



American International University-Bangladesh (AIUB)

Department of Computer Science
Faculty of Science & Technology (FST)

Mobile POS

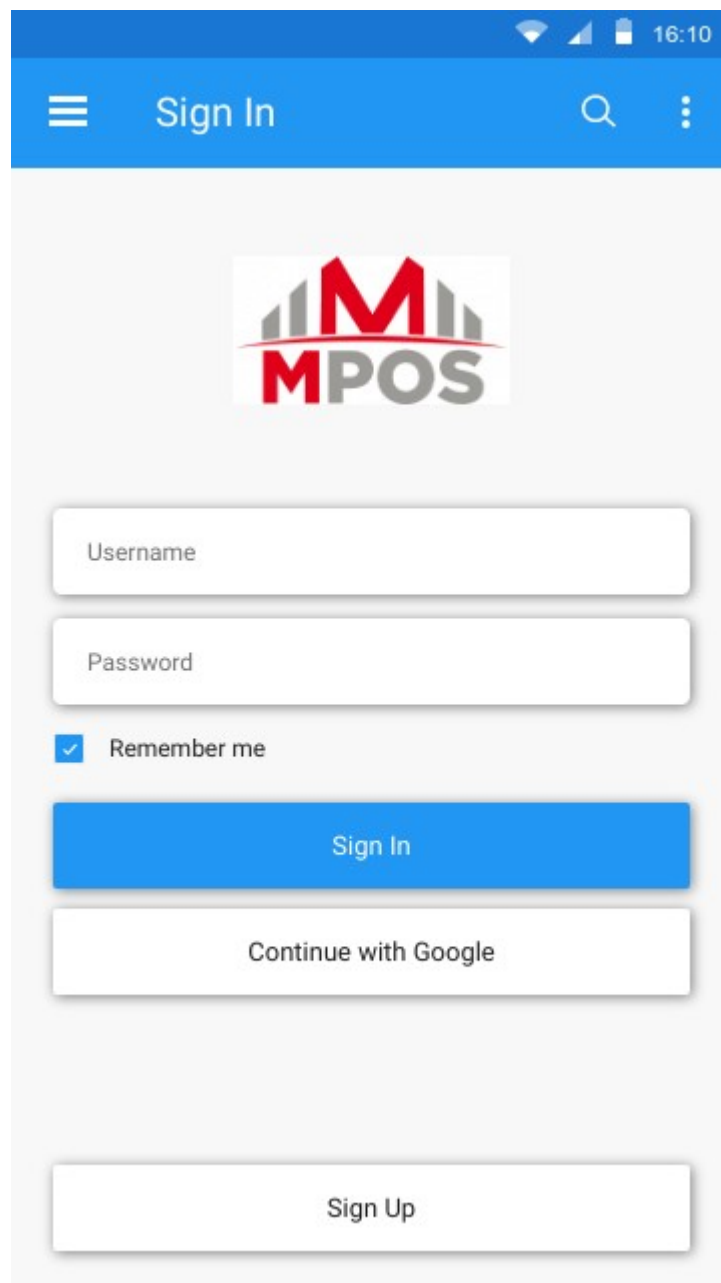
SN	Name	ID
1	Zarif Hossain Afif	20-44316-3
2	In Jam Ifte Khar Nur	20-43040-1
3	Tahmidur Rahman	19-40216-1

1 Wireframing:

User Interface and Experience (UI/UX) :


- The Tool Used in this task is **Proto** -- www.proto.io

1.1 Sign In Page



The image shows a mobile app wireframe for a sign-in page. At the top is a blue header bar with a hamburger menu icon on the left, the text "Sign In" in the center, a magnifying glass icon on the right, and a vertical ellipsis icon on the far right. Below the header is a light gray background area. In the center of this area is the MPOS logo, which consists of a stylized red "M" with gray vertical bars on either side, and the letters "MPOS" in gray below it. Below the logo are two white input fields with gray borders and placeholder text: "Username" and "Password". Below the password field is a checkbox with a blue checkmark and the text "Remember me". Below this is a solid blue button with the text "Sign In" in white. Below the blue button is a white button with a gray border and the text "Continue with Google". At the bottom of the form is another white button with a gray border and the text "Sign Up". The top of the screen shows a status bar with a blue background, containing icons for Wi-Fi, cellular signal, and battery, along with the time "16:10".

1.2 Sign Up Page



Full name

Username

Email

Password

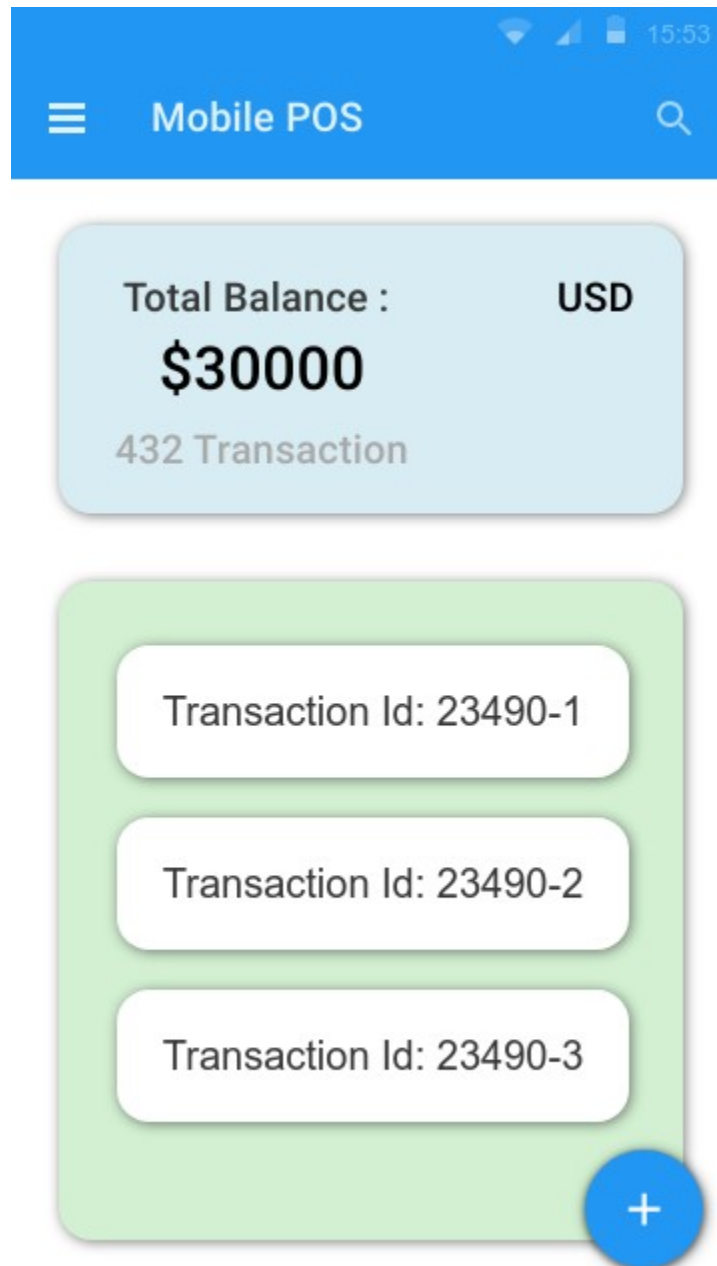
Confirm Password

Sign Up

Already have an account? [Sign In](#)

The image shows a mobile application sign-up page. At the top, there is a blue header bar with a hamburger menu icon, the text 'Sign Up', a magnifying glass icon, and a three-dot menu icon. The status bar at the very top shows a Wi-Fi signal, cellular signal, battery level, and the time 16:09. Below the header, the MPOS logo is centered. The logo consists of a red 'M' with grey vertical bars on either side, and the text 'MPOS' in grey below it. Below the logo, there are five white input fields with grey placeholder text: 'Full name', 'Username', 'Email', 'Password', and 'Confirm Password'. Below these fields is a blue button with the text 'Sign Up'. At the bottom, there is a link that says 'Already have an account? Sign In'.

1.3 Dashboard Page



1.4 Card Inserted Page

The image shows a mobile application interface for a Point of Sale (POS) system. At the top is a blue header bar with a hamburger menu icon on the left, the text "Mobile POS" in the center, and a magnifying glass search icon on the right. The status bar at the very top shows signal, Wi-Fi, and battery icons along with the time 16:07. The main content area has a white background. It features a large white rounded rectangle with a green title "Card was inserted successfully". Below the title are four horizontal grey bars containing the card details: the card number "234*****568", the expiration date "12/02", the cardholder's name "Karim Uddin", and a masked PIN "*****". Below this rounded rectangle is another white rounded rectangle containing a grey bar with the text "Amount : 1200". At the bottom of the screen is a solid blue button with the white text "NEXT".

Mobile POS

Card was inserted successfully

234*****568

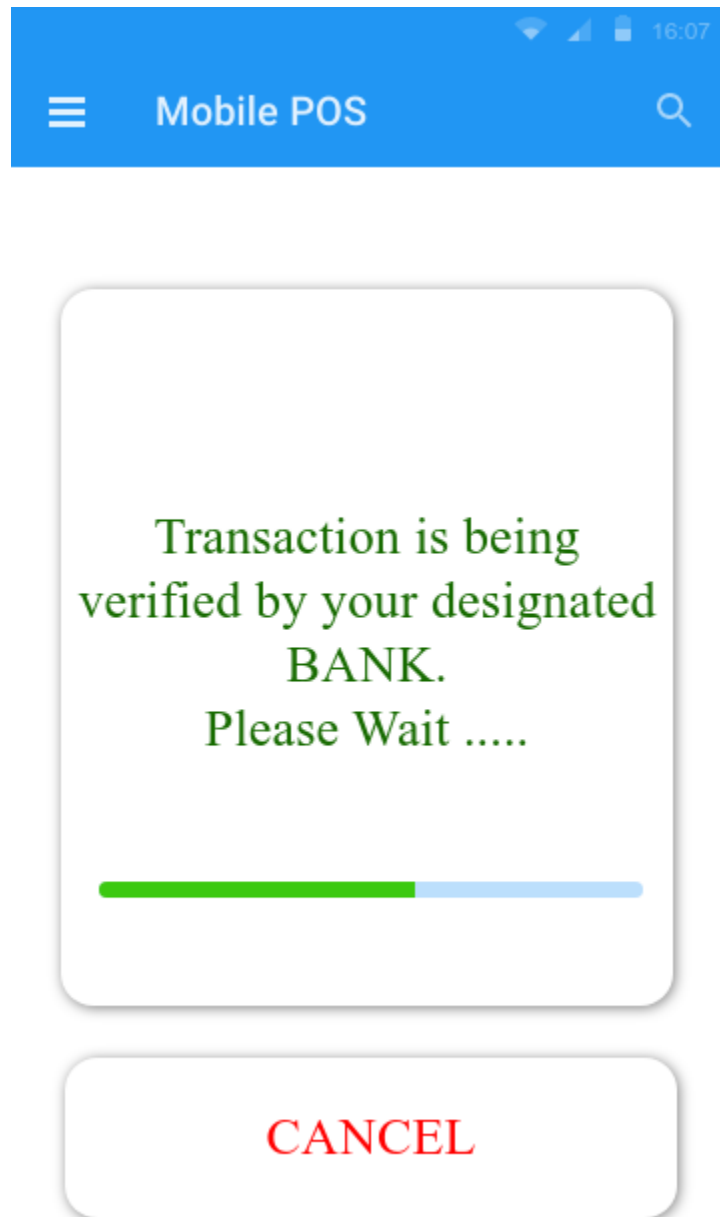
12/02

Karim Uddin

Amount : 1200

NEXT

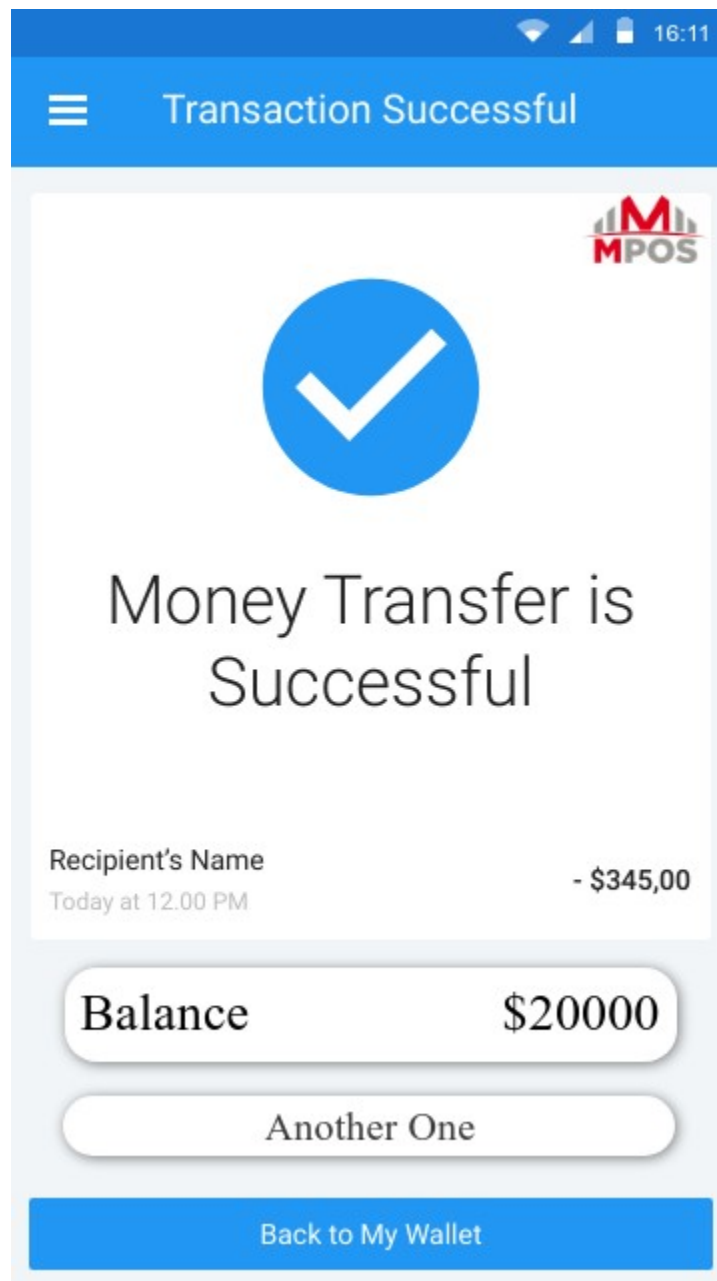
1.5 Transaction Verification Page



1.6 Card Denied Page



1.7 Transaction Successful Page



2 Functional Testing

2.1

Project Name: Mobile POS		Test Designed by: Zarif Hossain Afif		
Test Case ID: MT_1		Test Designed date: 24/07/22		
Test Priority (Low, Medium, High): High		Test Executed by: Tahmidur Rahman		
Module Name: Verification		Test Execution date: 24/07/22		
Test Title: User Verification				
Description: Checking if the user is an authentic customer of our solution.				
Precondition (If any): User must have our mPOS solution.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">• Open the app• Enter username• Enter Password• Click Login/Sign in	John Doe – weiop Karim – 34kjl Nabil - ###12DDjk	Yes Yes Yes	No Yes Yes	Pass

2.2

Project Name: Mobile POS		Test Designed by: Zarif Hossain Afif		
Test Case ID: MT_2		Test Designed date: 24/07/22		
Test Priority (Low, Medium, High): Medium		Test Executed by: Tahmidur Rahman		
Module Name: SignUp		Test Execution date: 24/07/22		
Test Title: SignUp page validation.				
Description: Testing the front-end page of creating a new user.				
Precondition (If any): User must have our mPOS solution.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">Open the AppClick Sign UpEnter required InformationClick Sign Up again.Query the database for the given user.	<div>Karim Uddin, Karim, @karim@gmail.com, @11ytnj, @@11ytnj</div> <div>Rahim Mia, Rahim, rami@yahoo.com, ddem,ddem</div>	<div>User Created</div> <div>User Created</div>	<div>User Created</div> <div>User Creation Failed</div>	Pass

2.3

Project Name: Mobile POS		Test Designed by: Tahmidur Rahman		
Test Case ID: MT_3		Test Designed date: 24/07/22		
Test Priority (Low, Medium, High): High		Test Executed by: Zarif Hossain Afif		
Module Name: Verification		Test Execution date: 24/07/22		
Test Title: Card Information Verification				
Description: Check If the inserted card is valid.				
Precondition (If any): User must be signed in to our mPOS solution.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">Open the appClick the Plus(+) iconInsert the Card	158*****620 901*****341 272*****982	Valid Valid Valid	Invalid Valid Valid	Pass

2.4

Project Name: Mobile POS		Test Designed by: Tahmidur Rahman			
Test Case ID: MT_4		Test Designed date: 24/07/22			
Test Priority (Low, Medium, High): High		Test Executed by: Zarif Hossain Afif			
Module Name: Card Verification		Test Execution date: 24/07/22			
Test Title: Card balance Verification					
Description: Check the card’s balance.					
Precondition (If any): User must be signed in to our mPOS solution and a valid card has been inserted.					
Test Steps		Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">Insert CardEnter the amount		1500 2999	Pass Pass	Fail Pass	Pass

2.5

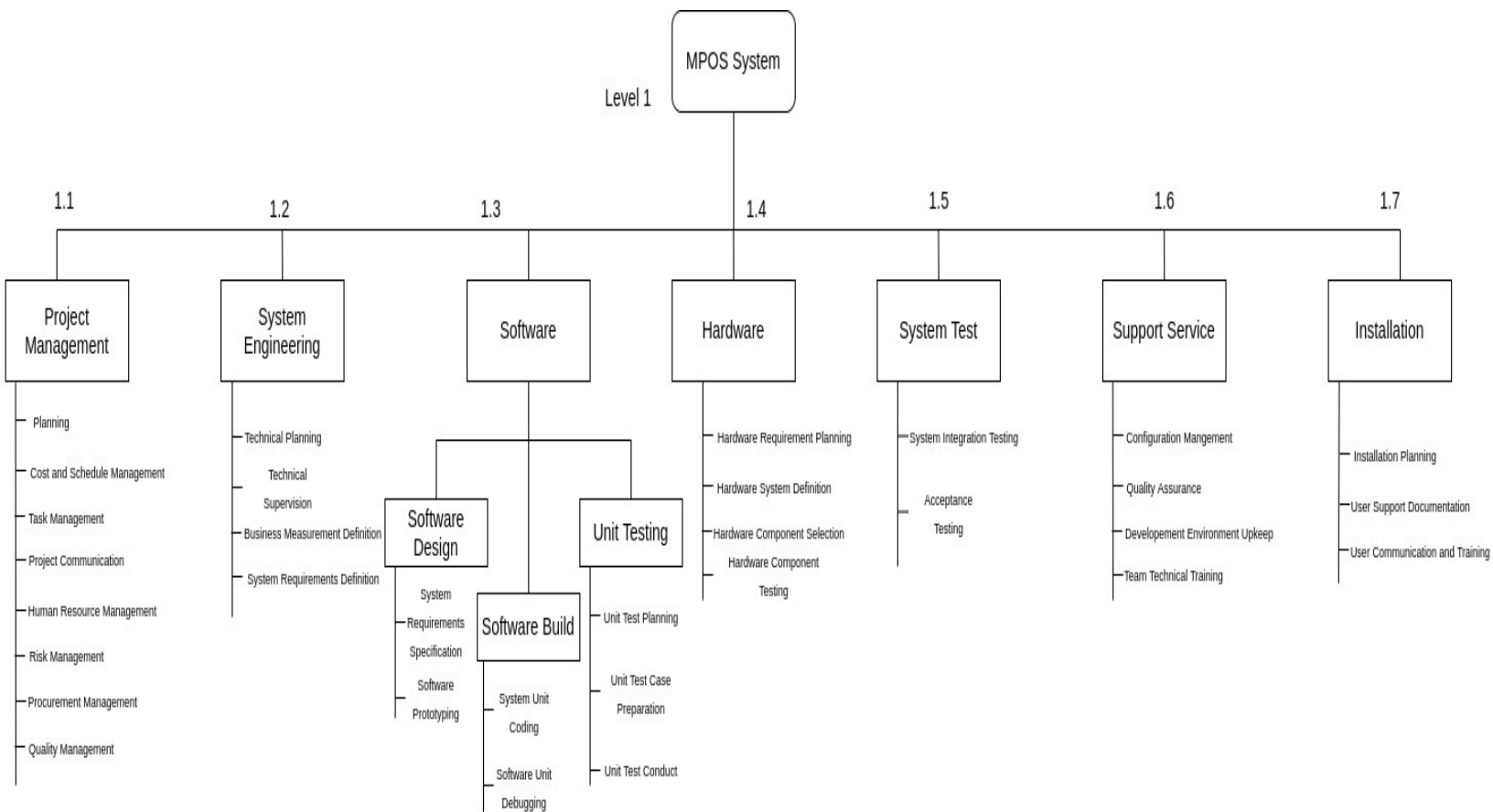
Project Name: Mobile POS		Test Designed by: Tahmidur Rahman		
Test Case ID: MT_5		Test Designed date: 24/07/22		
Test Priority (Low, Medium, High): High		Test Executed by: Zarif Hossain Afif		
Module Name: Transaction		Test Execution date: 24/07/22		
Test Title: Transaction Verification				
Description: Verify the transaction being done.				
Precondition (If any): User must be signed in to our mPOS solution and a valid card with enough balance has been inserted.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">• Open the app• Click Plus(+) icon• Insert the Card• Enter amount• Enter Pin Code• Click Next	158*****620, Karim, 12-08, ****, 1500	Done	Failed	Pass
	901*****341, Rahim, 01-12, ****, 2000	Done	Done	

2.6

Project Name: Mobile POS		Test Designed by: Tahmidur Rahman		
Test Case ID: MT_6		Test Designed date: 24/07/22		
Test Priority (Low, Medium, High): High		Test Executed by: Zarif Hossain Afif		
Module Name: Verification		Test Execution date: 24/07/22		
Test Title: Pin Verification				
Description: Verify the user’s customer provided pin				
Precondition (If any): User must be signed in to our mPOS solution and a valid card with enough balance has been inserted.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ul style="list-style-type: none">• Open the app• Click Plus(+) icon• Insert the Card• Enter Pin Code	158*****620, Karim, 12-08, ****	Valid	Invalid	Pass
	901*****341, Rahim, 01-12, ****	Valid	Valid	

3 Work Breakdown Structure

- The Tool Used in this task is **Draw.io** -- www.draw.io



4 Timeline Chart

- The Tool Used in this task is **Calc** -- [LibreOffice Calc](#)

Task : Person \ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13
A : Afif													
B : Somit													
C : Nur													
D : Somit													
E : Afif													
F : Nur													
G : Afif													
H : Somit													
I : Afif													
J : Afif													
K : Nur													
L : Somit													
M : Nur													
N : Afif													
O : Somit													
P : Afif													

Activity Key:

- A. Planning
- B. Requirements Gathering
- C. Technical Planning
- D. Hardware Procurement
- E. Software Design
- F. Design Feasibility Testing
- G. Software Prototype
- H. System Design
- I. System Design Feasibility Testing
- J. System Coding
- K. System Debugging
- L. Unit Testing
- M. Hardware Testing
- N. Quality Check
- O. Acceptance Testing
- P. System Integration

5 Effort Measurement

We use Cocomo.

According to the type of ~~the~~ our project our project is Organic.

Now,

$$\text{Effort} = PM = \text{Coefficient} \times \left(\frac{SLOC}{1000} \right)^{1.0}$$

$$PM = 2.4 \times \left(\frac{22,000}{1000} \right)^{1.05}$$

$$= 61.62$$

$$\approx 62$$

$$\text{Development time} = DM = 2.50 \times (PM)^{0.38}$$

$$= 2.50 \times (62)^{0.38}$$

$$= 11.99$$

$$\approx 12$$

$$\text{Required number of people} = ST = \frac{PM}{DM}$$

$$= \frac{62}{12}$$

$$= 5.16$$

$$\approx 5 \text{ member}$$

6 Risk Analysis

S.N.	Risks	Category	Probability	Impact
1	Size estimate maybe low	PS	60%	2
2	Larger number of users than expected	PS	30%	3
3	Delivery deadline will be tightened	BU	50%	2
4	Funding will be lost	CU	30%	1
5	Technology won't meet requirements	TE	20%	1
6	Cost forecasts are inaccurate	BU	40%	2
7	Misunderstanding of requirements	PR	10%	3
8	Users have inaccurate expectations	CU	80%	3
9	Resource shortfalls	DE	60%	2
10	Design is infeasible	TE	50%	3
11	Design lacks flexibility	TE	50%	2
12	Technology components aren't interoperable	TE	20%	3
13	Information security incident	TE	60%	4
14	Components or products aren't maintainable	TE	30%	2
15	Delays to required infrastructure	DE	80%	1
16	User interface is low quality	CU	50%	2

THE END