

18CSC106J

Software Engineering
and
Project Management

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Ambulance Booking

Problem Statement

The main purpose of this project will fill the gap between the patient and ambulance response time. Ambulances are a vital part of emergency medical services. Usually, patients have a finite range of ambulance contacts; thus whenever in an emergency, they find difficulty. With this project, it is proposed that the application would enable the patient to book a ride to the hospital. The patient can locate themselves or can upload their current location as well as their destination location into the application. The system would then show the nearby available ambulances and the patient can choose its appropriate rides by comparing the quotations and distance of every ride over a region. Finally, billing at the end. The project further endeavors to contribute blood inventory-delivery services to the hospitals.

Buissness Case Template

THE PROJECT

LOC

In bullet points, describe the problem this project aims to solve or the opportunity it aims to develop.

This system can be used by user who needs to book an ambulance for an emergency as well as for non-emergency services

THE HISTORY

In bullet points, describe the current situation.

waterfall approach is the earliest approach that was used for software development

BENEFITS

In bullet points, list the benefits that this project will bring to the organization.

- Patients can now book an ambulance for an emergency as well as for non-emergency services. User can keep history of the trips and can view any time
- You can locate the nearest available ambulance and request the same.
- Instantly get the information & contact details of the driver.

Ambulance plays a very crucial role when an accident occurs on the road network or in case of any medical emergency and the need arises to save a human life. Manual booking of an ambulance at times of emergency can take away precious time as it is a time-consuming process. Furthermore, the delay caused due to the heavy traffic congestion in between the pickup spot and the hospital facility may increase the risk of death for the victim.

LIMITATIONS

List what could prevent the success of the project, such as the need for expensive equipment, bad weather, lack of special training, etc.

- Wrong inputs will affect the project outputs.
- Internet Connection is mandatory
- The android mobile user will not be able to insert or view details if the server goes down. Thus, there is disadvantage of single point failure.

APPROACH

List what is needed to complete the project.

The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The

Methodology- Waterfall

- The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in downward fashion.

Incorporate information to below table regarding stakeholders of the project [Make use of below examples]

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
Owners/ Team Members	The individuals who are the owners. Owners are liable for the impacts the organization has and strategy. They supply capital or equity to the business and have a say in how everything runs.	High	High	1
Supporters/ Investors	Suppliers and vendors sell goods and/or services to a business and rely on it for revenue generation and on-going income.	High	Low	2
Customers/ End Users	They are impacted by the quality of service/products and their values. Provide feedback.	High	Low	3

System Requirements

System Requirements

Website : 2gb ram

Windows 7 or above

Support for Microsoft Edge or Google Chrome

Mobile Applications :

Android 6 or above, iOS11 or above

500 mb of space

2 gb ram

5Mbps or higher internet connection

Functional Requirements

1. Receiving Incident information from the caller
2. Locating nearest ambulance.
3. Allocating the ambulance to the incident.
4. Dispatch of ambulance and resource.
5. Finding the route to the incident
6. Logging and Reporting of incidents.
7. Displaying timing information and error reporting.
8. Tracking and monitoring of ambulance.
9. Manage Users

Non Functional Requirements

Non-Functional Requirements

Usability

Ambulance Dispatch System shall provide mouse and keyboard navigation.

Ambulance Dispatch System shall be easy to navigate by using clear words, menus and drop-down lists.

Ambulance Dispatch System shall be accompanied with a user manual.

Reliability

Ambulance Dispatch System shall be available 24 hours a day for application users.

Performance

Ambulance Dispatch System shall not take longer than 15 seconds to respond to a page request for members; when using an internet connection that is 56k or higher

Supportability

The ambulance dispatch system application should be supportable in current equipment such as computers, monitors, printers etc.

Implementation

The software implementation will be performed on Friday evening to minimize impact.

The implementation will be performed all on one day rather than in phases.

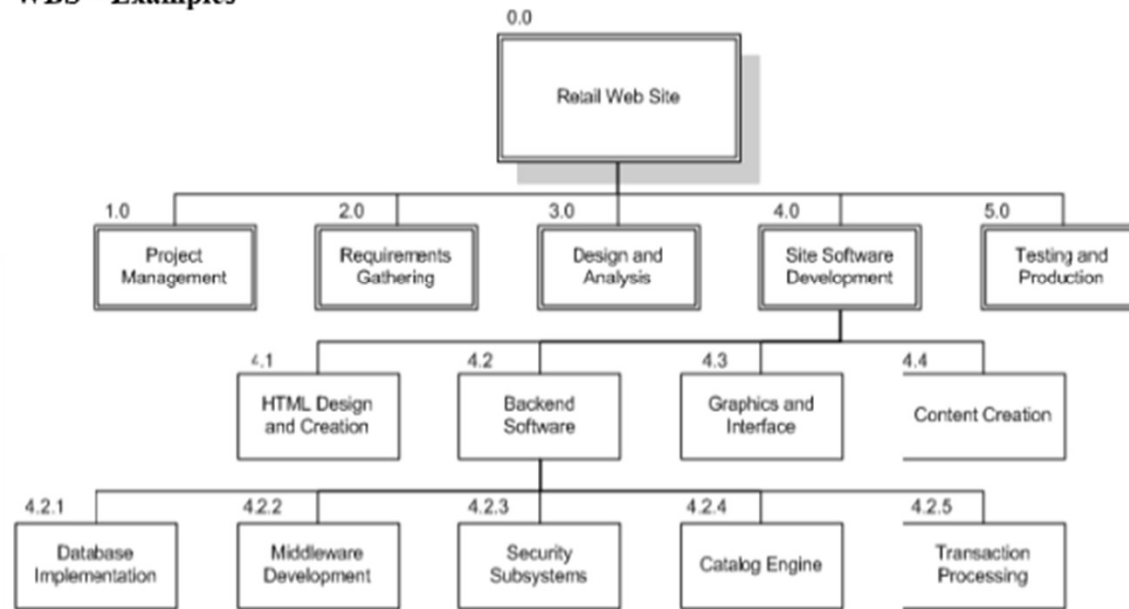
Interface

Ambulance Dispatch System shall be accessible through a web browser such as Internet Explorer 5 or higher and Netscape Navigator 4.7 or higher

Ambulance Dispatch System shall provide printer friendly outputs of reports so that users can have easy to read print outs of the reports.

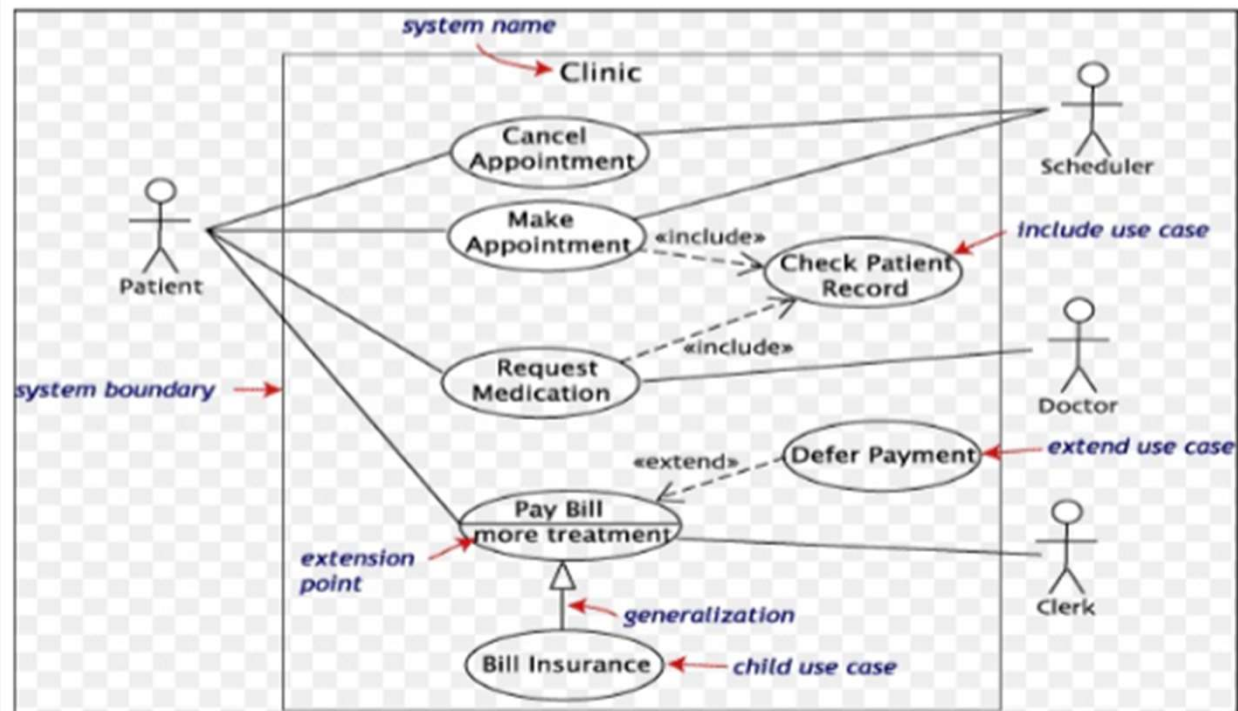
Work-breakdown structure

WBS – Examples



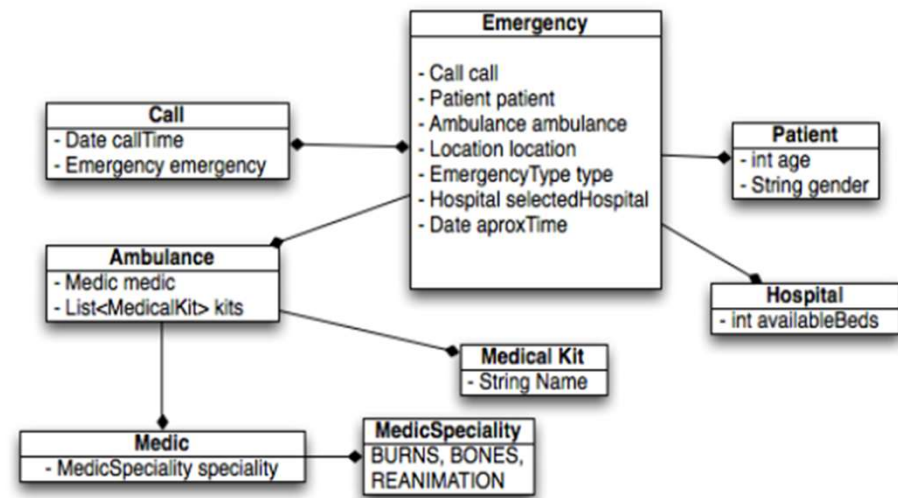
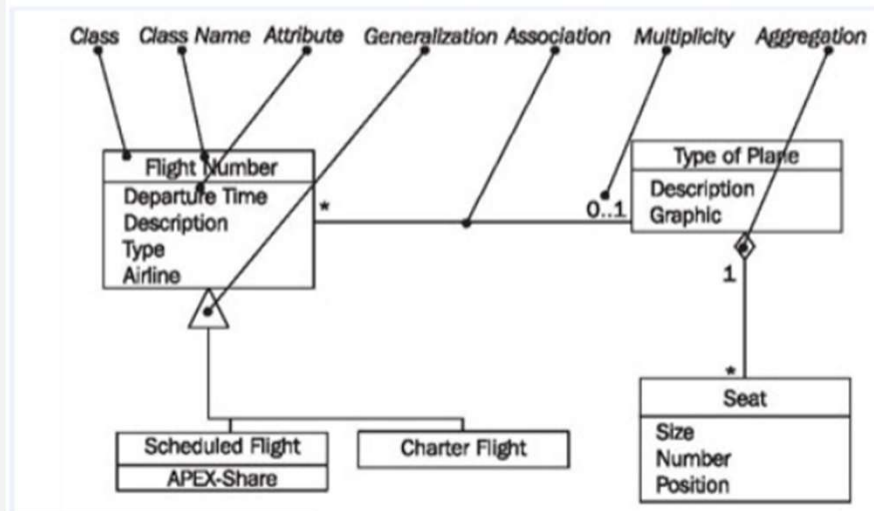
Use Case Diagram

USE CASE DIAGRAM – Example

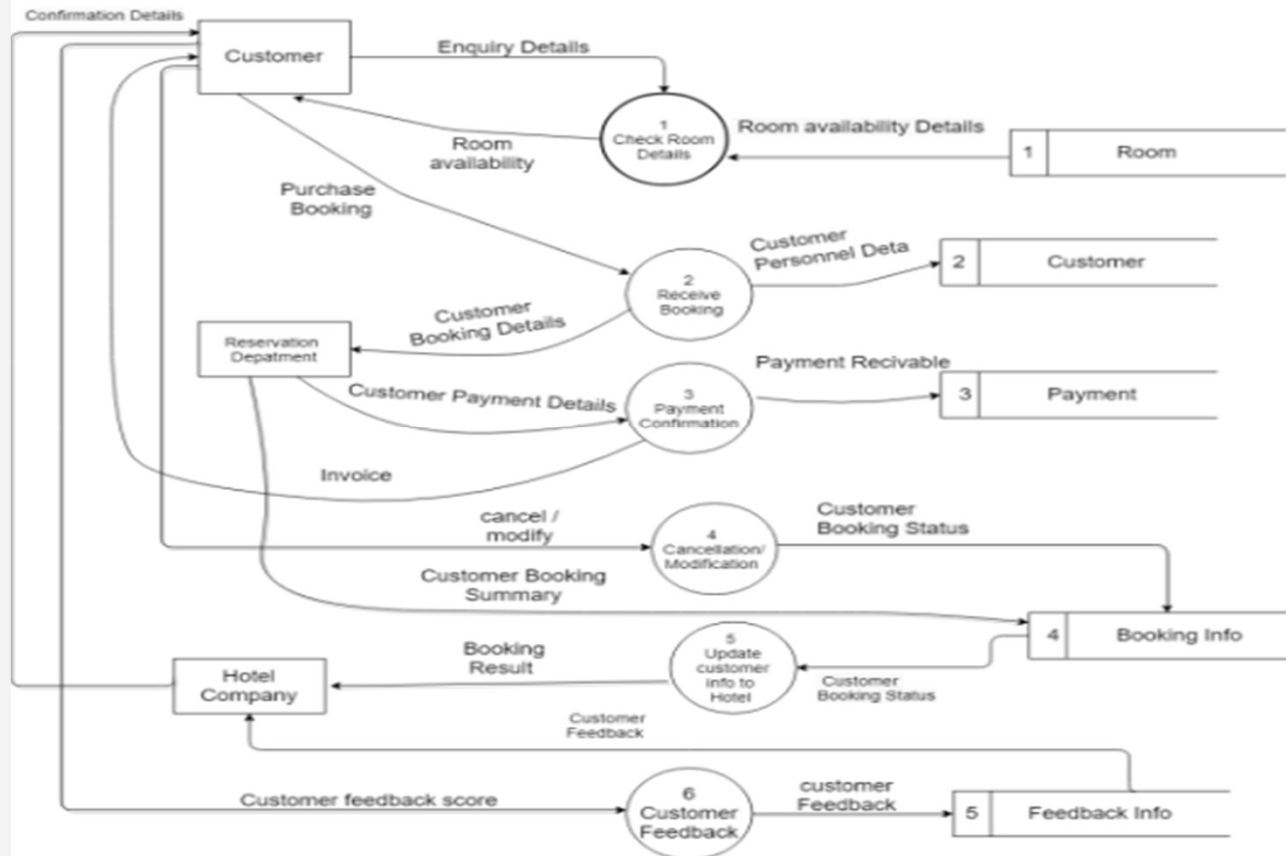


Class Diagram

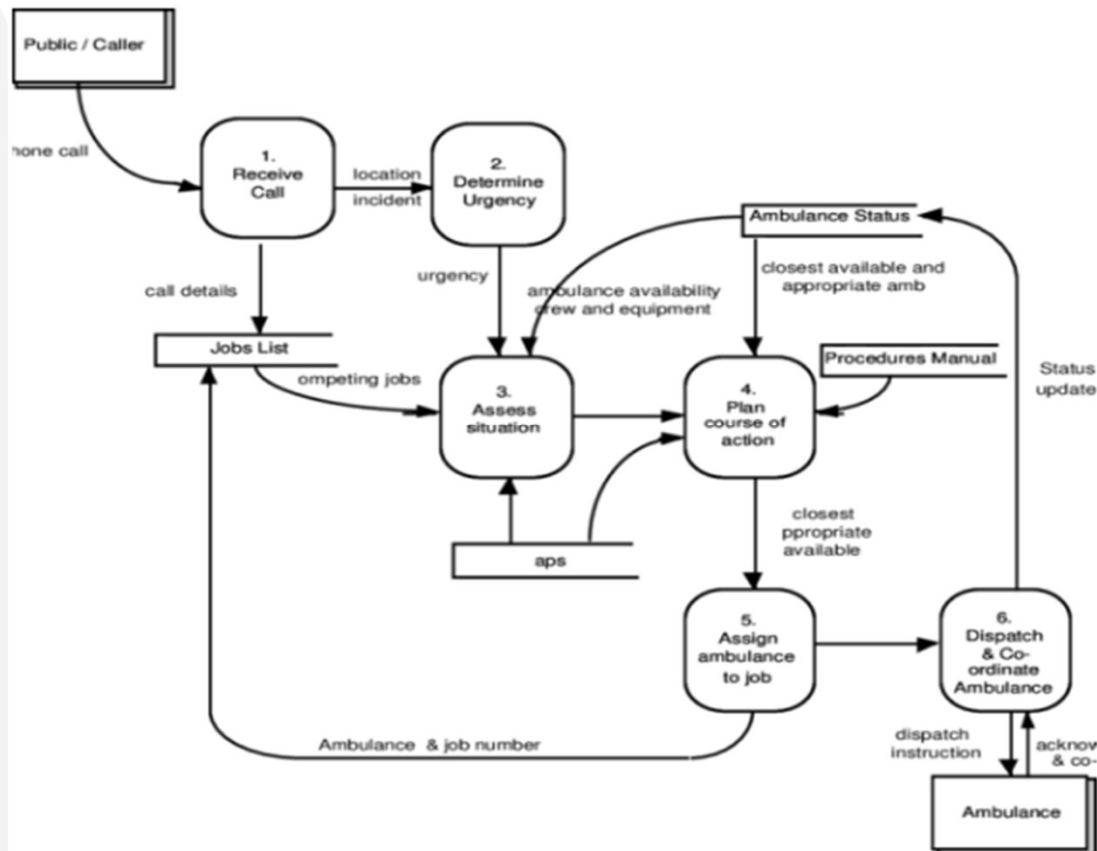
CLASS DIAGRAM – Example



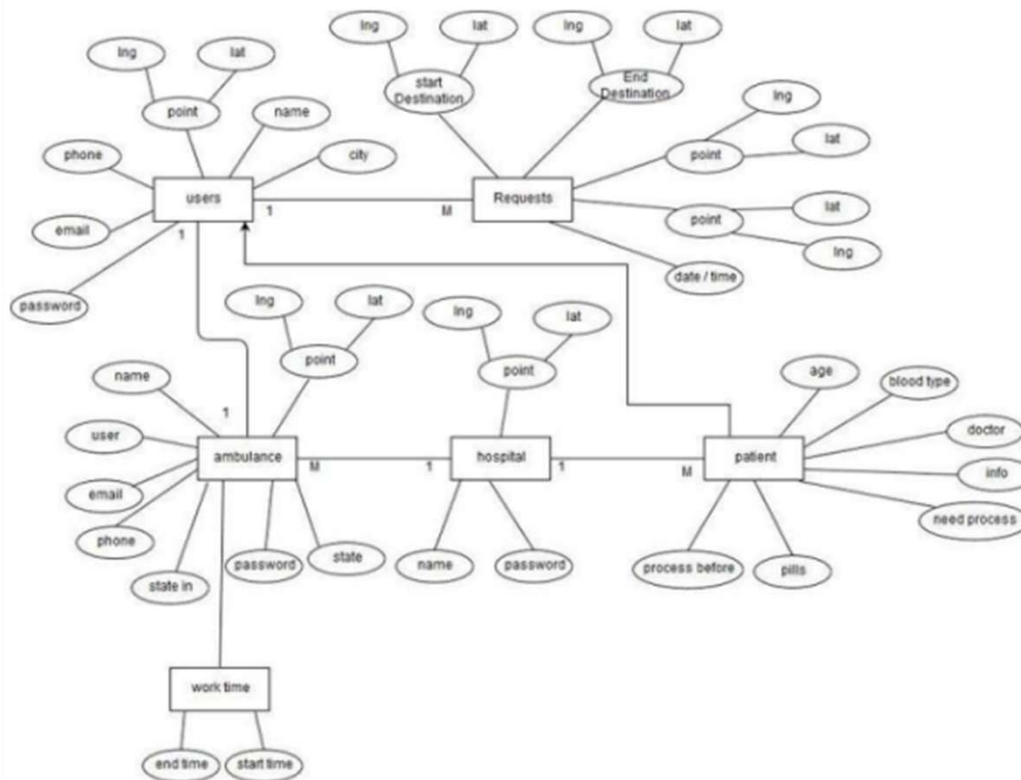
Data flow diagram- Level 0



Data Flow Diagram – Level 2

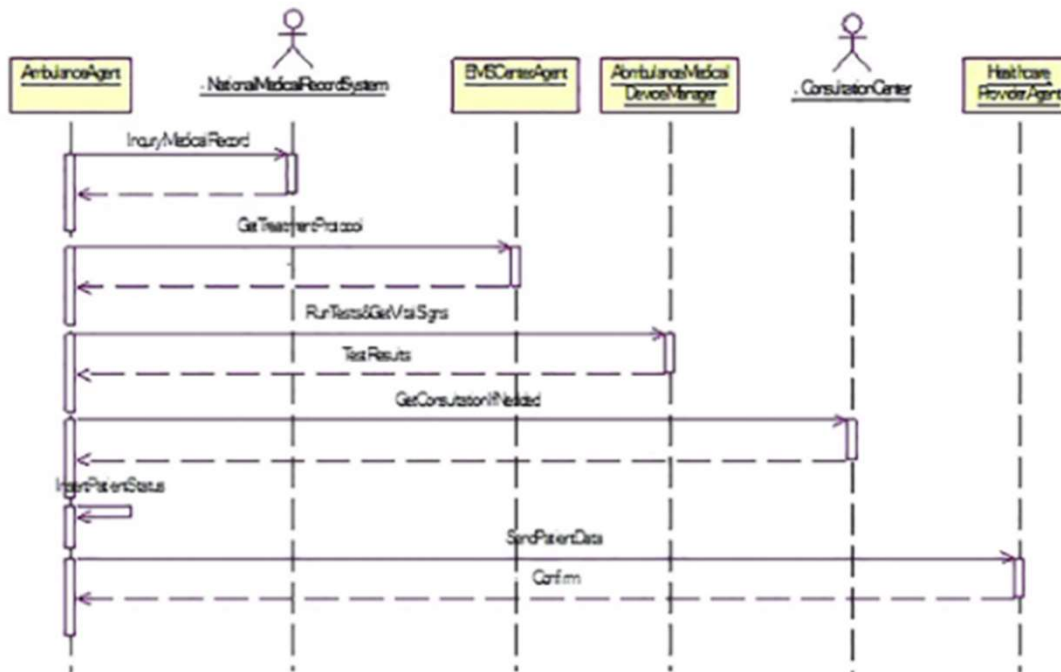


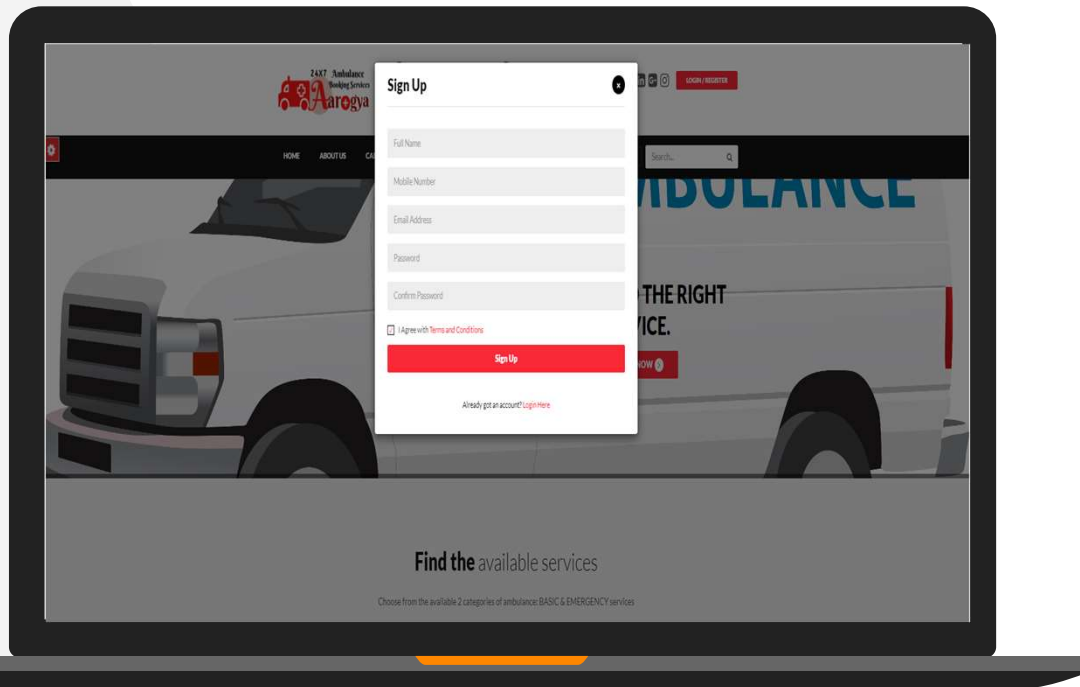
Entity Relationship [ER] diagram



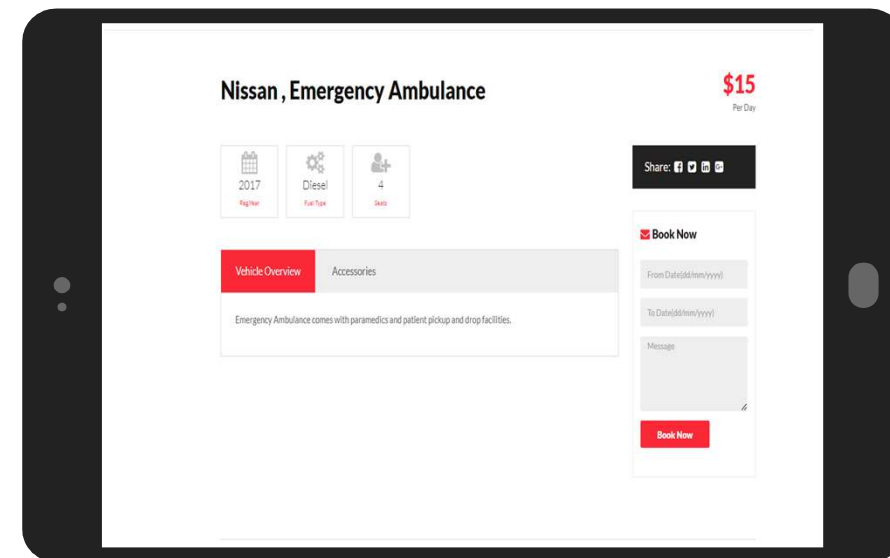
Sequence Diagram

Sequence Diagram





User Interface



Test Cases

Test Case Name - User Login**Test Items –**

Functionality of the User Login screen

Input Specifications –

Valid UserName - ace@ace6354.com

Valid Password – ace

Invalid UserName – sam

Invalid Password - bob

Output Specifications –

Input	Expected Output
Valid UserName + Valid Password	Display Dispatch Screen

Invalid UserName + Valid Password	Display Error Message
Valid UserName + Invalid Password	Display Error Message
Invalid UserName + Invalid Password	Display Error Message

Reference

<https://developer.android.com/>

<https://stackoverflow.com/>

<https://www.tutorialspoint.com/index.htm>

<https://medium.com/>

THANKS YOU!

Team-

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