport staff efficiently ● FR15: The system shall automatically update the date of the aircraft examination date by entering the FAA test number
  - FR16: The system shall display the updated annual medical examination of the technician
  - FR17: The system shall display a button with a search icon which will allow the user to view the returned list of relevant URLs that contain the given keywords
  - FR18: The system shall run on any macOS device that supports any browser.

  - FR19: The system shall run on any Windows device that supports any browser
  - FR20: The system shall allow for case sensitive search; it shall treat the uppercase characters the same as lowercase characters

- **Administrator Functional Requirements:**

  - FR21: System shall allow admin to create any airport staff data
  - FR22: System shall allow admin to view all users
  - FR23: System shall allow admin to modify any airplane details
  - FR24: System shall allow admin to modify any staff details

- FR25: System will allow admin to update any changes in the airplane arrival or departure
- FR26: System shall allow admin to verify the staff
- FR27: System shall enable admin to logout all the staff of their accounts
- FR28: System shall allow admin to delete any airport staff data
- FR29: System shall allow admin to enter the information related to FAA ●

FR30: System shall allow admin to view messages and account requests from the staff
  - FR31: System shall allow admin to store feedback about airport staff

Non-Functional Requirements :

- NFR1 : **Performance**

  - UI Response time: Each request will be processed in under 10sec
  - DB query time: DB queries to be processed under 5 sec
  - Reboot time of 30min • Client-side data validation & business logic implementation

- NFR2 : **Scalability**

  - The web service load can be scaled up on-demand

- NFR3 : **Understandability**

  - The system shall be easily understandable by people who aren't experts when it comes to computer operations

- NFR4 : **Reliability/Availability**

  - The services will be hosted locally, so they would be available on demand

- NFR5 : **Security**

  - HTTP basic authentication with Username and Password

- NFR6 : **Maintenance**

  - Database maintenance will be done during the pre-communicated downtime hours

- NFR7 : **Data retention/encryption**

  - The order/advertisement data will be retained and archived every 30 days KYC data, Usernames, passwords are to be stored in encrypted format

- NFR8 : **Usability**

  - It should be user friendly and shouldn't be hard to use by the user/admin

- NFR9 : **Capacity**

  - The website will be able to accommodate 20 concurrent users

- NFR10: **Enhanceable**

  - The system shall be be easily changeable when a better solution comes in the future, it shouldn't be built from the ground up