



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Fall 22_23

Section: D

Group No: 01

TotCare

A software Engineering project submitted
By

S/N	Student Name	Student ID	Contribution (%)	Individual Marks
03	Md. Ruhul Quddus Sowmik	18-36772-1		
09	Md. Asif Chowdhury	19-40746-1		
26	Uday Kumar Sarker Pranto	20-42941-1		
30	Rad Shahamat Akash	20-43631-2		
31	Fatima Zohra Aneen	20-43649-2		

The project will be Evaluated for the following Course Outcomes

Your Project will be Evaluated based on the following marking criteria		Total Marks
Identify and Analyze Requirements (functional, quality, and project req.)	[5Marks]	
Design the System Interface (UI/UX design)	[5Marks]	
Prepare Test cases and Test plan	[5Marks]	
Prepare WBS and Project Schedule	[5Marks]	
Identify potential risks and Prepare a risk management plan	[5Marks]	
Submission, Completeness, Spelling, Grammar and Organization	[5Marks]	

1. PRODUCT AND PROJECT DESCRIPTION

1.1 System Features

1) Registration:

- 1.1 Go to registration
- 1.2 Enter the name, e-mail, phone number, and all the necessary details.
- 1.3 Verification of users
- 1.4 Set the confirmation password
- 1.5 If the registration is successful, the login page will be displayed
- 1.6 If the registration isn't successful, the system will provide a message on where changes are a must.

Priority level: High

Precondition: The user must be a parent of a child of age between 2-18 years old.

Cross-references: 1.3, 1.2

2) Login:

- 2.1 The system shall allow users to login with their given name and password.
- 2.2 The login credentials will be verified with database records.
- 2.3 If the login is successful the home page of the user account will be displayed.
- 2.4 If the username/password has been inserted wrong, the random verification code will be generated and sent to the user's e-mail address by the system to retry login.

Priority level: High

Precondition: A user has a valid id and password

Cross-references: 1, 2,2, 2,1

3) Home Page:

- 3.1 The system will take the user to their homepage
- 3.2 The homepage will have several sections like profile, notification bar, and child registration option. Selecting any section will directly lead to that section.

Priority level: High

Precondition: Successfully completing a registration and also logging in successfully

Cross-references: 2

4) Profile:

- 4.1 Here all the information of the user shall be showcased and viewed.
- 4.2 Also, there will also be options that will allow us to update any changes on our account, delete the account or create a new account.

Priority level: Medium

Precondition: Completing the registration

Cross-references: N/A

5) Notification Bar:

5.1 This section will just keep users updated.

Priority level: Low

Precondition: Child registration is completed.

Cross-references: N/A

6) Child Registration:

6.1 A User has to fill up the basic details asked by the system.

6.2 The system shall ask for the number of the child the registration should be carried out.

6.3 For each child their birth certificates should be given

6.4 The system shall be given the fingerprints of each hand of the child by the user.

6.5 The screen timing should be asked for and specified.

6.6 The applications that users don't want their children to view should be named and listed in the system.

Priority level: High

Precondition: Child must be 2-18 years old

Cross-references: 1

7) Agreement:

7.1 All the prerequisites and conditions of the system shall be stated which by clicking agreed, the user must agree to.

Priority level: High

Precondition: A User must know the rules for following the app.

Cross-references: N/A

8) Logout:

8.1 Logging out of the system.

Priority level: High

Precondition: User must have logged in.

Cross-references: 2

1.2 System Quality Attributes

Non-Functional Requirements:

- **QA1-Usability:** A user shall be able to completely finish the registration process within a maximum of 2-3 minutes.

Priority level: Medium

Precondition: A User must have a good internet connection.

Cross-references: N/A

- **QA2-Performance:** A user can easily within few seconds access the upcoming interfaces right after providing the information.

Priority level: High

Precondition: Choosing the best algorithm for coding.

Cross-references: N/A

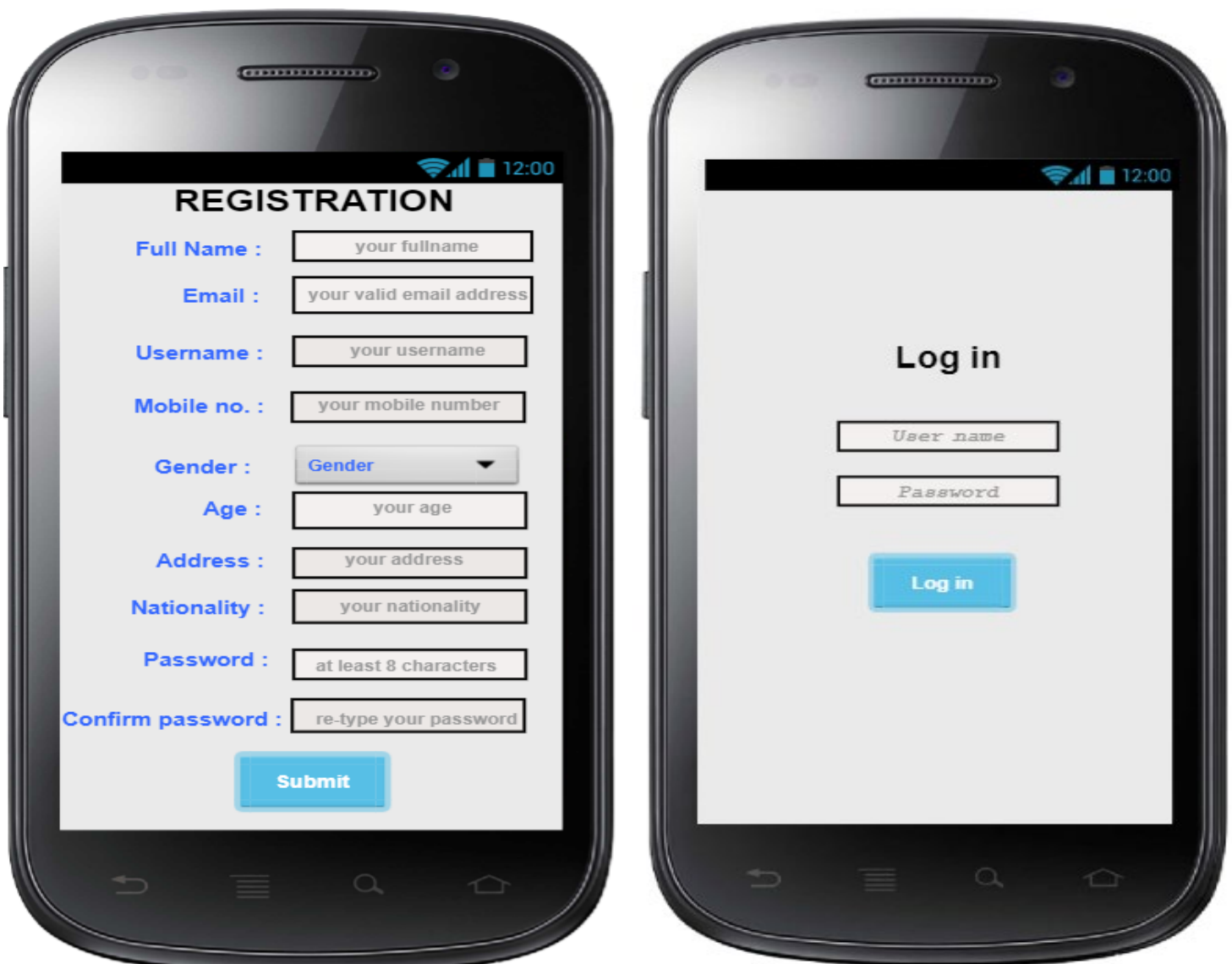
- **QA3-Integrity:** A user can safely provide their personal information, as the system ensures that the data are completely protected from intruders.
Priority level: High
Precondition: Data must be encrypted during coding
Cross-references: N/A

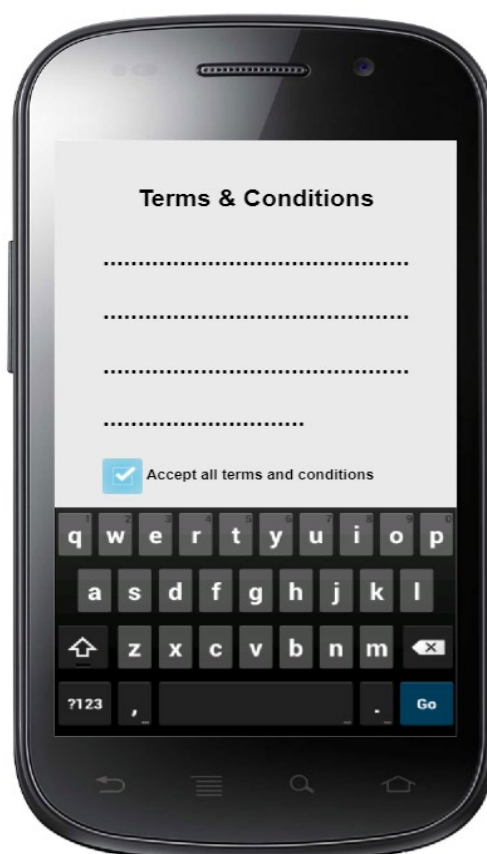
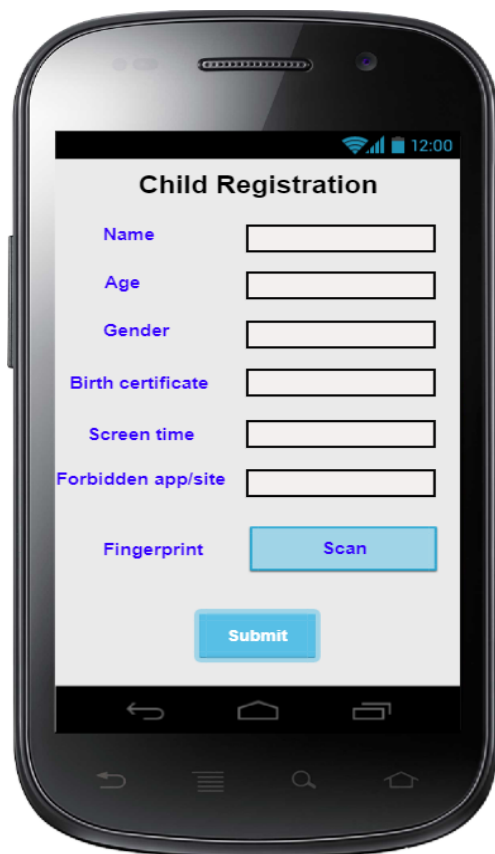
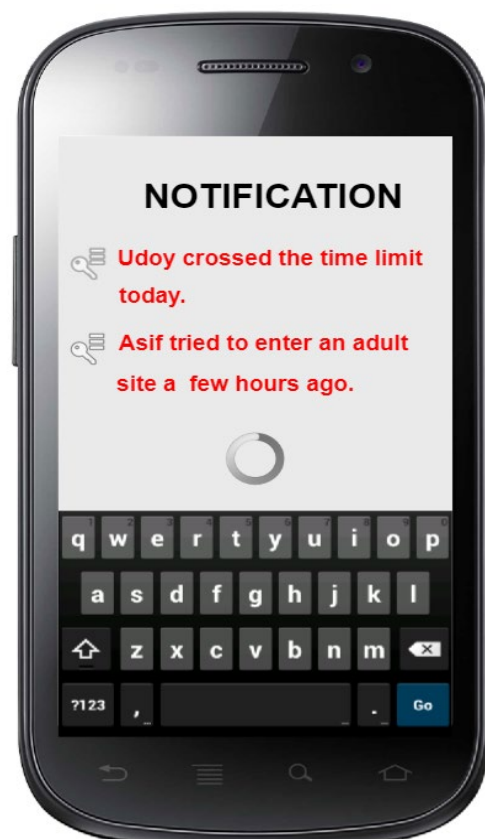
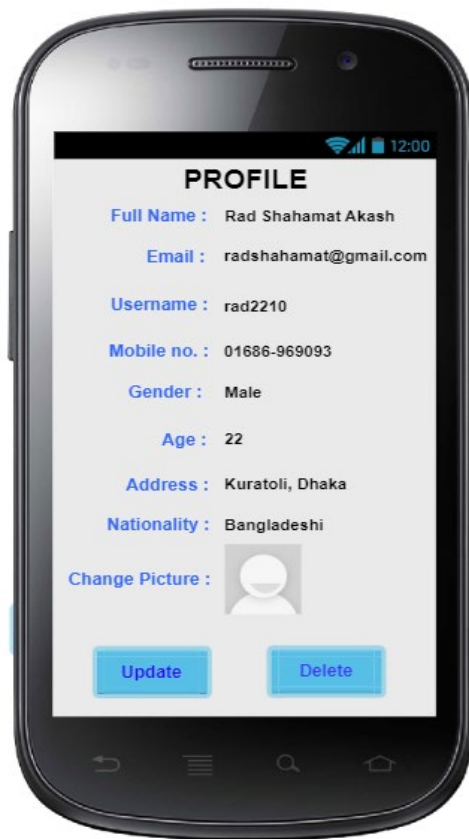
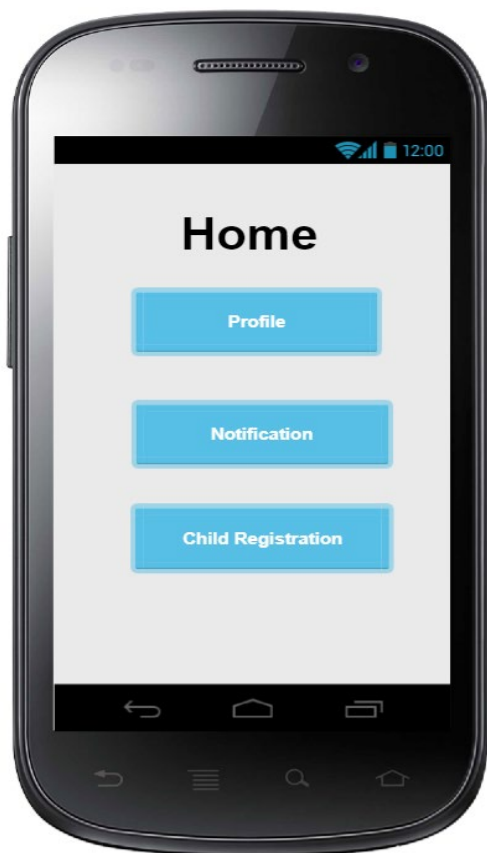
1.3 Project Requirements

- **Device:** Our software is only applicable for Android-based Mobile & Tablets.
- **Budget:** As the project is a short system, hence the total cost will be around Tk 40000.
- **Tools:** Here we will be using applications such as PENCIL, Visual Studio, SQL Server, Excel, and google (for brainstorming).
- **Time:** 14 months

2. SYSTEM DESIGN SPECIFICATION

2.1 UI/UX Design





3. SYSTEM TEST PLAN

Tools/ Apparatus: Selenium

Selected system: Mobile/Tablet

Project Name: TotCare		Test Designed by: Rad Shahamat Akash		
Test Case ID: TC_1		Test Designed date: 26-Nov-22		
Test Priority (Low, Medium, High): Medium		Test Executed by:		
Module Name: Registration		Test Execution date:		
Test Title: verify registration with valid information				
Description: Test website registration page				
Precondition (If any): User must have valid information				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Download the app 2. Enter full name 3. Enter username 4. Enter email 5. Enter mobile no 6. Enter gender 7. Enter age 8. Enter address 9. Enter nationality 10. Enter password 11. Enter confirm password 12. Click submit	Full name: Rad Shahamat Akash Username: Rad121 Password: 243ef63@\$5 Email: radshamat@gmail.com Mobile no.: 0123 Gender: Male Age: 22 Address: Kuratoli, Dhaka Nationality: Bangladeshi	Users should register for the application		
Post Condition: User will be validated with database and successfully register to the software.				

Project Name: TotCare		Test Designed by: Sowmik		
Test Case ID: TC_4		Test Designed date: 26-Nov-22		
Test Priority (Low, Medium, High): High		Test Executed by:		
Module Name: Home Page		Test Execution date:		
Test Title: go to home page after a successful login				
Description: successful login will push a user in home page for using homepage sections				
Precondition (If any): if the user information is correct then login successful and get access homepage				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter valid username 2. Enter valid password 3. Click submit button 4. Login successful 5. Go to the homepage 6. Homepage has three sections. Profile, Notification & Child Registration 7. Click profile to see profile details 8. Click notification bar and see all notification 9. Child Registration by giving child information with fingerprint	Username: smk1011 ‘Or’ Email: sowmik@gmail.com Password: 3h_1#\$	User should successfully login into the application and go to the home page perfectly		
Post Condition: User is valid through validated information with the database and successfully login to go to the home page.				

Project Name: TotCare		Test Designed by: Asif Chowdhury		
Test Case ID: TC_4		Test Designed date: 26-Nov-22		
Test Priority (Low, Medium, High): Medium		Test Executed by:		
Module Name: Profile		Test Execution date:		
Test Title: Verify Profile Information				
Description: Information of user must be shown in the profile section after login successfully.				
Precondition (If any): User must have valid username and password.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. View profile section from home page 2. Ensure That the Users Information Are Viewed Properly. 3. Update Profile 4. Delete Profile	Full name: Asif Chowdhury Username: Asif727 Mobile no: 0172 Gender: Male Age: 25 Address: Dhaka	All the information of the User Must Be Shown.		
Post Condition: Functions in Profile Works Properly.				

Project Name: TotCare		Test Designed by: Fatima Zohra		
Test Case ID: TC_6		Test Designed date: 26-Nov-22		
Test Priority (Low, Medium, High): High		Test Executed by:		
Module Name: Child Registration		Test Execution date:		
Test Title: Verify child registration system				
Description: Test application child registration system.				
Precondition (If any): Child must be 2-18 years old.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to Home Page. 2. Click the child registration section. 3. Select number of children that must be registered. 4. Fill up the basic details. 5. Scan the birth certificate and fingerprints. 6. Screen timing and restricted applications setup. 7. Click submission for the child registration.	Number of children: 1 Name: Anisa Age: 9 School: XYZ Class: 2 Birth certificate: scanned Fingerprints: setup Screen Timing: 1hr Apps to be restricted: YouTube, Instagram	A child should be registered properly		
Post Condition: Child successfully registered.				

4. PROJECT MANAGEMENT PLAN

4.1 Project Scheduling

As our Software project type is Organic so the value of P will be 1.05 and the value of T will be 0.38

$$\begin{aligned}\text{Effort} = \text{PM} &= \text{Coefficient}_{\langle \text{Effort Factor} \rangle} * (\text{SLOC}/1000)^P \\ &= 2.4 \times (30000/1000)^{1.05} \\ &= 85.35\end{aligned}$$

$$\begin{aligned}\text{Development time} = \text{DM} &= 2.50 * (\text{PM})^T \\ &= 2.50 \times (85.35)^{0.38} \\ &= 13.54 \text{ months} \sim 14 \text{ months}\end{aligned}$$

Required number of people = ST = PM/DM

$$\begin{aligned}&\frac{85.35}{13.54} \\ &= 6.3 \sim 7\end{aligned}$$

4.2 Risk Analysis

S/N	Risk Description	Probability	Impact	Mitigation Plan
1	Code Issues	40%	Software may have bugs	Creating code standards for software developers
2	Budget Issues	30%	Employee decreased and so system delivery time delayed	Budget related calculations should be done properly
3	Stakeholder Issues	30%	System won't be developed properly	Project goals must be set clearly
4	Users Response	20%	Working on same module repetitively	Conducting focused groups to gather information about users

