Prince Sattam bin Abdulaziz University

Software Engineering Project

Sa pay

Group Members:

Manar Almunyif /441960354

Hessa Saleh Husain /444540057

Hind Aldosri /442830172

A. Introduction

The banking business is the lifeblood of any modern economy. It is one of the most important financial pillars in the financial sector, and it is necessary for the economy to operate and to make economy to operate we have to facilitate operations. BANKING SYSTEM is a mobile wallet that lets you pay for everyday costs, transfer money to friends and family, and pay bills

B. Statement of Problem

1.transfer money very slow.

2.stc pay you can only register in an application if you have only a phone number in stc.

3. very slow to login

C. Background Survey

1. Manage your money.

2. Transfer money.

3. Easy Spending.

4. Work it in any platform.

D. Proposed Approach

1.Make transfer money very fast.

2. you can register to application form any phone number.

3. make the application very fast to login.

E. Work Plan

Week 1: Feasibility Study &Project Proposal	**Introduction**	**Problems**	**Background**	**Proposed solution**
Week 2: Group Project requirements	**Write the FR perfectly (8)**	**Write the NFR perfectly (8)**		
Week 3: Activity diagram	**The flow of most processes**	**Start point / End point / Decision paths**		
Week 4: Project Use Case Modelling	**Actors**	**Use cases &its related use cases**	**Table 1**	**Table 2**
Week 5: Creating Sequence Diagrams	**Objects**	**Messages**		
Week 6: Creating a Class Diagram	**Classes attributes + operations**	**Associations**		
Week 7:	**User Interface Design**			
Week 8:	**Report contents are accurately prepared as per technical specification of a required report**			

2. Group Project requirements:

A. functional requirements:

functional requirements user:-

ID	Priority	Description
R1	High	**1.Transfer Funds:-** moving money from one account to another and you can transfer money Inside or outside the country.
R2	Intermediate	**2.Pay bills:-** is a secure electronic service that allows customers to pay bills without having to write checks and mail them.
R3	High	**3.View Account:-** The Accounts Overview page includes a summary of all accounts you have chosen to view online and provides direct access to the following: 1-View account activity 2-View statements 3-Make credit card payments
R4	High	**4.Login:-** A customer to be able to use this system, he/she has to enter username and password
R5	Intermediate	**5.Technical support:-** if you have any problem you communication with him. To provide great customer service

functional requirements System:-

ID	Priority	Description
R1	High	**1.1 User authentication:** The user must be authenticated before they can transfer funds. This can be done using a username and password, two-factor authentication, or a **.**fingerprint scan **1.2 Account selection:** The user must select the accounts from **.**which and to which they want to transfer funds **1.3 Funds amount:** The user must specify the amount of funds **.**they want to transfer **1.4 Fees:** The user must be informed of any fees that may be **.**associated with the transfer **1.5 Confirmation:** The user must confirm the transfer before it **.**is processed **1.6 Transaction history:** The user must be able to view their .transaction history
R2	Intermediate	**2.1 User authentication:** The user must be authenticated

		before they can pay bills. This can be done using a username .and password, two-factor authentication, or a fingerprint scan **2.2 Biller selection:** The user must select the billers they want .to pay **2.3 Bill amount:** The user must specify the amount they want .to pay for each bill **2.4 Payment method**: The user must select a payment .method, such as a credit card, debit card, or bank account **2.5 Confirmation:** The user must confirm the payment before .it is processed **2.6 Transaction history:** The user must be able to view their .transaction history
R3	High	**3.1 User authentication:** The user must be authenticated before they can view their account information. This can be done using a username and password, two-factor .authentication, or a fingerprint scan **3.2 Account selection:** The user must select the account they .want to view **3.3 Account activity:** The user must be able to view their account activity, such as recent transactions, account balance, .and recent payments **3.4 Statements:** The user must be able to view their account .statements **3.5 Payments:** The user must be able to make payments on .their account
R4	High	**4.1 User authentication:** The user must be authenticated before they can access the system. This can be done using a username and password, two-factor authentication, or a .fingerprint scan **4.2 Username:** The username must be unique for each user **4.3 Password:** The password must be strong and secure **4.4 Login failure**: If the user enters an incorrect username or password, they should be given the option to try again or to .reset their password **4.5 Remember me:** The user should be able to check a box to have their username and password remembered for future .logins
R5	Intermediate	**5.1 Availability: The technical support feature must be available 24/7 to support users who are experiencing .problems** **5.2 Contact methods: The technical support feature must provide users with multiple ways to contact support, such as .phone, email, and chat** **5.3 Response time: The technical support feature must .respond to user inquiries in a timely manner** **5.4 Knowledge: The technical support staff must have the .knowledge and expertise to resolve user problems**

		5.5 Communication skills: The technical support staff must be able to communicate effectively with users to understand .their problems and provide solutions

B. non-functional requirements

Non-functional requirements user:-

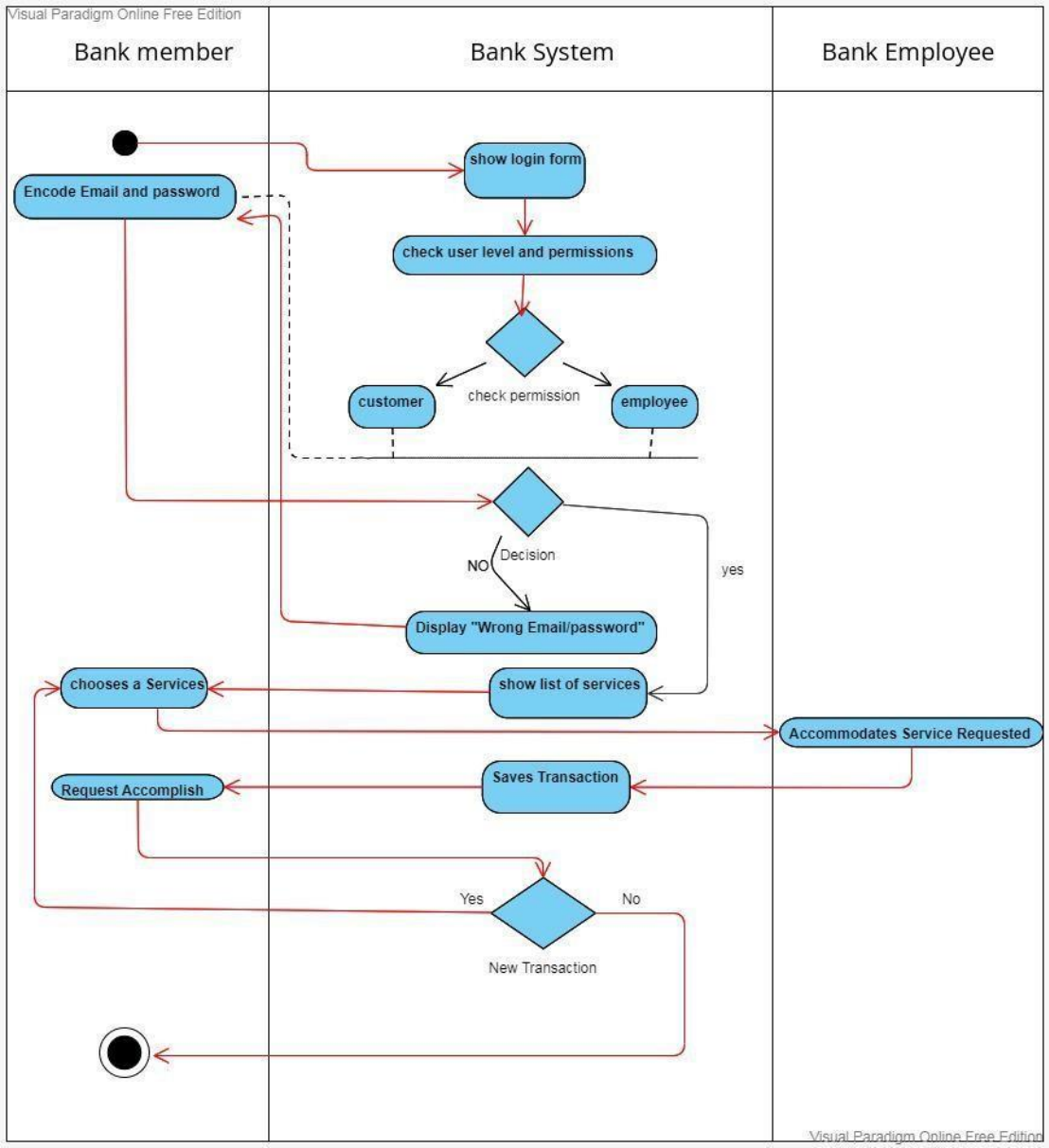
ID	Priority	Description
R1	High	**1.Security:-** is freedom from, or resistance against, any possible harm from external forces
R2	High	**2.Performance:-** Increase Customer Satisfaction Internet banking system must allows customers to access banking services 24 hours a day, fast and don't take lot of space in the memory
R3	High	**3.Safety :**-Backup, recovery & business continuity Banks should ensure adequate back up of data as may be required by their operations
R4	High	**4.Reliability:-** System reliability, which is defined asprobability of demand satisfaction, is studied as a key performance indicator for measuring service level of the banking company transmission system

Non-functional requirements System:-

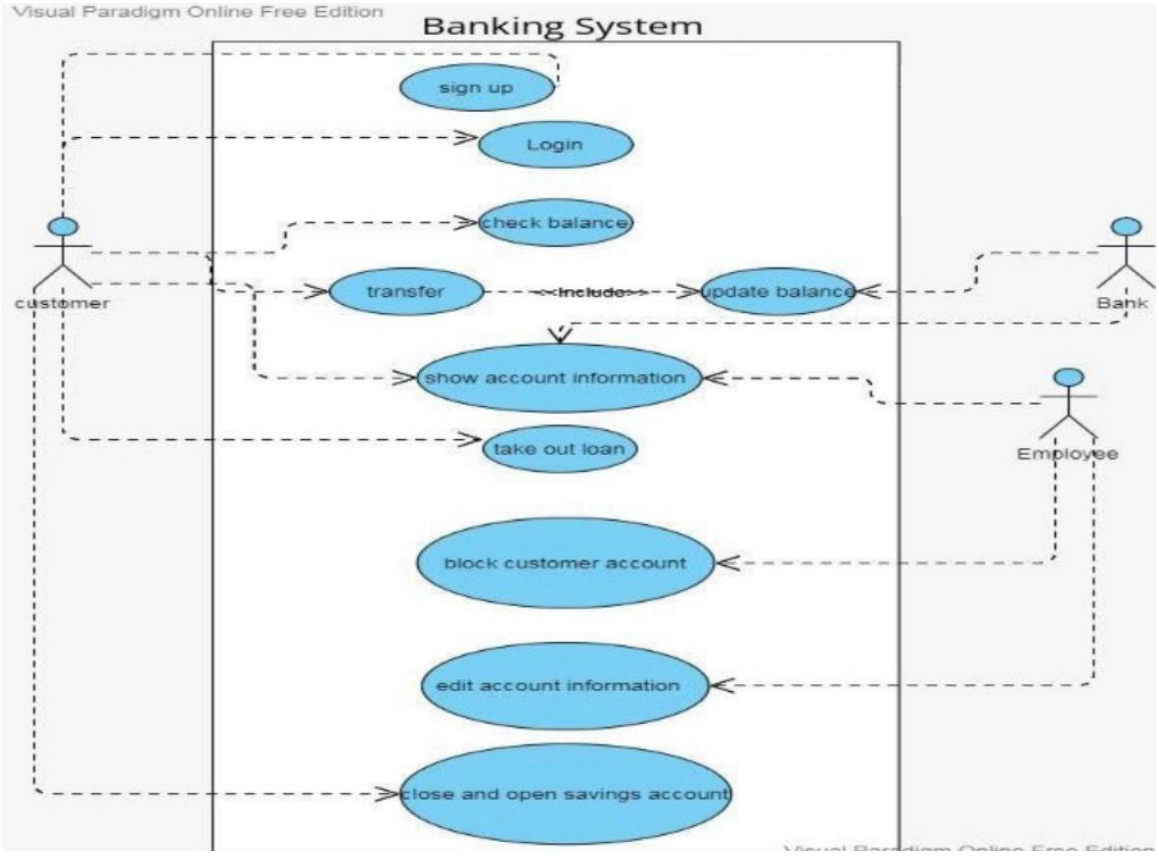
ID	Priority	Description
R1	High	**1.1 Data encryption:** All data must be encrypted in transit and at rest. This will protect the data from unauthorized access. **1.2 Strong passwords:** Users must create strong passwords that are difficult to guess. **1.3 Multi-factor authentication:** Users must use multi-factor authentication to log in. This will add an additional layer of security. **1.4 Vulnerability scanning:** The system must be scanned for vulnerabilities on a regular basis. This will help to identify and fix any security weaknesses. **1.5 Security awareness training:** Users must be trained on security best practices. This will help them to protect themselves from security threats.
R2	High	**2.1 High availability:** The system must be available 24 hours a day, 7 days a week. This can be achieved by using a redundant infrastructure with multiple servers and data centers. **2.2 Low latency:** The system must respond to requests quickly. This can be achieved by using a scalable architecture and/or caching mechanisms. **2.3 Scalability:** The system must be able to handle a high volume of transactions without slowing down. This can be achieved by

		using a scalable architecture and/or caching mechanisms. **2.4 Low memory usage:** The system must not take up too much memory on the user's device. This can be achieved by using efficient data structures and algorithms.
R3	High	**3.1 Data backup:** The BRBC system must be able to backup all of the data that is critical to the bank's operations. This data may include customer data, financial data, and operational data. **3.2 Data recovery:** The BRBC system must be able to recover all of the data that was backed up in the event of a disaster. This recovery must be done in a timely manner so that the bank can resume operations as quickly as possible. **3.3 Business continuity:** The BRBC system must be able to keep the bank's operations running in the event of a disaster. This may involve providing alternative access to data and applications, or providing temporary facilities for the bank's employees.
R4	High	**4.1 High availability:** The system must be available 24/7/365. This may require using a redundant architecture and/or load balancing mechanisms. **4.2 Scalability:** The system must be able to handle a high volume of transactions without slowing down. This may require using a scalable architecture and/or caching mechanisms. **4.3 Fault tolerance:** The system must be able to continue operating even if some components fail. This may require using redundant components and/or fault-tolerant software. **4.4 Security:** The system must be secure to prevent fraud and unauthorized access. This may involve using encryption, strong passwords, and other security measures. **4.5 Compliance:** The system must comply with all applicable laws and regulations. This may involve implementing AML/KYC checks, reporting requirements, and other compliance measures.

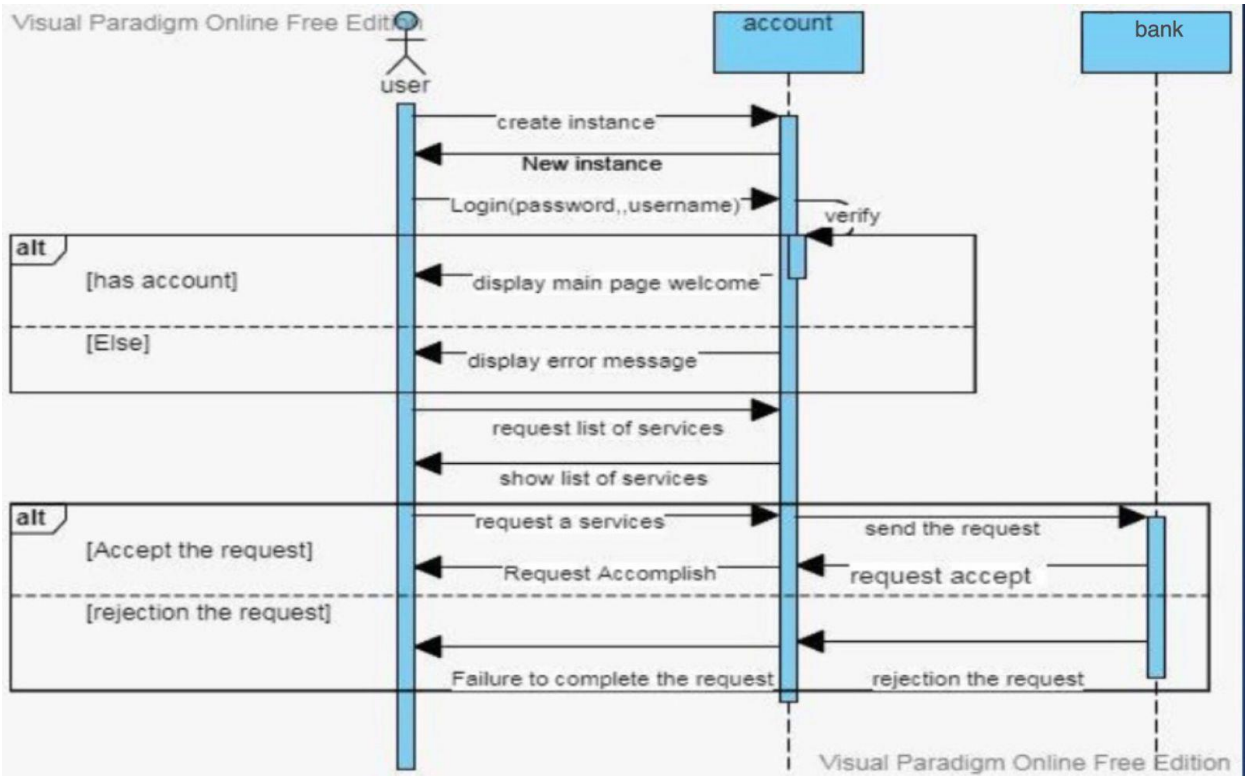
3. Project Activity diagram (Process Model)



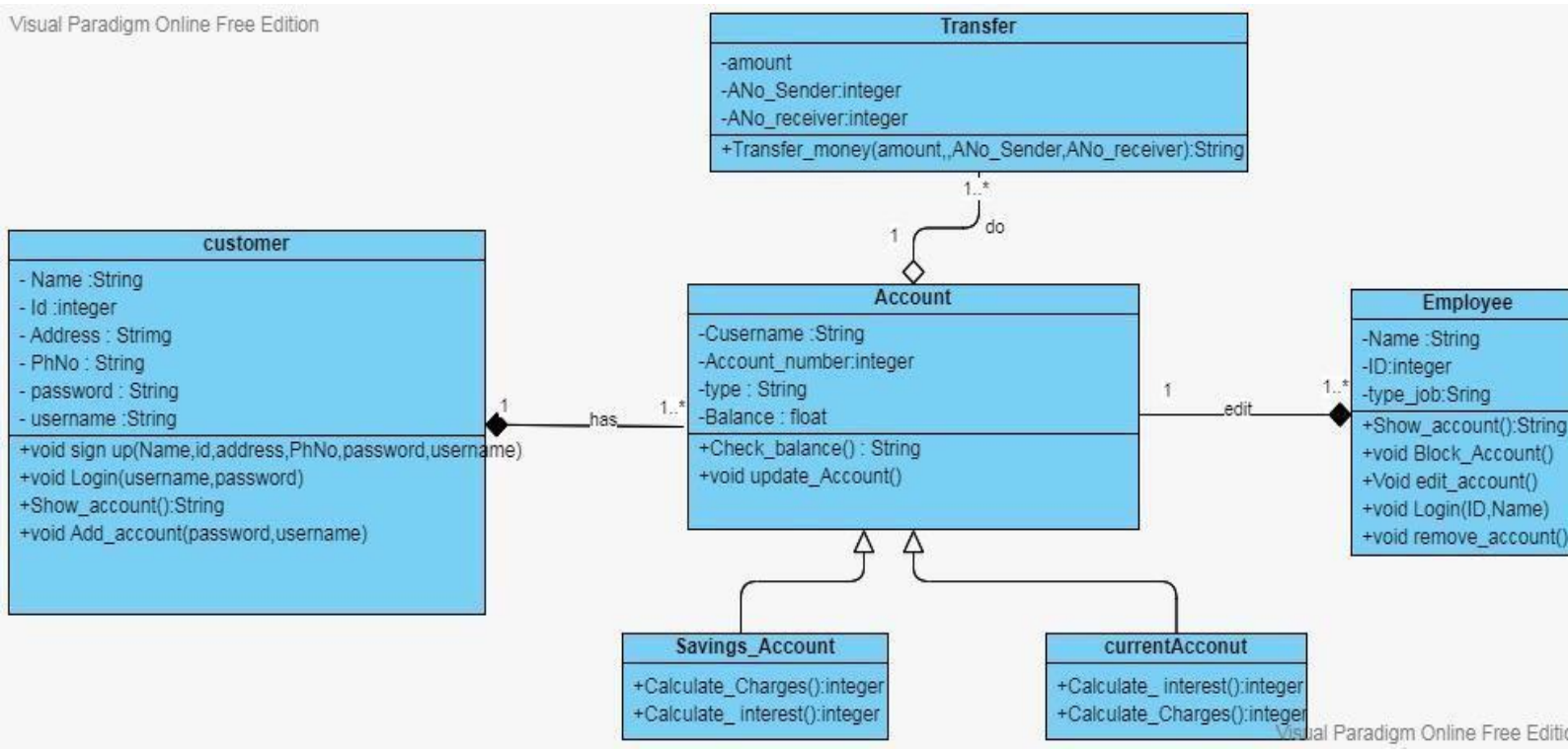
4. Project Use Case diagram (Process Model)



5.creating sequence diagram



6.creating class diagram



7.User interface design

Demo: