

## CSC 107 2.0 Introduction to Computer Programming

### Final Assignment – 2019

**Deadline: 3<sup>th</sup> Friday, May 2019**

- Venue and the date of **viva and code modification test** will be notified later.
- 
- ABC Bank wants to develop a computer based system to maintain their banking details. As the first step, assume the bank has less than 1000 customers and they only want to maintain their savings account details, and customer details shown in table 1 & 2.

**Table 1:** Account Details

Code	Title	Interest Rate	Minimum Balance
N	Normal	4%	Rs. 500
E	Eighteen Plus	4.5%	Rs. 1000
R	Rankakulu	5%	Rs. 1500
W	Wanitha	4.7%	Rs. 1000

**Table 2:** Customer Details

Acc No	Acc Type	Name	NIC	Balance
801002	E	Mr. Kamal	980045200V	Rs. 5000
801105	W	Ms. Mala	810485942V	Rs. 1800
803020	R	Mr. Nimal	770035762V	Rs. 4500
805014	N	Mr. Bandara	880552147V	Rs. 8000

Assume the account details are fixed as above; thus, they can be hardcoded to the respective arrays. Furthermore, populate your customer detail arrays with the above given values. Besides, the system should facilitate deposit and withdraw of cash.

Develop a menu driven C program to automate the following tasks.

- a. Follow good modularity, good coding practices, and formatted outputs in your code.
  - b. Identify the suitable data structures (1D and 2D arrays) to store these details.
  - c. Develop a **menu driven program** to implement all the related tasks such as,
    - i. **Add** a new customer to the bank.
    - ii. **Deposit** money to a given account.
    - iii. **Withdraw** money from a given account.
    - iv. **Display account details** with suitable formatting.
    - v. Display **sorted customer details** according to the account type.
  - d. Marks will be given for the **validations** such as maintaining the minimum balance of the account, positive numbers, duplicate accounts, etc.
  - e. Bonus marks will be given for **file handling** (Store above details in files when exit and reload them when you start the system next time).
- Students should submit a **printed report** with evidence (**Screenshots**) of functionality of the developed system, the design (**structure chart**, etc.), and the **test plane** (test cases and test data). Further, **known bugs and limitations** of the system should **be clearly specified in the report**. Moreover, the **source code** of the working system should be submitted in a **CD**.

\* \* \* \* \*