Rutgers University
Program Methodology I
Spring 2018

Project 1

Our goal in this project is to create a simple banking system which allows a banker to manage different bank accounts. As a banker, you would create new accounts, deposit to an account, withdraw from an account, transfer money from one account to another, delete account, sort the accounts, or do inspection on one or all bank accounts. In order to do this job, you would need the tool for each of those items. The bank maintains a list of accounts.

Write a program in C++ to meet the above requirements. The list of account has to be available as long as you run the program. This means the list of the account has to be initialized in the **main()** function. Write a function for each of the items above. You will call these functions to perform any task on the bank accounts. Each account will have account number, name (last, first), balance and status (active/deactive). The **header file**, **function file**, and **main file** are as the sample below. All functions are of type **void**. You will fill in the necessary function parameters.

In order to do this project, you would need to understand **pointers**, **functions**, and **vectors** among other basic C++ knowledge. You will follow the exact requirement and format of the program. Any unnecessary changes will result in points taken off.

```cpp
// header_file.h
# include <iostream>

using namespace std;

void menu(int*);

void makeAccount();

void printAccount();

void transfer();

void PrintAllAcount();

void depositAccount();

void ActiveDeactive();

void withdrawAccount();

void sortAcounts(); // sort the accounts using the account numbers

void deleteAccount();
```

```cpp
// function_file.cpp
# include "header_file.h"

void  menu(int *num) {
        int  select = 0;
        cout << "Welcome!  Select options below:" << endl; cout << "\t1. Make new
                account."
                        << "\n\t2. Deposit to an account." << "\n\t3. Withdraw from an
                        account."<< "\n\t4. Transfer money."
                        << "\n\t5. Print account." << "\n\t6. Activate/Deactivate an account."<<
                        "\n\t7. Delete an account." << "\n\t8. Display all accounts."
                        << "\n\t9. Quit." << endl;
                cout << "Selection:\t";


        cin >> select;
        *num = select;
}
```

```cpp
// main_file.cpp
# include "header_file.h"

int  main() {
        // declare list of account here. The size of the list is not fixed.
        int input = 0;
        menu(&input);

        // run loop to continue program until terminated by user
        switch (input) {
                // cases: call functions to perform tasks
        }
        return 0;
}
```