

## **Self Service Banking System UI Flowchart**

### **Main Menu:**

- "Create New Customer"
  - Prompts for Name, Gender, Age, and Pin.
    - If any input is invalid: Error message will be printed, and returns to the Main Menu.
    - If all inputs are valid: A new customer account will be created. New customer ID will be printed. Logs in to new customer's account. Goes to Customer Main Menu.
- "Customer Login"
  - Prompts for ID and Pin.
    - If ID and Pin don't match: Error message will be printed, and returns to the Main Menu.
    - If ID and Pin match: Logs in to that customer's account. Goes to Customer Main Menu.
    - If ID and Pin are both "0": Logs in to Admin. Goes to Administrator Main Menu.
- "Quit"
  - Exits the program

### **Customer Main Menu:**

- "Open Account"
  - Prompts for Customer ID (the customer for which this account will be opened), the Account Type, and Initial Deposit.
    - If the customer does not exist, or any input is invalid: Error message will be printed, and returns to the Customer Main Menu.
    - If all inputs are valid: A new bank account will be created. Confirmation of new account will be printed, and returns to the Customer Main Menu.
- "Close Account"
  - Prompts for Account Number of the Account to be closed.
    - If the account does not exist, or the account is not in the logged-in customer's name: Error message will be printed, and returns to Customer Main Menu.
    - Otherwise: Close this account. Confirmation of account closing will be printed, and returns to Customer Main Menu.
- "Deposit"
  - Prompts for Account Number and Deposit Amount.
    - If the account does not exist or the deposit amount is invalid: Error message will be printed, and returns to Customer Menu.
    - Otherwise: Confirmation of deposit will be printed, and returns to Customer Main Menu.
- "Withdraw"
  - Prompts for Account Number and Withdraw Amount.
    - If the account does not exist, the account is not in the logged-in customer's name, the withdraw amount is invalid, or the withdraw amount is more than the account's balance: Error message will be printed, and returns to Customer Main Menu.
    - Otherwise: Confirmation of withdraw will be printed, and returns to Customer Main Menu.
- "Transfer"
  - Prompts for Source Account Number, Destination Account Number and Withdraw Amount.
    - If the source account does not exist, the source account is not in the logged-in customer's name, the destination account does not exist, the transfer amount is invalid, or the transfer amount is more than the source account's balance: Error message will be printed, and returns to Customer Main Menu.
    - Otherwise: Confirmation of transfer will be printed, and returns to Customer Main Menu.
- "Account Summary"
  - For each open account under the logged- in customer's name: Prints the account number, type, and balance. Then prints the total balance among all these accounts, and returns to Customer Main Menu.
- "Logout"
  - Logs customer out. Goes to Main Menu.

### ***Administrator Main Menu:***

- "Customer Account Summary"
  - Prompts for Customer ID.
    - If the customer does not exist is invalid, or the ID is invalid: Error message will be printed, and returns to Administrator Main Menu.
    - Otherwise: For each open account under the customer's name, prints the account number, type, and balance. Then prints the total balance among all these accounts, and returns to Administrator Main Menu.
- "Report A"
  - For each customer in the Banking System: Print the Name, ID, Age, Gender, and Total Balance (ordered by total balance in decreasing order), and returns to Administrator Main Menu.
- "Report B"
  - Prompts for a Minimum Age and a Maximum Age.
    - If either age is invalid or the min is greater than the max: Error message will be printed, and returns to Administrator Main Menu
    - Otherwise: Prints the average total balance among customers between the specified ages (not including customers with no open accounts), and returns to Administrator Main Menu.
- "Logout"
  - Logs admin out. Goes to Main Menu.