



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Spring 20_21

Section: C

Group No: 01

HELPDROID

An Android Help Assistance

A software Engineering project submitted
By

Serial No.	Student Name	Student ID	Contribution (%)
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The project will be Evaluated for the following Course Outcomes

Your Project will be Evaluated based on the following marking criteria	Total Marks
Requirements Analysis (functional, quality, and project requirements) [5Marks]	
System Design (UML, UI/UX design) [5Marks]	
Test and Project Management Planning [5Marks]	
Submission, Completeness, Spelling, Grammar and Organization [5Marks]	

Submission Date:

1/ Product and project description

System Features: (functional)

1. System Login

- This is the very first page and will ask user to enter login button. It will allow the user to enter username. Users have to write name, cell number, profession, institution, email, exact location. After receiving username, it will show again for password.
- After receiving all the information, it will check for the validity of the username and the password. If the entered details are valid, then user will be redirected to the home page.
- Then it will verify the information of the user through email.
- If it is invalid, it will read out a message to retry the attempt.
- If a user provides incorrect username and password for 3 continuous attempts, the system shall freeze the user account for an hour and will be active after that certain time.

2. Home page

- Stored information: All the information of nearest hospitals, ambulance, fire stations, police stations, nearby shopping malls, restaurants, garage will be stored here. All the addresses and contact numbers will be available here.
- Google map: current location of the user and search location will be available here. Users can get help with the use of Google Place API and displayed on a map with directions and with contact details.
- Help post box: User can also directly post about their problems which need to be solved immediately. Nearby users can see the post of the user who is facing problems and can give a proper solution to it. Like, if anyone need a garage immediately. he/she will post it & any nearby user who can help, will contact with him/her and solve this issue.
- Access call: Auto call in emergency will be available. There are some problems which people face all of a sudden like fire in the kitchen or urgently need to admit someone in hospital. For this kind of problem there will be a "Panic" Button in the system. It will get activated by pressing or shouting "Panic", and after activation sends Panic SMS to members and dials 911 automatically, and a loud Alarm will be triggered and at regular intervals SMS of current location.
- Message box: There will be a message box for emergency cases.
- Access camera: users will be able to use their camera to show the problems and ask for help.
- Profile check: If any user wants a private tutor in nearby location, he/she can find through this app by randomly checking everyone's profile and connect through call or message with the user he/she thinks suitable for study purpose.

- News: Users will be able to scroll through news feed and find updates about weather, sports, and current affairs around the world.

3. Log out

After completing necessary tasks users will be able to simply log out until next time.

System Features: (Non-functional)

Admin:

- **Login:** Admin need to login with their valid login credentials in order to access the system.
- **View User:** All the registered user's details can be viewed by admin.
- **View Accidents:** All the recent as well as current accident with details and images can be viewed by the admin.
- **Add News:** Admin can add a news with details.
- **Add Road Side Assistance:** For accidental or any breakdown purpose, admin add a Roadside assistance info.

Quality attributes:

- User can get all types of assistance help and specially their number at one place.
- User can directly report an accident information and upload photos of accidental site.
- Requires active internet connection.
- System may provide inaccurate results if data not entered properly.
- The system can be used for women's security as well as day to day life for searching any assistance.

Environment:

Front End: Android

Backend: ASP.net with C#

Project Requirements:

Hardware Requirement:

- i3, i5, i7 Processor Based Computer
- 1GB-RAM
- 80 GB Hard Disk
- Monitor
- Internet Connection
- Android Device

Software Requirement:

- Windows 7, 8, 10 or higher
- Android Studio
- SQL Server 2008

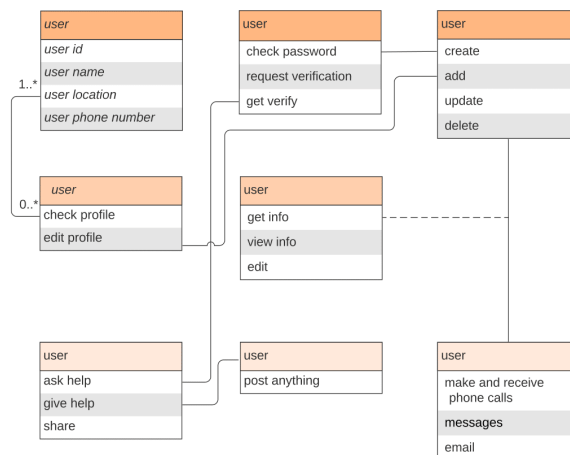
2/ SYSTEM DESIGN SPECIFICATION

Figure: ER Diagram.

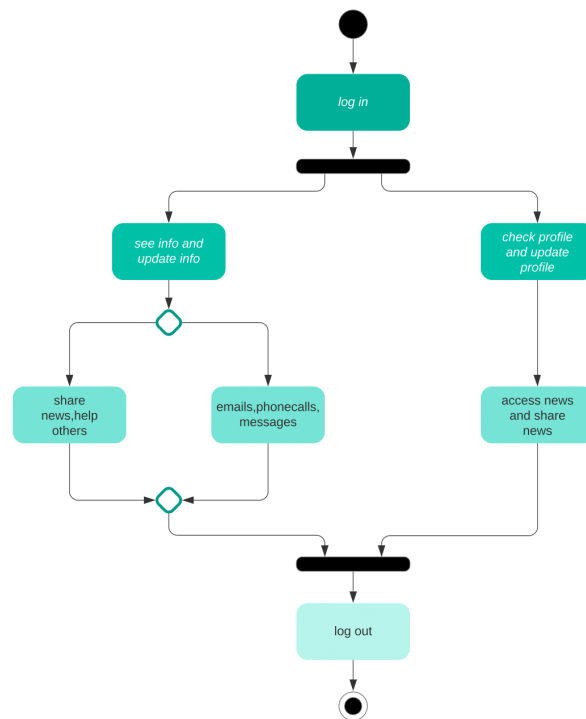


Figure: Activity Diagram.

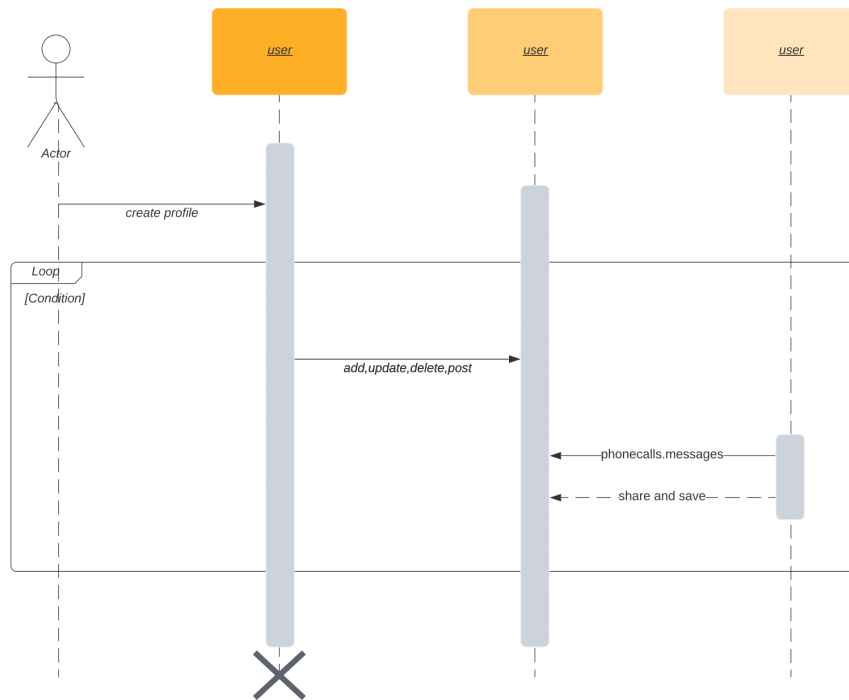


Figure: Sequence Diagram.

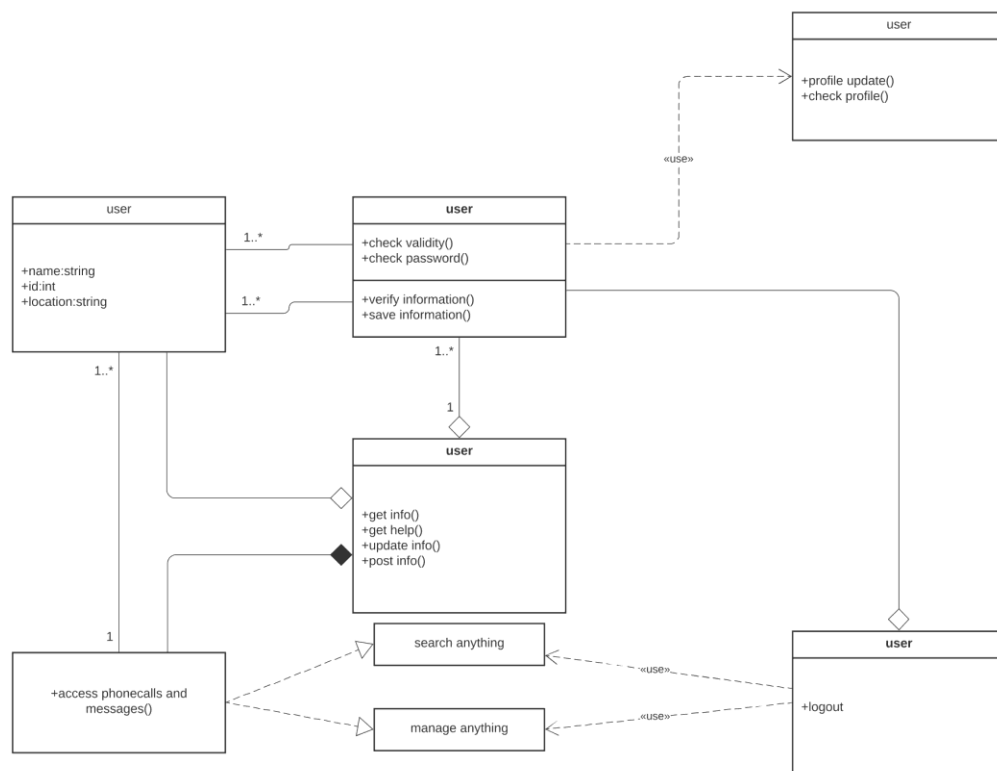


Figure: UML Class Diagram.

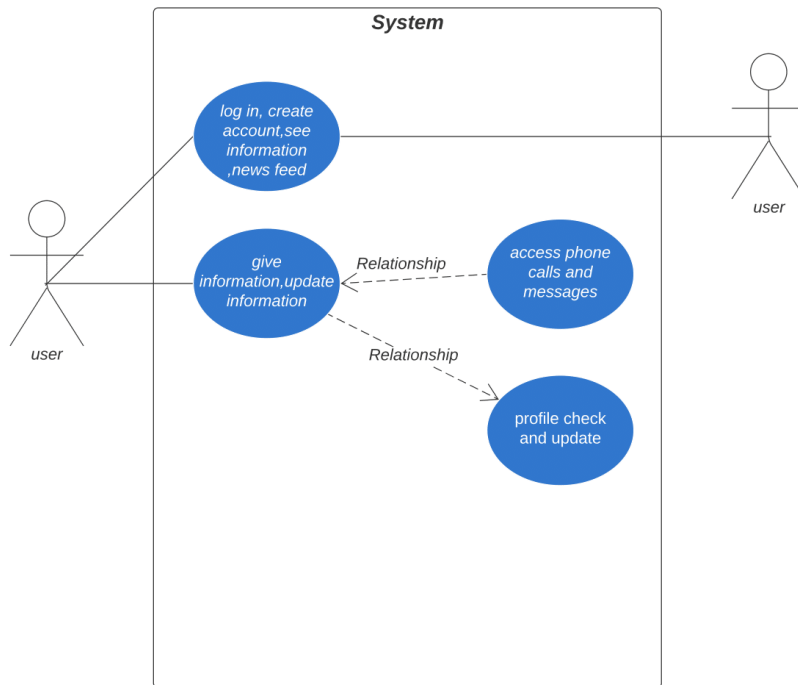


Figure: USE CASE Diagram.

3/ SYSTEM TEST PLAN

Functional Requirements Test:

Project Name: Helpdroid		Test Designed by: Group 1		
Test Case ID: FR-2		Test Design Date:22-04-2021		
Test Priority: High		Test Executed by:		
Module Name: Home Page		Test Execution Date:		
Test Title: Show all information in the homepage and works fast				
Description: Test website home page				
Precondition: User must log in to the system and provide location information				
Test Steps	Test Data	Expected Results	Actual Results	Status (pass/fail)
1.Open homepage 2.Open stored information near your location 3.Open google map and find location 4.Try to call and send message and access camera 5. Enter a post for help 6.Press the ‘Panic’ button for emergency help 7.Try to check others profile	1.Showed map and location 2.Easily Calling and messaging and access the phone camera. 3.Get comment from the help post. 4.Panic button directly call 999	User find the solution from the help post and get emergency help		
Post Condition: User will get solution from the home page and the history of call and message will be saved and the user will logout from the system.				

Project Name: Helpdroid		Test Designed by: Group 1		
Test Case ID: FR-3		Test Design Date:22-04-2021		
Test Priority: Medium		Test Executed by:		
Module Name: Logout		Test Execution Date:		
Test Title: Logout from the system				
Description: Test website logout page				
Precondition: User must log in to the system.				
Test Steps	Test Data	Expected Results	Actual Results	Status (pass/fail)
1.Login to the system 2.Open homepage 3.Click logout button 4.Press the (Yes/ No) option for confirming log out from the system	1.Login successful 2. Logout From the System	Close all page of the system and Logout From the system		

Non Functional Requirements Test:

Project Name: Helpdroid	Test Designed by: Raisa Nuzhat
Test Case ID: NFR-1	Test Design Date:22-04-2021
Test Priority: Medium	Test Executed by:
Module Name: Performance	Test Execution Date:
Test Title: How rapidly the system must perform for all the functions	
Description: Test all functions of the system.	
Precondition: Run the whole system.	

Test Steps	Test Data	Expected Results	Actual Results	Status (pass/fail)
1.Speed test 2.Throughput test 3.Capacity test 4.Timing test	1.Database Response timely 2. the system under load when the network connectivity is slow 3.The system works moderate in the heavy load condition	The system performs well.		