**ANDROID BASED ELECTRONIC PRODUCT SERVICING SYSTEM**

**by**

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**Dhaka, Bangladesh**

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**APPROVAL**

This Project titled “**Android Based Electronic Product Servicing System**”, submitted by Md Tasluf Morshed and Md Assadujjaman Tilok to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on \*date\*.

**Board of Examiners**

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**Declaration**

We hereby declare that, this project has been done by us under the supervision of **Dr. MD. FOKHRAY HOSSAIN,** Dean, FSIT & Director, International Affairs, Department of CSEDaffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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Finally, we must acknowledge with due respect the constant support and patients of our parents.

**Abstract**

In The 21th century while the world is vastly depending on electronic goods and technology in that very time people from Bangladesh are facing difficulties to find a optimal servicing solution for their household necessaries. Sadly a number of factors can be accountable for the issue. Undoubtedly service policy is the root of it. However, this project intendant to build a service system, considered as “**Android Based Electronic Product Servicing System**” which could be the ultimate solution for the purpose. This project expect to reduce a lot of work load that people don't need to go out to find a servicing solution. User can simply register their problem to the application and then we will send a technician to solve the problem in a suitable time.

**CHAPTER 1**

**Introduction**

**1.0 Introduction**

The Project illustrate that “**Android Based Electronic Product Servicing System**” is a virtual store on internet confide on aggregation model, where user can hire technician based on their product of interest. User can simply register themselves by using a valid email or phone number to the system in order to take the services. The system is a package, used by service provider to improve the efficiency to their B2C business.

The most widely used operating system in the smartphone is Android and ios. Therefore, as a developers of the project, we are working on an android app and web application for this service. To make an android app they want to use React native. It's a javascript framework that helps us to build an android and ios app. It's built on top of the React framework. For the web application, this will use React framework. For the backend, it will use Nodejs and for the database, developer want to use MongoDB.

**1.1 Project Overview**

“**Android Based Electronic Product Servicing System**” is an optimal servicing solution for their electronic goods. From the site customer can hire technician based on their product requirement by following some easy steps.

**1.2 The Purpose of the Project**

Along with the rapid development of technology, the servicing system is not improving very speedily. It is considered to be a massive problem not only in Bangladesh but also South Asia. Which is generating a lot of controversy while many people are speaking strongly against this issue. Even today, whenever a household product collapse, user have to take this to a service point and wait for a long time to fix it.

Now it is necessary to structure the service system which is based on time efficiency and skilled technicians. This advanced system may upgrade the UN ethical servicing trends by developing a user friendly application for stakeholders. Therefore, the purpose of this project is to develop a “**Android-based Electronic Product Servicing System**” in order to reinforce the user’s satisfaction.

**1.3 Stakeholders**

* **Visitor:** Visitor can view the available services on the site.
* **Customer:** Customer can choose any services and make payment from the site.
* **Admin:** An Admin have some additional privilege and access including all the privilege that visitor and customer had.

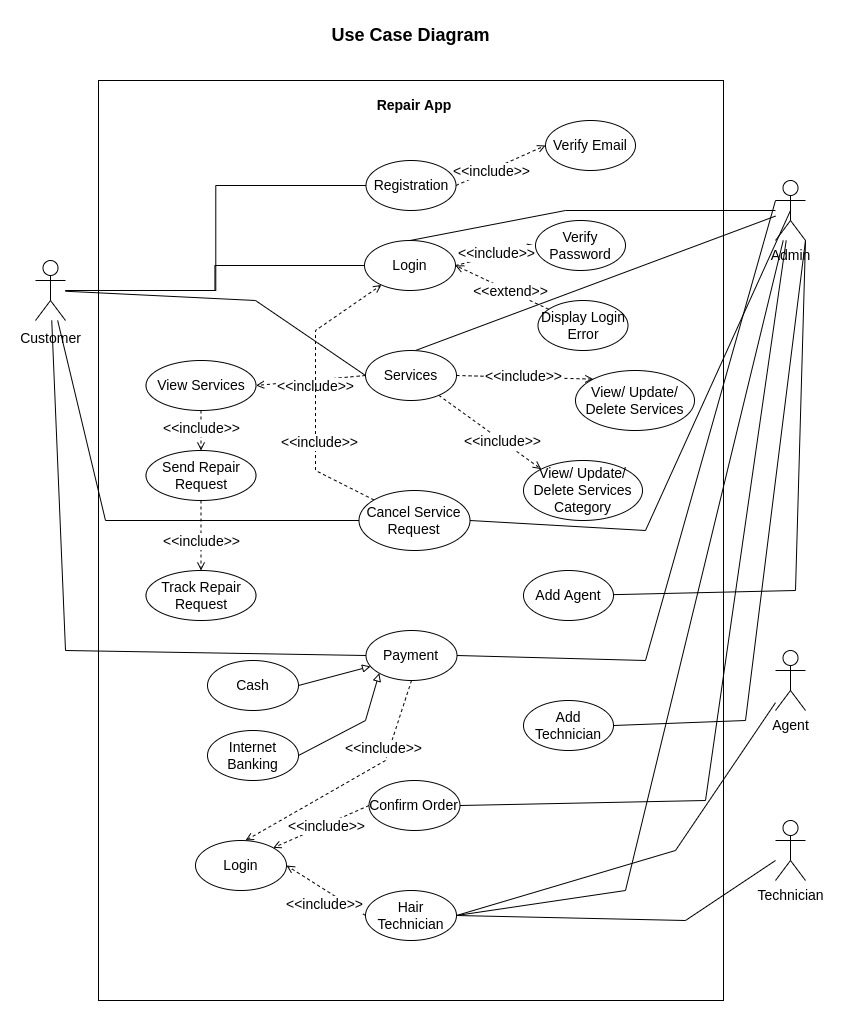
**1.4 Project Timeline**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Task Name | Start | End | Status |  |  |  |  |  |  |  |
|  |  |  |  | Sep- Oct | Nov- Dec | Jan- Feb | Mar- Apr | May- Jun | July- Aug | Sep- Oct |
| Project Proposal | 17-09-21 | 29-09-21 | Complete |  |  |  |  |  |  |  |
| Requirement collect & Analysis | 02-10-21 | 17-12-21 | Complete |  |  |  |  |  |  |  |
| System Design | 24-12-21 | 08-02-21 | Complete |  |  |  |  |  |  |  |
| Coding | 09-01-21 | 24-05-22 | Complete |  |  |  |  |  |  |  |
| Testing | 12-06-22 | 23-08-22 | Complete |  |  |  |  |  |  |  |
| Documentation & Report | 09-8-22 | 05-09-22 | Complete |  |  |  |  |  |  |  |

**CHAPTER 3**

**SYSTEM ANALYSIS & DESIGN**

**3.1 Use Case Diagram**



**3.2 Use Case Diagram**

|  |  |
| --- | --- |
| **Use Case ID** | **UC1** |
| Name | Registration. |
| Description | Need for accessing the system. |
| Actor | * Admin * Customer |
| Post Condition | Get access to the system. |
| Flow | * Fill up the registration form with necessary information. * Press Create Account button. * System will verify the given information and authorize access. |
| Include | Verified email number. |

Table 02: Use Case Diagram (Registration)

|  |  |
| --- | --- |
| **Use Case ID** | **UC2** |
| Name | Login. |
| Description | Need for accessing the system. |
| Actor | * Admin * Customer |
| Post Condition | Get access to the system. |
| Flow | * Give the email address and password. * Press Login button. * System will verify the account and allow access. * Otherwise display Login error. |
| Include | Unique password. |

Table 03: Use Case Diagram (Login)

|  |  |
| --- | --- |
| **Use Case ID** | **UC3** |
| Name | Service. |
| Description | Browse all the available services. |
| Actor | * Admin * Customer |
| Post Condition | Hire technician based on their product requirement. |
| Flow | * Go to service section. * View service details. * Send service request. |
| Include | Track repair Request. |

Table 04: Use Case Diagram (Service)

|  |  |
| --- | --- |
| **Use Case ID** | **UC4** |
| Name | Cancel Request. |
| Description | Customer is not interested anymore for the service or required service isn’t available on the system. |
| Actor | * Admin * Customer |
| Post Condition | Cancel Service Request in order to reinforce the user’s requirement. |
| Flow | * View order list. * Select the specific booking. * Give a reason and Press Cancel Request button. |
| Include | Login. |

Table 05: Use Case Diagram (Cancel Request)

|  |  |
| --- | --- |
| **Use Case ID** | **UC5** |
| Name | Confirm Order. |
| Description | Admin check all the necessaries and confirm the Order. |
| Actor | * Admin |
| Post Condition | Administrator agent allow Customer for the asking service. |
| Flow | * View request details from system database. * Verify request. * Confirm request. |
| Include | Login into Mobile banking account. |

Table 06: Use Case Diagram (Confirm Order)

|  |  |
| --- | --- |
| **Use Case ID** | **UC6** |
| Name | Hair Technician. |
| Description | Administrator agent assign a technician for the job. |
| Actor | * Administrator Agent |
| Post Condition | Technician will arrive for the service. |
| Flow | * Check confirmation. * Select location. * Assign a technician. |
| Include | Request Confirmation. |

Table 07: Use Case Diagram (Hair Technician)

|  |  |
| --- | --- |
| **Use Case ID** | **UC7** |
| Name | Payment. |
| Description | Essential to complete the process. |
| Actor | * Admin * Customer |
| Post Condition | Customer Get the expected servicing solution. |
| Flow | * View service tracker to get an amount total. * Choose payment method. * For instant payment select cash. * For digital payment select internet banking. |
| Include | Login into mobile banking account. |

Table 08: Use Case Diagram (Payment)

**3.3 Activity Diagram**

An Activity diagram is used to understand the flow of work that an object or component performs. It can also be used to visualize the interaction between different use cases.

**3.3.1 System Admin Activity Diagram**

Admin manage system content by creating, updating or deleting content from system database as well manage customers, orders, bookings and payments in the system.

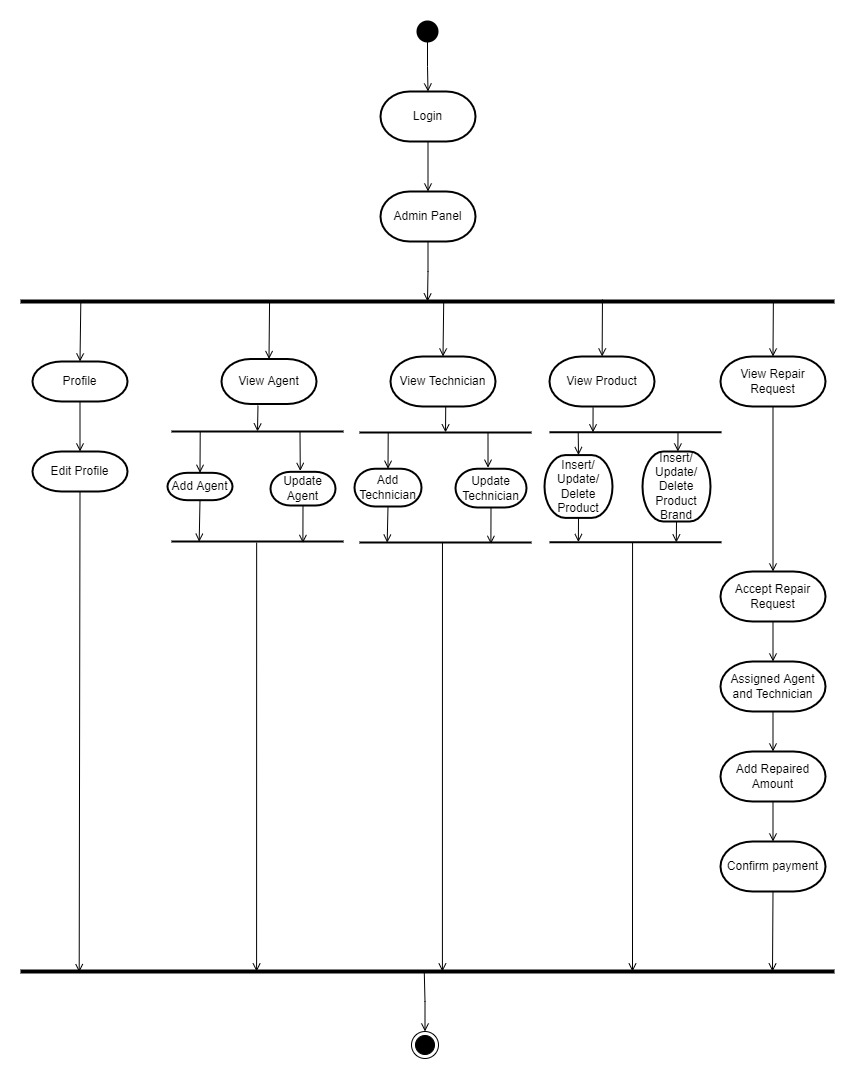


Figure 02: Admin Activity Diagram

**3.3.1 Customer Activity Diagram**

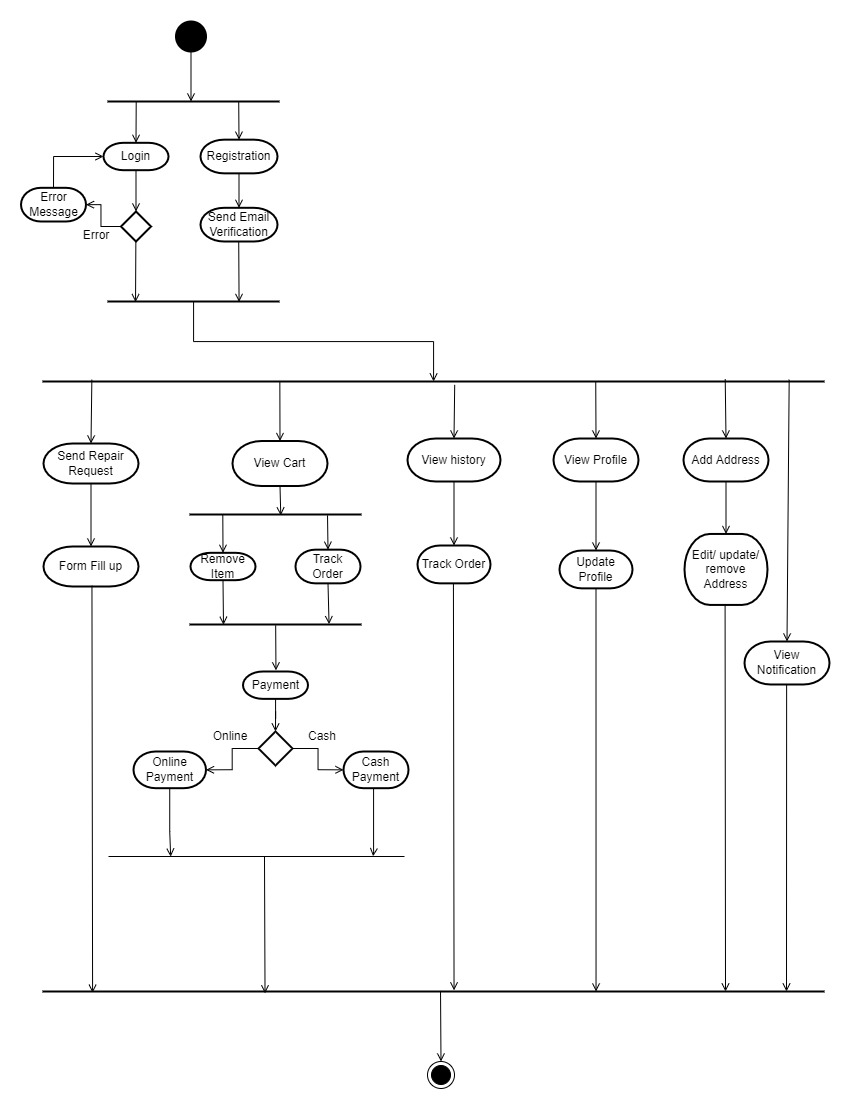


Figure 03: Customer Activity Diagram

**3.4 Sequence Diagram**

A Sequence diagram shows the sequence of messages exchanged by the set of objects performing a certain task.

**3.4.1 Admin Registration**

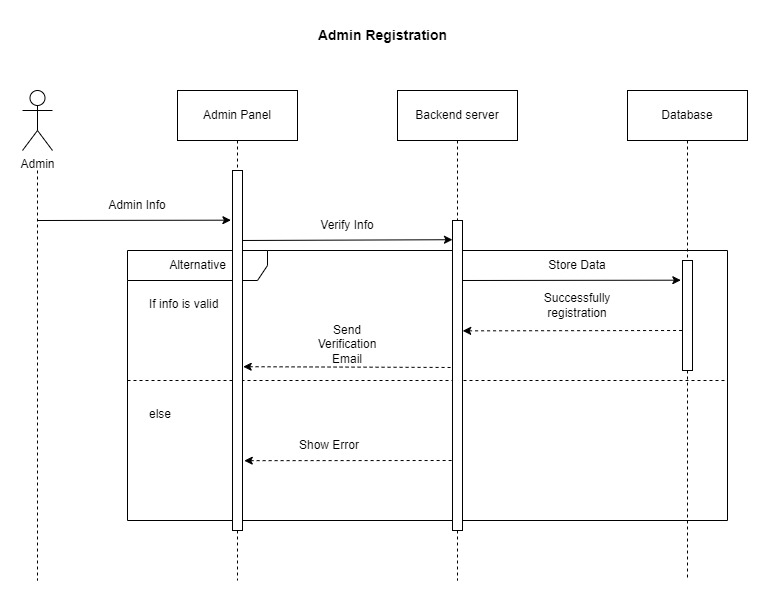


Figure 04: Admin Registration Sequence Diagram

**3.4.2 Admin Login**

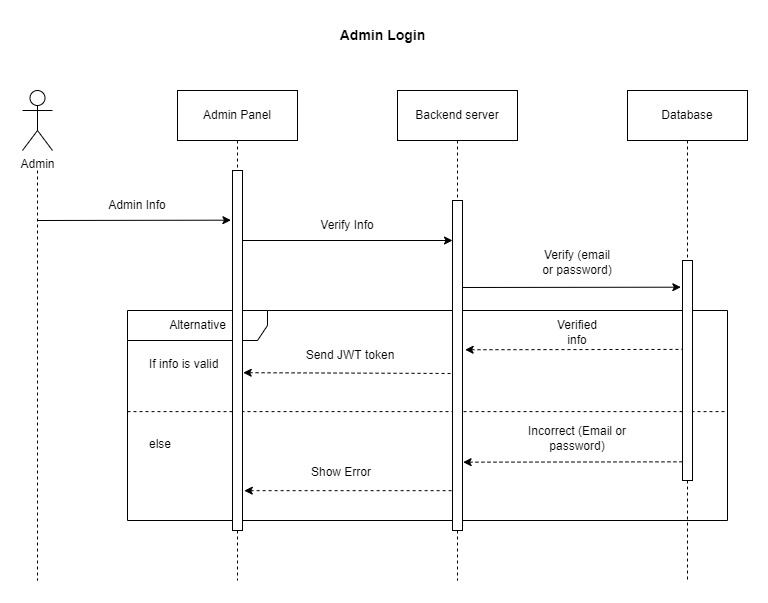


Figure 05: Admin Login Sequence Diagram

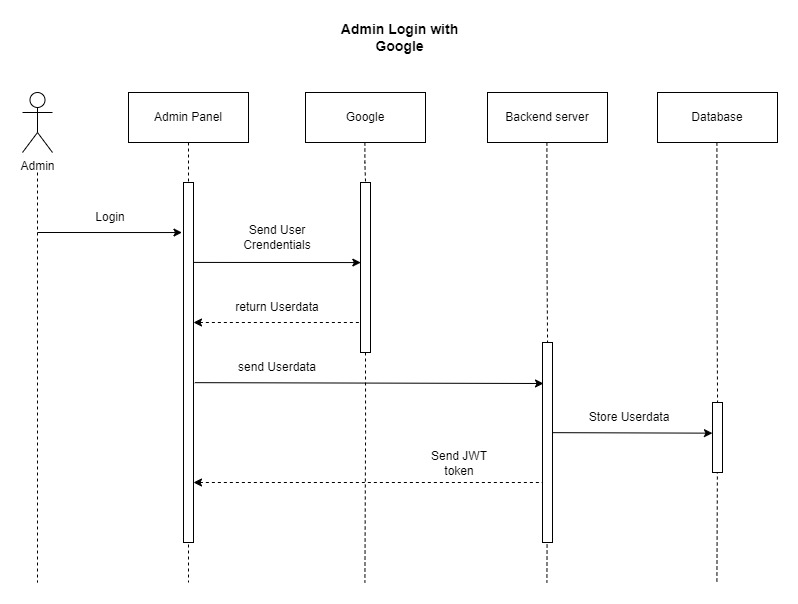


Figure 06: Admin Login with Google Sequence Diagram

**3.4.3 Admin Profile**

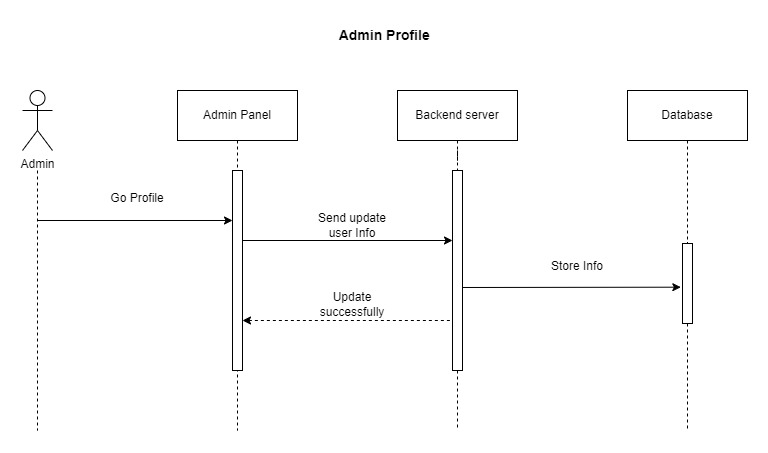


Figure 07: Admin Profile Sequence Diagram

**3.4.4 Admin Forget Password**

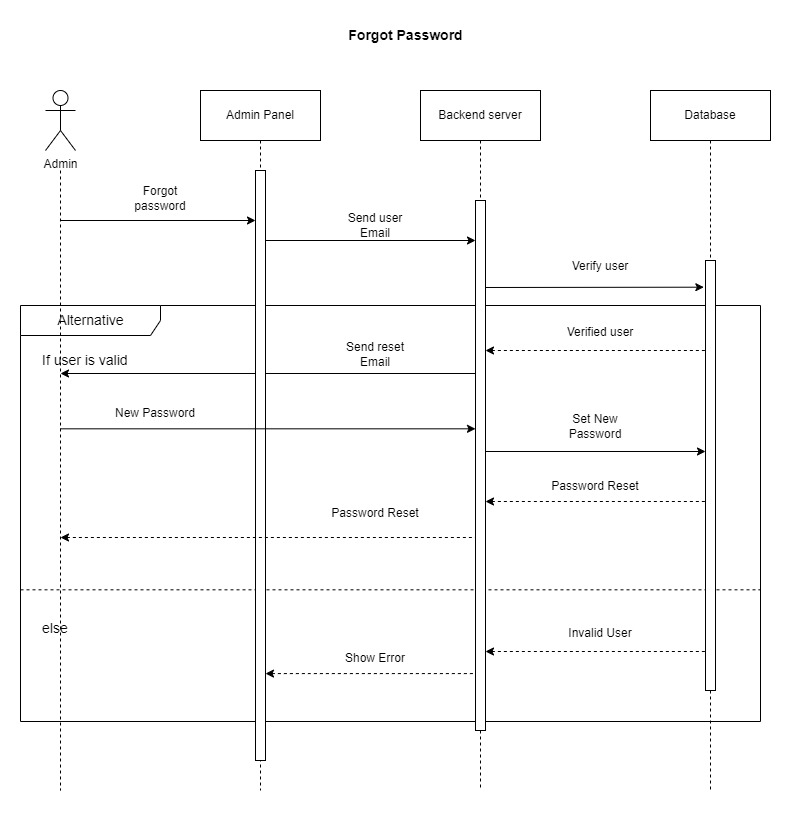
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Figure 08: Admin Forget Password Sequence Diagram

**3.4.5 Admin View Order**

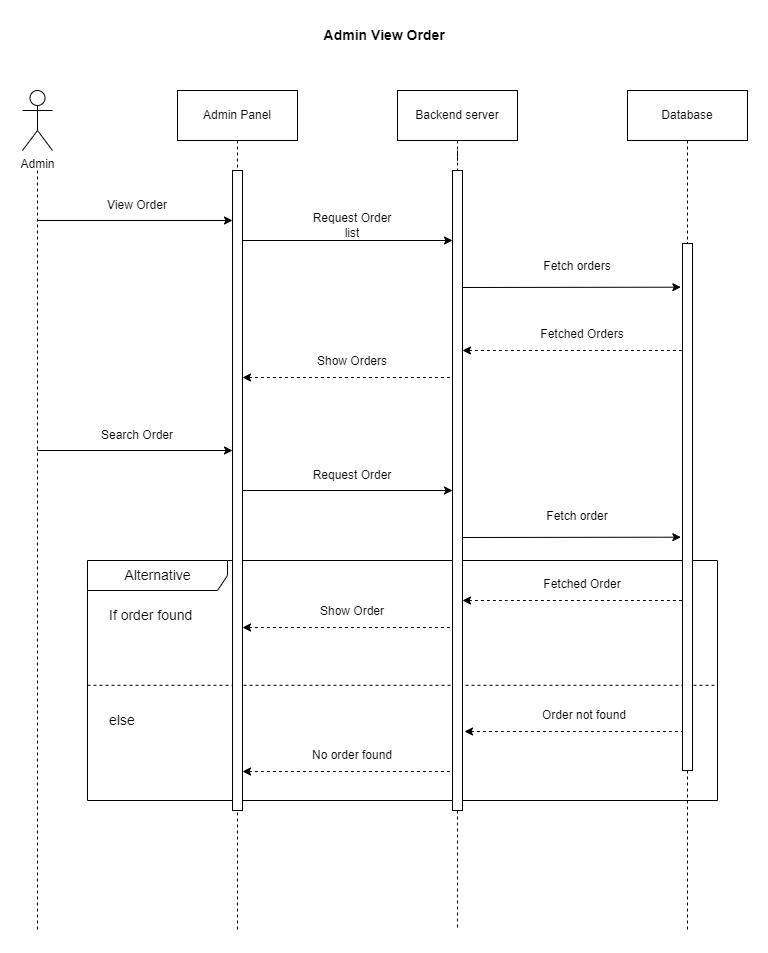
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Figure 09: Admin View Order Sequence Diagram

**3.4.6 Admin Add Agent**

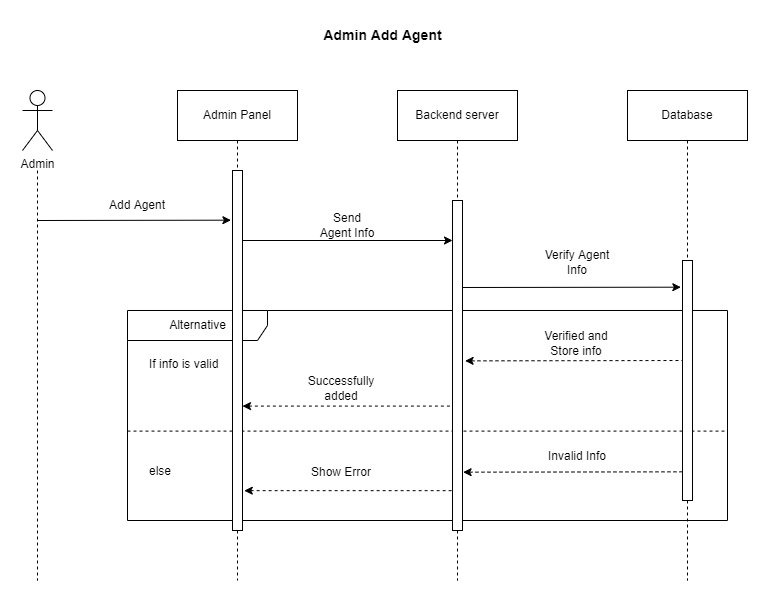


Figure 10: Admin Add Agent Sequence Diagram

**3.4.7 Admin Add Technician**

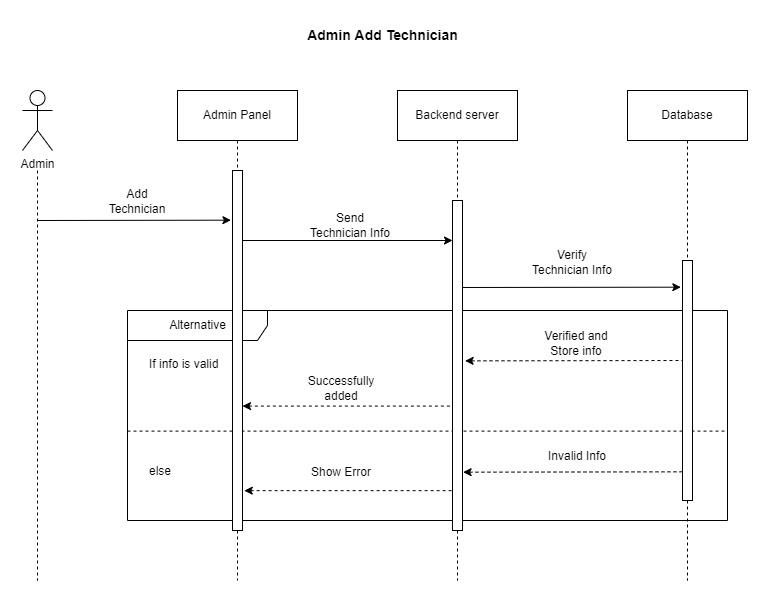
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Figure 11: Admin Add Technician Sequence Diagram

**3.4.8 Admin Update Order**

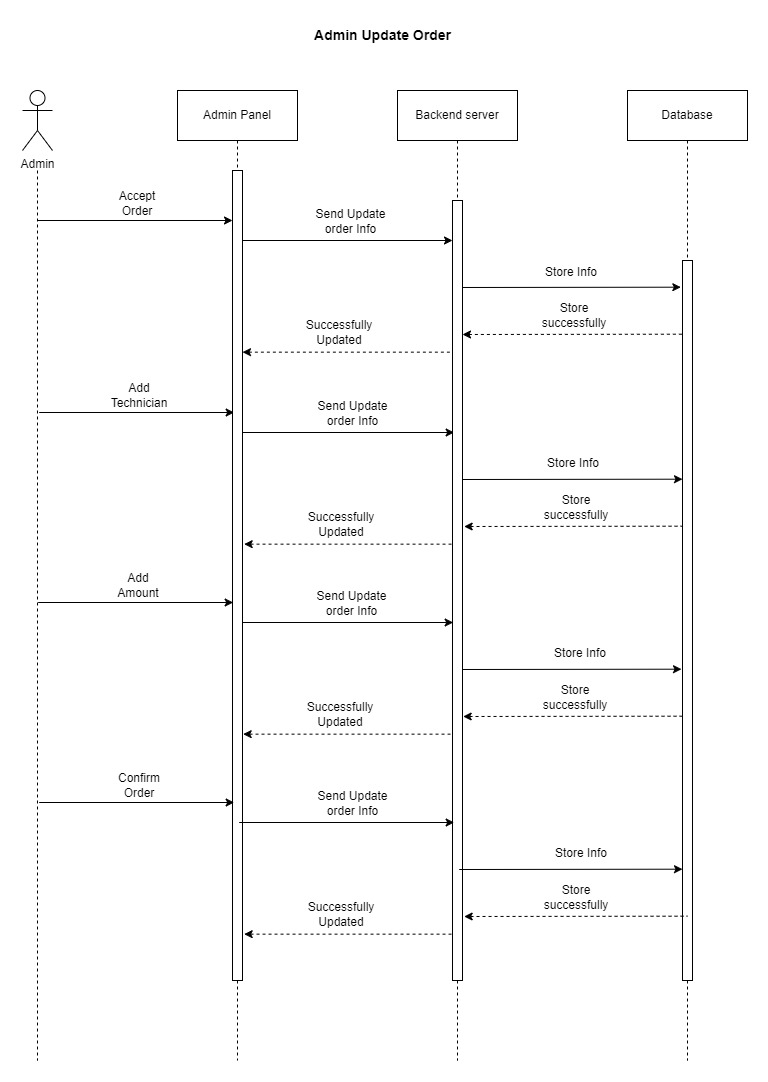


Figure 12: Admin Update Order Sequence Diagram

**3.4.9 Admin Update Agent**

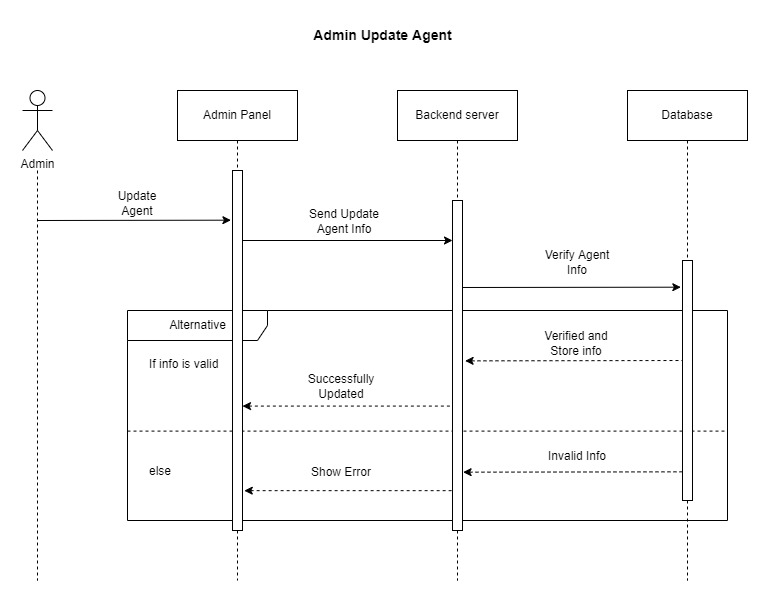


Figure 11: Admin Update Agent Sequence Diagram

**3.4.10 Admin Update Technician**

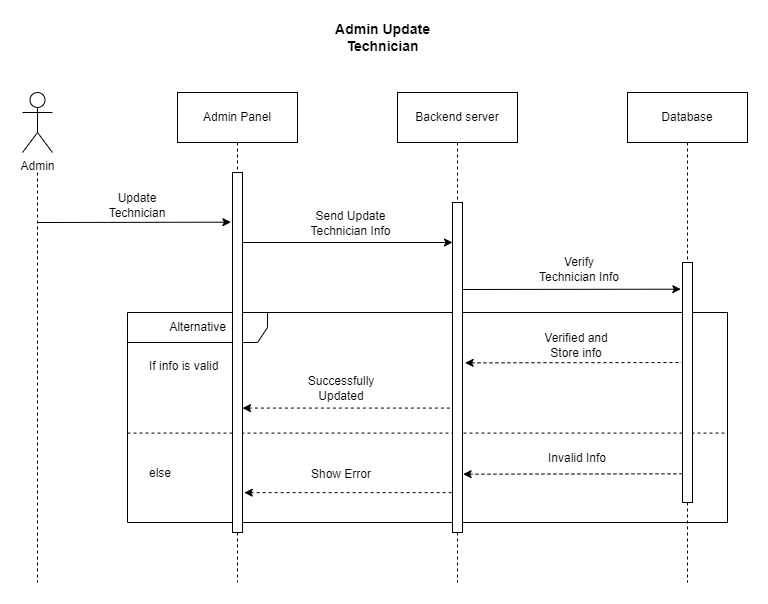
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Figure 12: Admin Update Technician Sequence Diagram

**Reference**: Font-10

All references to books, papers, and other publications must be fully and correctly quoted. There are several methods of quoting references. One is to state the name of the author and a serial number in the main text with the full details of the reference in the Reference section of the report, for example:

In the text:

*....The analysis of the algorithms has been extensively reviewed by Yorozu et al. [1]*

*and will ....*

In the References section:

[1] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, “Electron spectroscopy studies on magneto-optical media and plastic substrate interface,” IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987.

***Conference/Journal Papers:***

[1] Author1, Author2, and Author3, “Paper Title”, Conference/Journal, Volume, page number, Month and year.

**Example:**

[1] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, “Electron spectroscopy studies on magneto-optical media and plastic substrate interface,” IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987.

***Books:***

[2] Author, Book Title, Edition/Volume, Publisher, Year, Page number

**Example:**

[2] T. H. Cormen, C. E. Leiserson, R. L. Rivest, C. Stein, Introduction to Algorithms, 3rd Edition, The MIT Press, 2009, pp. 120-122.

***Websites:***

[3] Name/Title of the Website, available at << https://URL>>, last accessed on Date at Time.

**Example:**

[3] Learn about Wikipedia, available at << http://www.wikipedia.org/>>, last accessed on 06-06-2019 at 12:00 PM.