American International University-Bangladesh (AIUB)

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

Mobile POS

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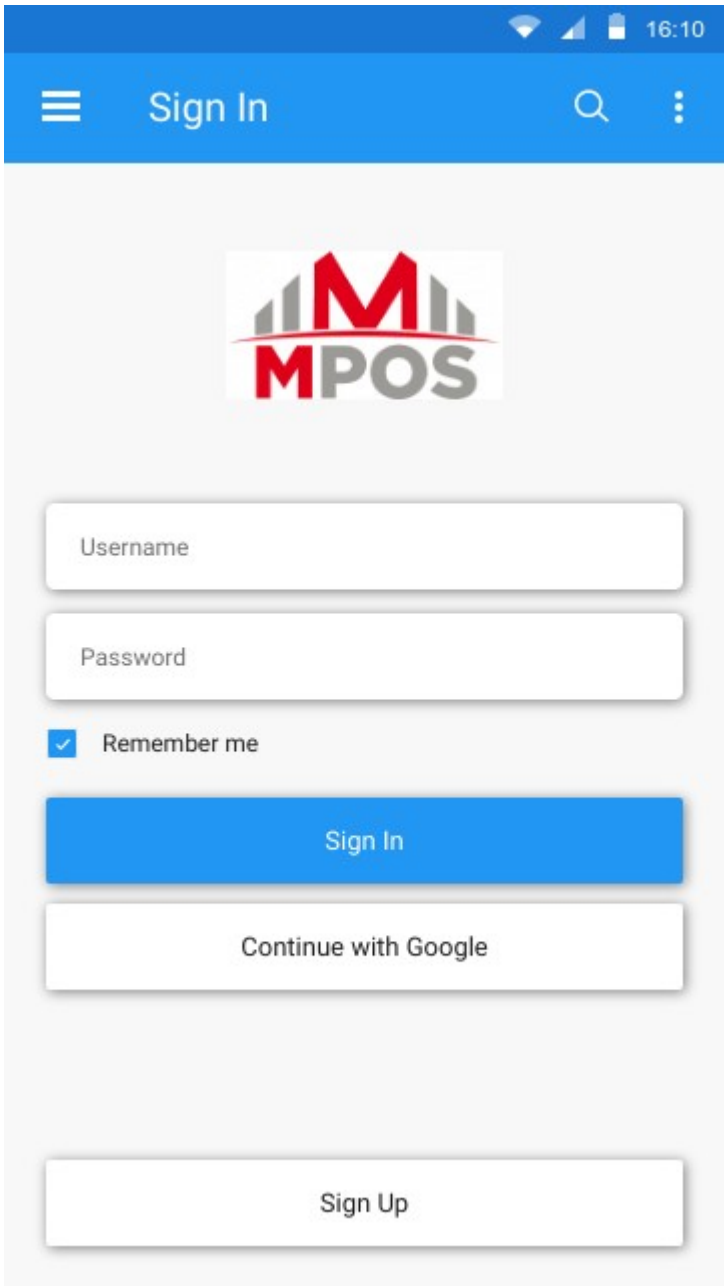
1 Wireframing:

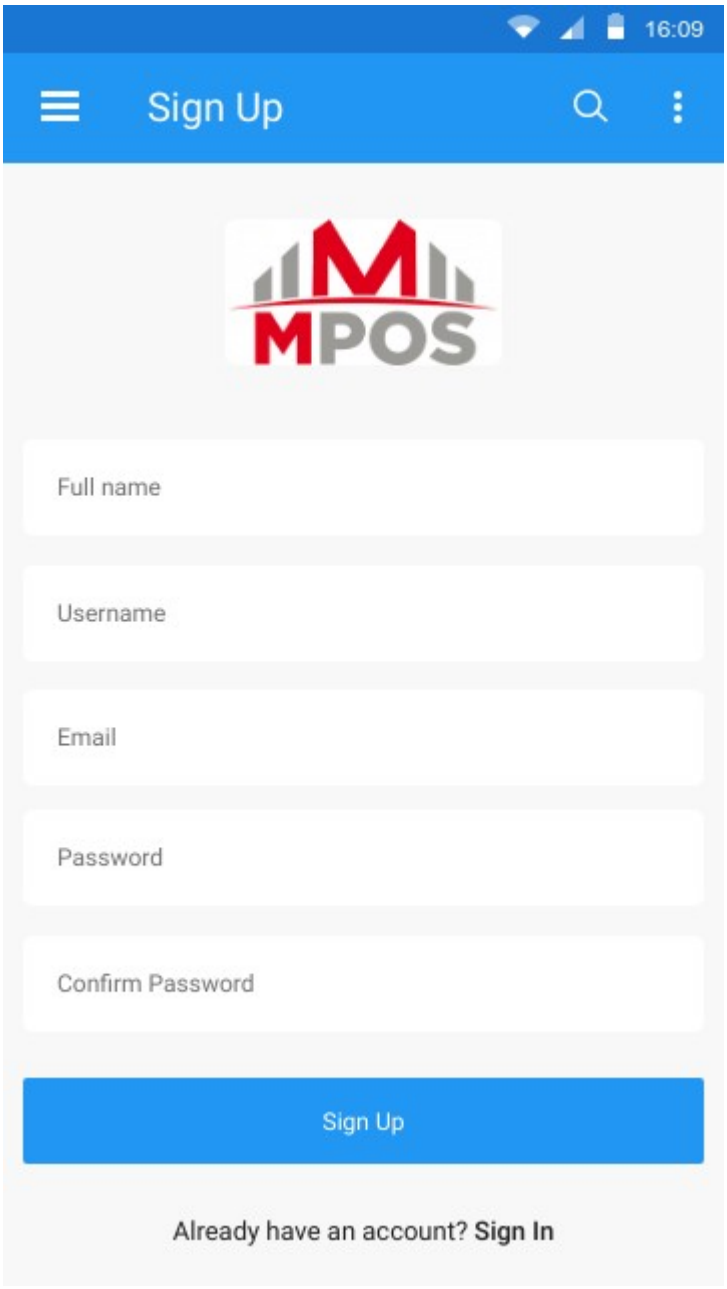
User Interface and Experience (UI/UX) :

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

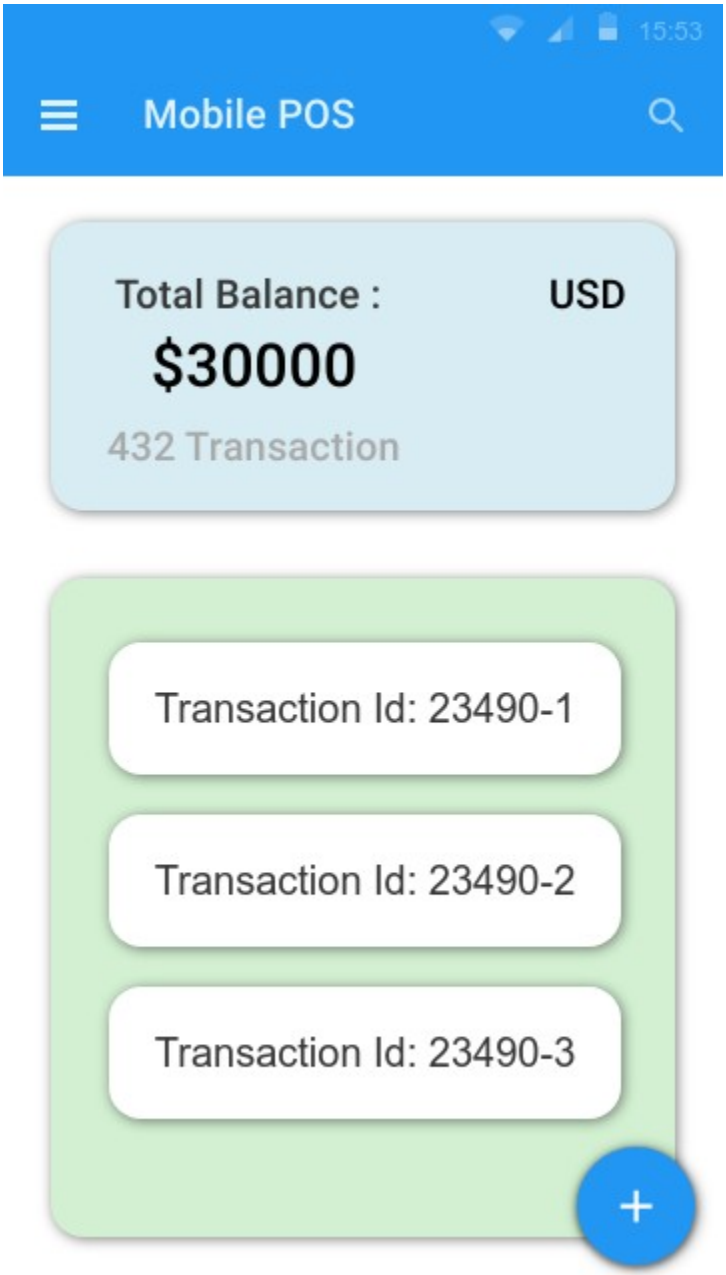
1.1 Sign In Page



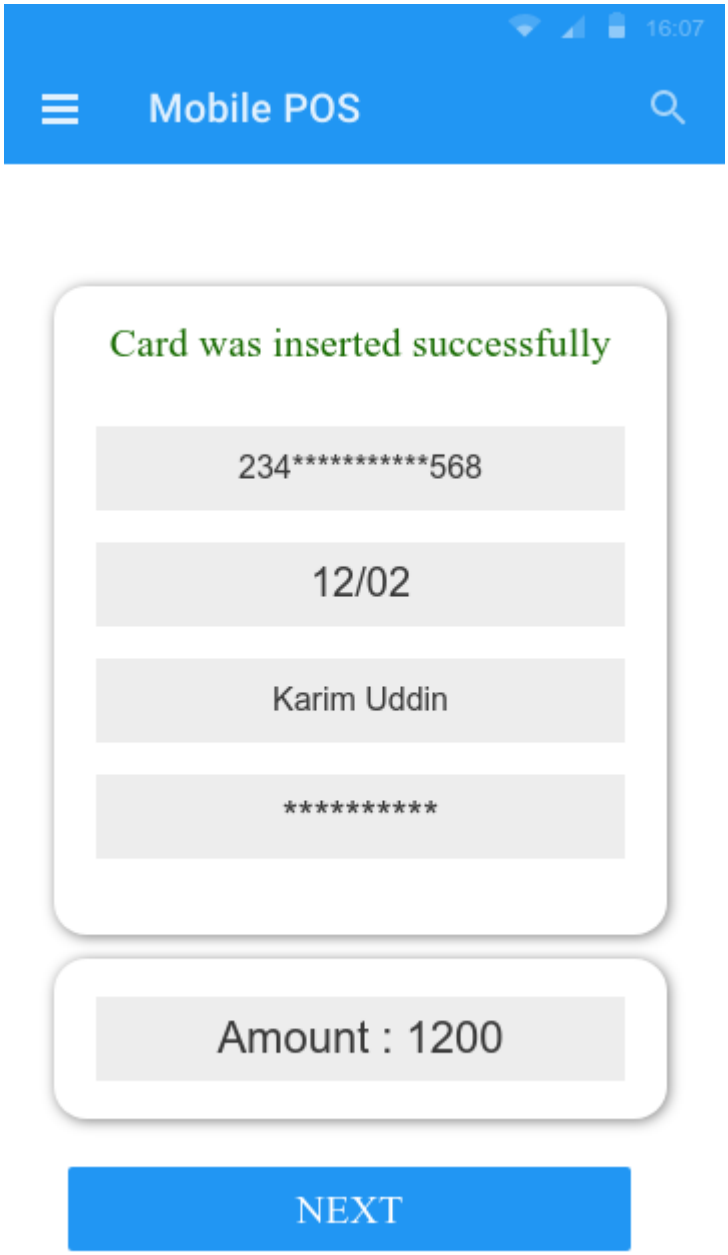
1.2 Sign Up Page



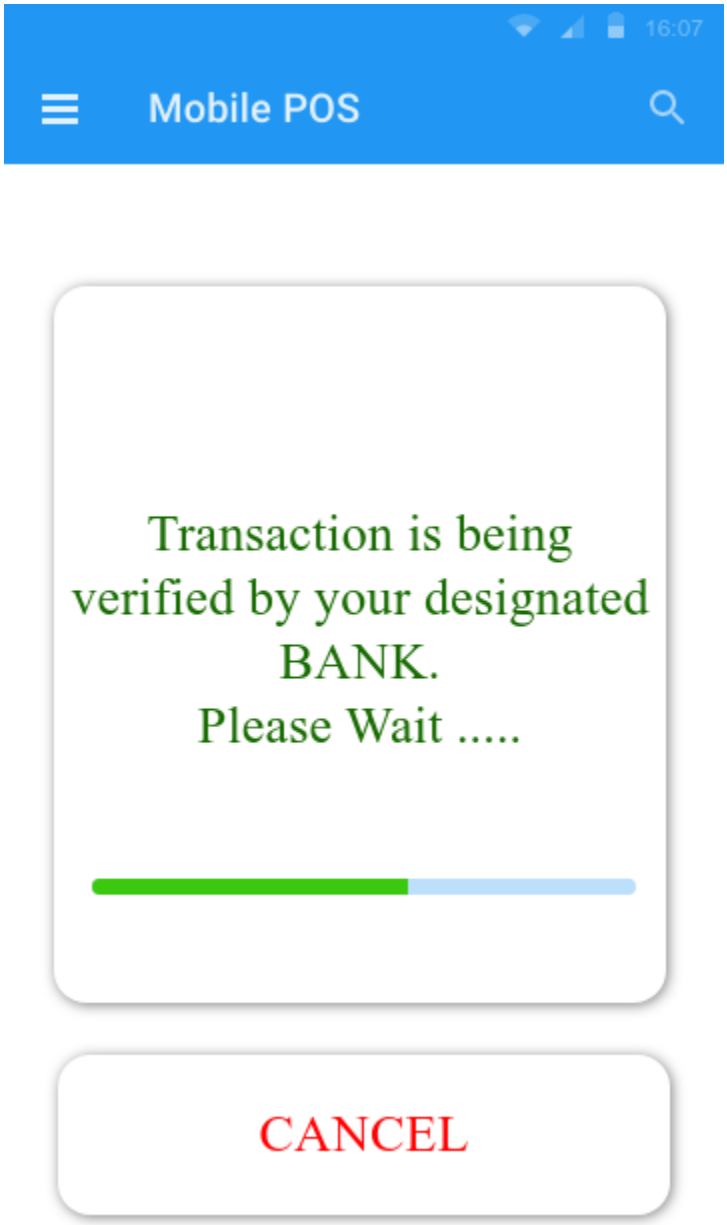
1.3 Dashboard Page



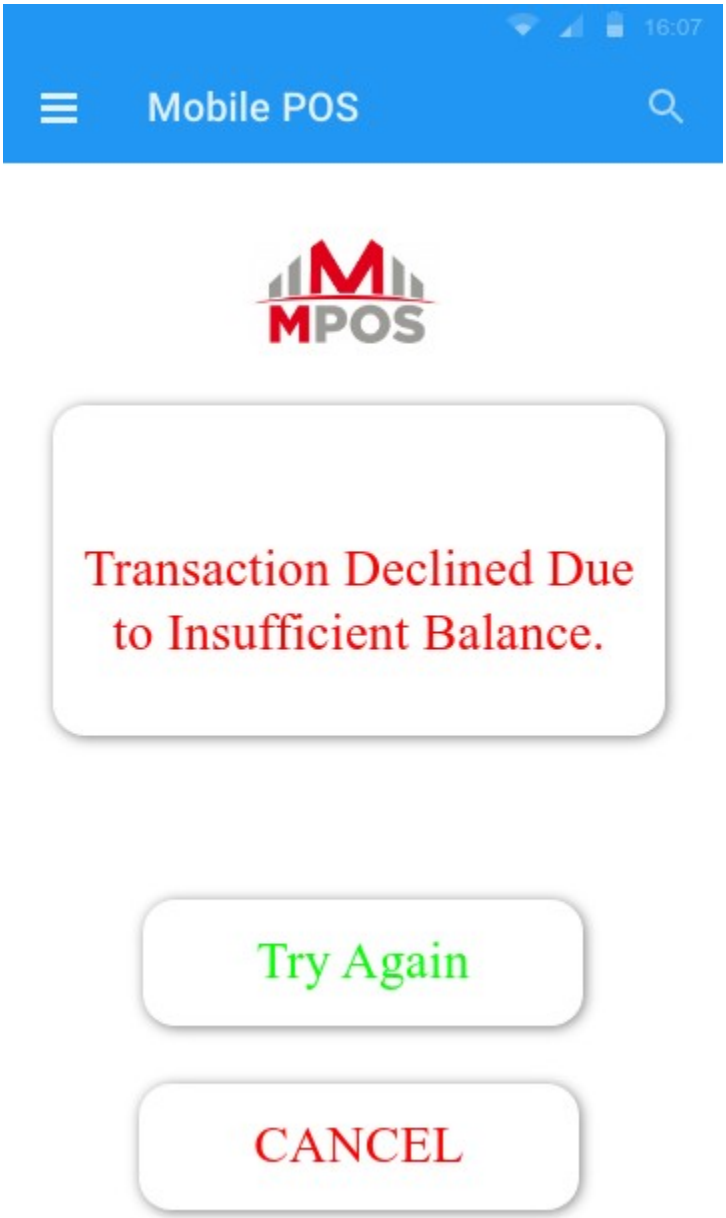
1.4 Card Inserted Page



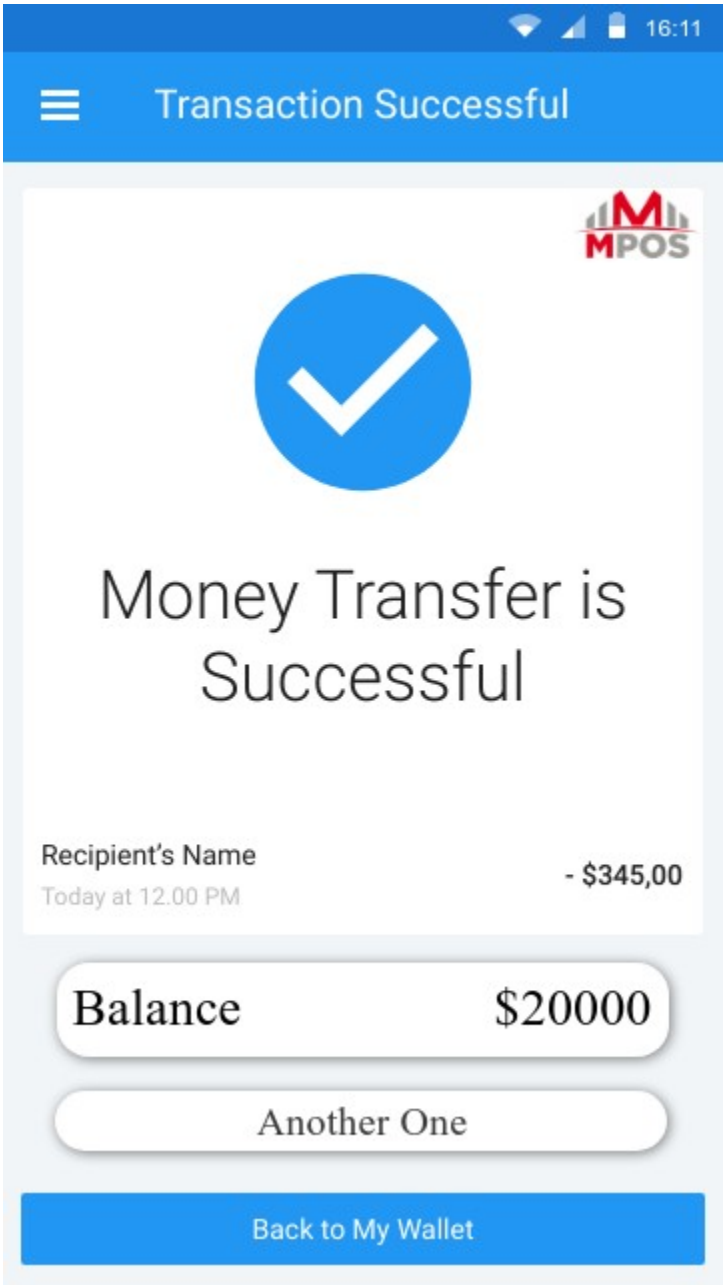
1.5 Transaction Verification Page



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 Priority (Low, Medium, High): High			Test Designed date: 24/07/22 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)
• Open the app • Enter username • Enter Password • Click Login/Sign in	John Doe – weiop Karim – 34kjlp 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 Priority (Low, Medium, High): Medium			Test Designed date: 24/07/22 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)
• Open the App • Click Sign Up • Enter required Information • Click Sign Up again. • Query the database for the given user.	Karim Uddin, Karim, karim@gmail.com,@ @11ytnj, @@11ytnj Rahim Mia, Rahim, rami@yahoo.com, ddem,ddem	User Created User Created	User Created User Creation Failed	Pass

2.3

Project Name: Mobile POS			Test Designed by: Tahmidur Rahman	
Test Case ID: MT_3 Test Priority (Low, Medium, High): High			Test Designed date: 24/07/22 Test Executed by: Zarif Hossain Afif	
Module Name: Verification			Test Execution date: 24/07/22	
Test Title: Card Information Verfication				
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)
• Open the app • Click the Plus(+) icon • Insert 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 Priority (Low, Medium, High): High			Test Designed date: 24/07/22 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)
• Insert Card • Enter the amount	1500 2999	Pass Pass	Fail Pass	Pass

2.5

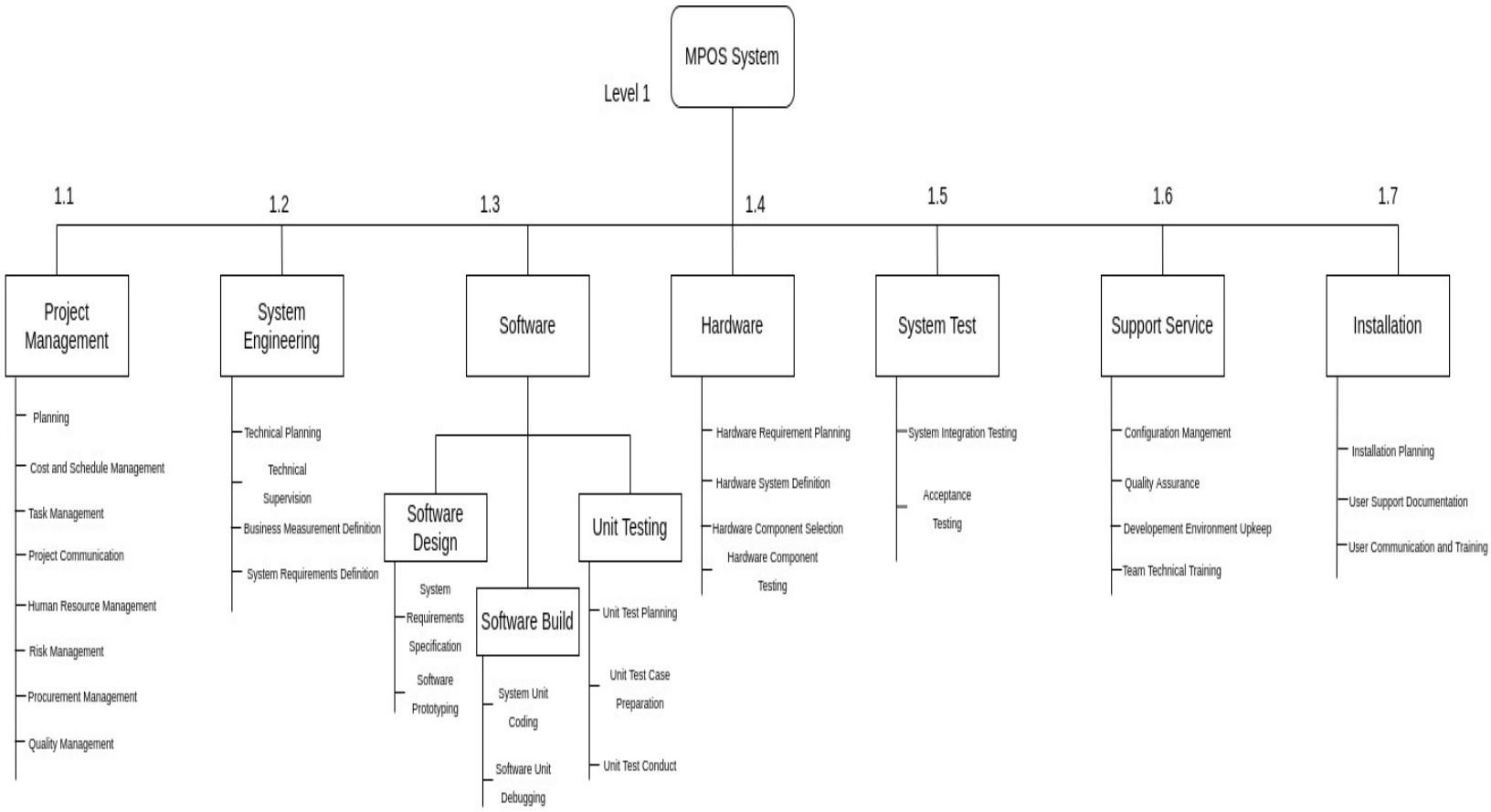
Project Name: Mobile POS		Test Designed by: Tahmidur Rahman		
Test Case ID: MT_5 Test Priority (Low, Medium, High): High		Test Designed date: 24/07/22 Test Executed by: Zarif Hossain Afif		
Module Name: Transaction		Test Execution date: 24/07/22		
Test Title: Transaction Verification				
Description: 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)
• Open the app • Click Plus(+) icon • Insert the Card • Enter amount • Enter Pin Code • Click Next	158*********620, Karim, 12-08, ****, 1500 901*********341, Rahim, 01-12, ****, 2000	Done Done	Failed Done	Pass

2.6

Project Name: Mobile POS		Test Designed by: Tahmidur Rahman		
Test Case ID: MT_6 Test Priority (Low, Medium, High): High		Test Designed date: 24/07/22 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)
• Open the app • Click Plus(+) icon • Insert the Card • Enter Pin Code	158*********620, Karim, 12-08, **** 901*********341, Rahim, 01-12, ****	Valid Valid	Invalid Valid	Pass

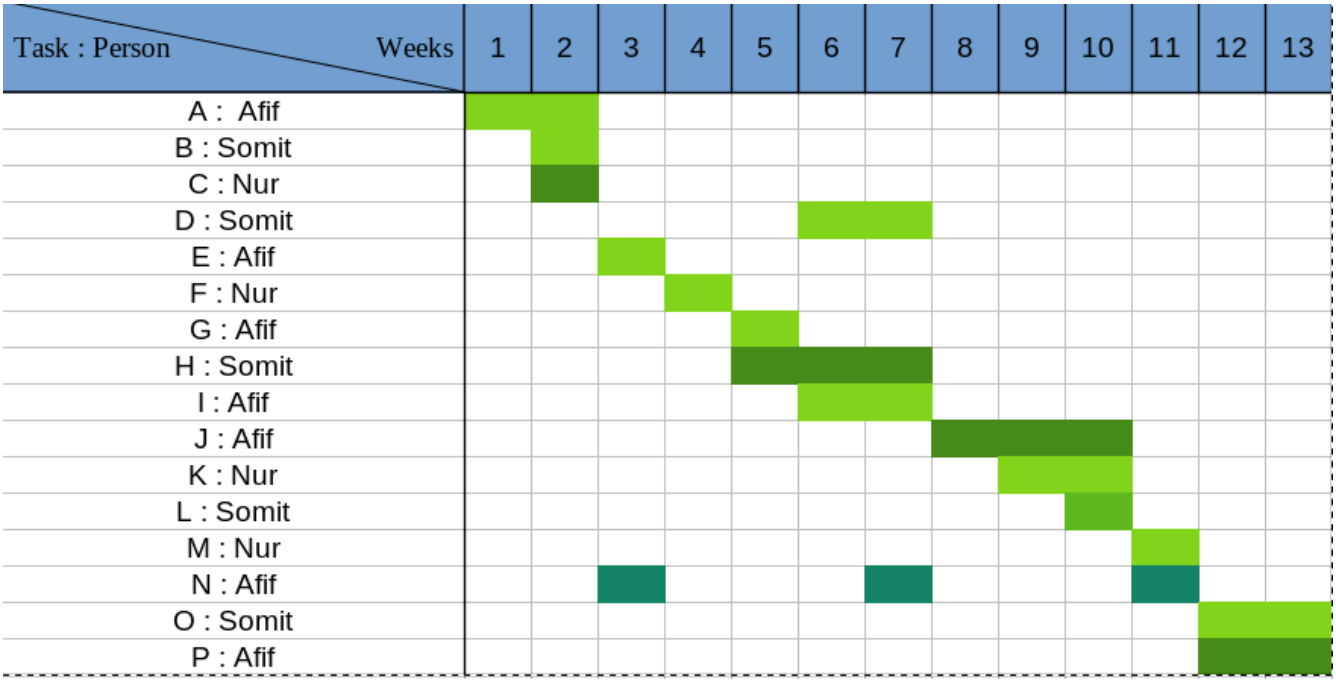
3 Work Breakdown Structure

- 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



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 types of ~~our~~ project our project is organic.

Now,

$$\text{Effort} = PM = \text{Coefficient}_{\langle \text{Effort factor} \rangle} * \left(\frac{KLOC}{1000}\right)^{P}$$

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

$$= 61.62$$

$$\simeq 62$$

$$\text{Development time} = DM = 2.50 * (PM)^{T}$$

$$= 2.50 * (62)^{0.38}$$

$$= 11.99$$

$$\simeq 12$$

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

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

$$= 5.16$$

$$\simeq 5 \text{ member}$$

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