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## Project Part 2

1. **Name:** Allison Rodenbaugh
2. **Title:** Banking System
3. **Project Summary:** A Banking System where Customers have bank accounts (checking and savings) and the bank Admin has an account list that keeps track of account number, owner, and balance as well as a customer list that keeps track of the customerID and their different accounts and loans. The bank Admin can add customers and set up their accounts as well as loans. The customer can deposit and withdraw from their accounts, and transfer money between them.

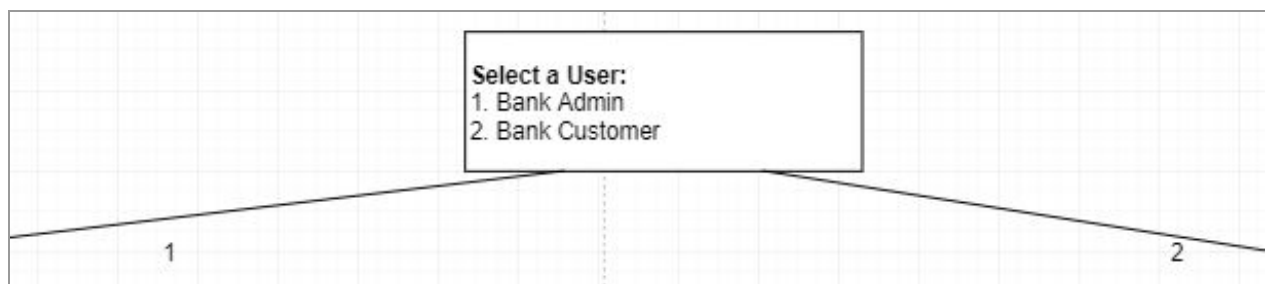
### 4. Project Requirements:

Functionality ID #	Requirement ID #	User Requirement
1	UC-01A	Customer shall be able to make withdrawals from their checking account
1	UC-01B	Customer shall be able to make withdrawals from their savings account if the withdrawal is $\leq$ to current balance
2	UC-02	Customer shall be able to make deposits to their accounts
3	UC-03	Customer shall be able to make loan payments from their accounts
4	UC-04	Customer shall be able to make transfers between their savings and checking accounts
5	UC-05	Customer shall be able to view the balance of their accounts
6	UC-06A	Bank Admin shall be able to add new customers
6	UC-06B	The system shall generate a unique customer ID for a customer when the bank Admin adds a customer
7	UC-07A	Bank Admin shall be able to add accounts to an existing customer
7	UC-07B	The system can generate a unique account ID for an account when the Bank Admin adds an account for a customer
8	UC-08A	Bank Admin shall be able to add a loan to an existing customer
8	UC-08B	The system shall generate a unique loan ID for a loan when the Bank Admin adds a loan to a customer
9	UC-09	Bank Admin shall be able to view account owner and account balance for a given accountID

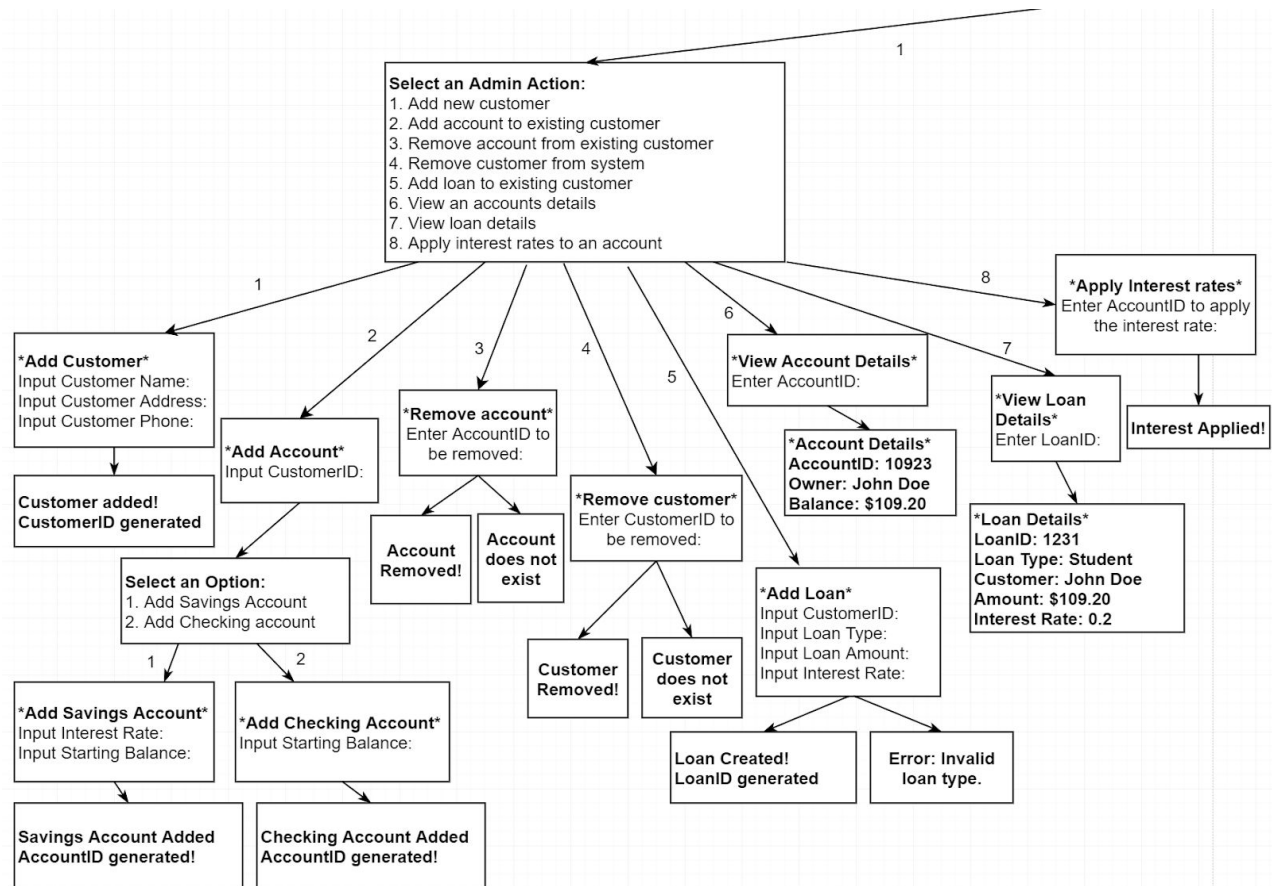
10	UC-10	Bank Admin shall be able to view loan details for a given loanID including the owner, amount, and interest rate.
11	UC-11	Bank Admin shall be able to remove an account from an existing customer
12	UC-12	Bank Admin shall be able to remove a loan from an existing customer
13	UC-13A	Bank Admin shall be able to remove a customer from the system if their corresponding accounts/loans are at zero balance
13	UC-13B	The system shall remove corresponding accounts/loans if a customer is removed
14	UC-14	The system shall transfer money from the customer's savings to checking and complete the withdrawal if the checking account has insufficient funds
15	UC-15A	The system shall cancel a withdrawal if both accounts combined cannot cover the withdrawal.
15	UC-15B	The system shall notify the user of an "insufficient funds" error if the withdrawal was cancelled
16	UC-16A	The system shall allow loan types of "student", "auto", "personal", and "business"
16	UC-16B	The system shall notify the user of an error if the loan type is invalid

## 5. UI Mockups:

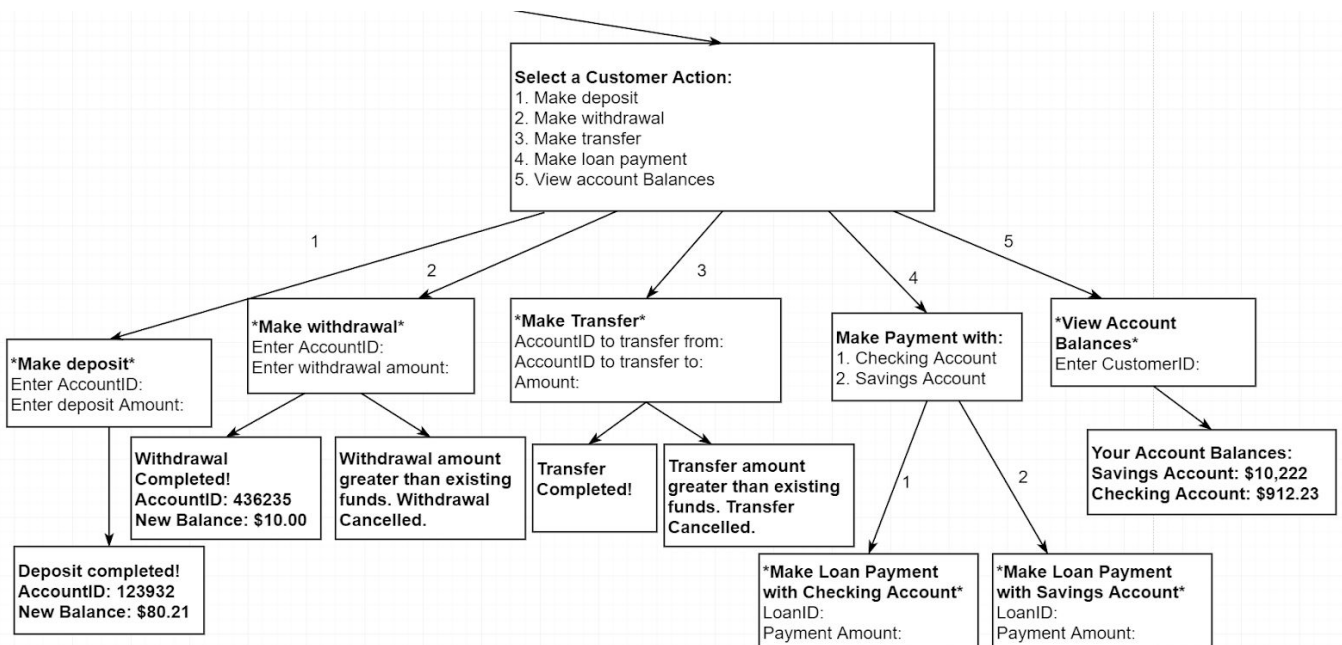
The user interface will be a command line interface where the user selects options and enters information into the system based on the prompts. First, the user selects if they are a **Bank Admin** or a **Customer**. The command line options and prompts for those respective users are demonstrated in the charts below.



## Interface for Bank Admin:



## Interface for Customer:



## 6. Class Diagrams:

