CS F111 - Computer Programming - Lab 4

Date: April 13, 2021 - 5pm to 7pm.

- The lab is **EVALUATIVE**.
- Follow the instructions given below in the exact order.
- Any deviation from the instructions or incomplete steps will be dealt with according to the policy announced on quanta.
- Without the video recording link, the lab marks will be withheld.
- You may refer **ONLY** to the teaching materials shared by the course instructors.

LAB INSTRUCTIONS

(Please ensure that you follow the instructions in this order.)

1. Close all applications and browser-tabs except the ones needed during the lab, and join the Google meet assigned to your group..
2. Start recording your screen and webcam feed in the format mentioned in the "Software Prerequisites" document. Ensure that the date/time are visible.
3. Solve the questions given in the question paper.
4. When you are ready to submit your solution, upload your C program via the form given below:
   https://forms.gle/CLfMMjxbFgXpFnoBA
   Please ensure that you use BITS email ID while filling the form.
5. Stop screen and webcam recording.
   Please click the "Stop recording" button only once. If you click it multiple times, you may lose the entire recording.
6. Upload the recording on your BITS Google Drive.
7. Edit the options on the uploaded recording to allow the "All can view" option and copy the link to be shared. If you're unsure about this, use the following link : https://tinyurl.com/GDriveuploadhelp
8. Submit the link of the recording via the form below by 5pm, 14th April:
   https://forms.gle/CL4pqP6P5Z7Yqj35A
   Please ensure that you use BITS email ID while filling the form.

NOTE :

- **Resubmission of solutions on the form is not permitted, so please ensure that you only submit your final solutions.**
- **There are a total of 3 questions.**

Question 1 - (4 Marks):

Write a program **`Q1.c`** that takes a positive number from the user and prints the corresponding pattern as given below:

Sample Output : 1

```
Enter an integer: 3
Output:
***
**
*
**
***
```

Sample Output : 2

```
Enter an integer: 4
Output:
****
***
**
*
**
***
****
```

Question 2 - (2 Marks):

Write a program **`Q2.c`** that takes a positive odd number from the user and prints the corresponding pattern as given below:

Sample Output : 1

```
Enter an integer: 3
Output:
*-*
 *
*-*
```

Sample Output : 2

```
Enter an integer: 7
Output:
*-----*
 *---*
  *-*
   *
  *-*
 *---*
*-----*
```

Question 3 - (4 Marks):

Write a program **`Q3.c`** that does the following steps:

1. Initially prompt the user to enter the balance amount.
2. Ask the user to enter one of the following options:
    - **`'A'`** followed by an amount.
        - On receiving this option, add the amount to the balance.
        - Display the balance.
        - Go to step 2.
    - **`'S'`** followed by an amount.
        - On receiving this option, subtract the amount from the balance.
        - Display the balance.
        - Go to step 2.
    - **`'E'`**
        - On receiving this option, break from the loop and exit the program.

Sample Output 1

```
Enter Balance: 10

Enter Option: A 20
Balance: 30

Enter Option: S 15
Balance: 15

Enter Option: E
Exiting...
```

Sample Output 2

```
Enter Balance: 100

Enter Option: S 20
Balance: 80

Enter Option: S 15
Balance: 65

Enter Option: A 5
Balance: 70

Enter Option: A 25
Balance: 95

Enter Option: E
Exiting...
```
