

## **BITS Pilani K. K. Birla Goa Campus**

### **Computer Programming (CSF111) Second Semester 2020-21**

**Lab No. 2 Date: March 30, 2021 - 5pm to 7pm.**

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#### **NOTE:**

- 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/ztATCCk3kKiNBTRv7>

**Please ensure that you are using 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, 31 March:  
<https://forms.gle/AhbJrEdLmHc8khdHA>

**Please ensure that you are using BITS email ID while filling the form.**

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**No: of questions : 5**

1. Write a C program (**Q1.c**) to read your date of birth in the given format **dd:mm:yyyy** only, where **dd** is the date, **mm** is the month, and **yyyy** the year and store in the integer variables **dob**, **birth\_month** and **birth\_year** and print the variable values. **(1 Mark)**

**Expected Output:**

Enter your date of birth in dd:mm:yyyy format:- 12:12:1999 //valid input  
Day 12, month 12 and year 1999

// 1 digit month with preceded by zero  
Enter your date of birth in dd:mm:yyyy format:- 12:03:1999  
Day 12, month 3 and year 1999

Enter your date of birth in dd:mm:yyyy format:- 12:3:1999 //month less than 2 digit  
Day 12, month 3 and year 1999

Enter your date of birth in dd:mm:yyyy format:- 12:12:19998 //year more than 4 digit  
Day 12, month 12 and year 1999

Enter your date of birth in dd:mm:yyyy format:- 12:12:1 //year less than 4 digit  
Day 12, month 12 and year 1

**The following are invalid inputs:**

- 12-3-1999 // character different than colon
- 123:12:1999 // day more than 2 digit
- 12:123:1999 //month more than 2 digit
- 12::1999 //missing input
- :: //missing inputs

2. Write a C program (**Q2.c**) to read only consonants. If the user enters a vowel, it should not be stored in the variable. Print the value of this character variable. **(2 marks)**

3. Write a C program (**Q3.c**), which prompts the user to take a 4 digit integer (first digit to be non-zero) as input and **displays the number as follows : (2 Marks)**

First Line : All digits  
Second line : All digits except first digit  
Third line : All digits except first two digits  
Fourth line : The Last digit  
**Note:** Ensure that the output is right justified

**Sample output:**

Enter the number : 3452  
3452  
452  
52  
2

4. Write a C program (**Q4.c**) that reads a precision value from the user, and computes the temperature in Celsius scale for the given temperature values 0,20,40,60,80,100 in Fahrenheit scale. Use the following equation:  $\text{Temp\_Celsius} = (5.0/9.0) * (\text{Temp\_Fahrenheit} - 32)$ .

Display the output in the **given format only. (3 Marks)**

**Expected Output:**

```
Enter precision value:3

Farenheit      Celcius
0              -17.778
20             -6.667
40             4.444
60            15.556
80            26.667
100           37.778
```

5. Complete the following C code **(Q5.c)** to get the following output (The file Q5.c is provided on Quanta). Do not declare new variables, do not perform any arithmetic operations, and do not modify existing statements in the given code. You may modify 'scope' of the code to get the expected output.  
**(2 Marks)**

**Q5.c:**

```
#include<stdio.h>
int g=;
int main()
{
    printf("g=%d\n",g);
    int g=;
    printf("g=%d\n",g);
    int g=;
    printf("g=%d\n",g);
    int g=;
    printf("g=%d\n",g);
    return 0;
}
```

**Expected Output:**

```
g=10
g=20
g=30
g=40
```

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**\*\*END\*\***