BE First Year: AS2020

CPL101: Introduction to Programming

Assignment

Instructions:

1. Attempt all the questions and present diagram neatly wherever necessary. Each question carries 1 mark.
2. WARNING!!!
   The copy and paste or copying your friend's work if caught, will be dealt seriously resulting in marking your assignment void and award 0. If need be, the case may be forwarded to be deliberated in PCM.
3. The assignment must be submitted in hardcopy on or before ***November 30, 2020 4:00PM***.
4. The late submission will be subjected to awarding 0 for the assignment.

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1. What do you mean by type casting? Why is it necessary? Illustrate with the help of program.
2. Differentiate the following
   a) Break and continue statement
   b) Entry-controlled and exit controlled loop
3. Define a template named "Student_Record" with the following elements
   a. Name
   b. Std_No
   c. Marks of five subjects

WAP to

   a. Get student name, student no, and marks scored for 5 subjects for at least 5 students
   b. To compute total marks for each student
   c. Compute highest total and display the result as "*Congratulation!!! **Std_Name** bearing **STD_NO** has secured first position with **Total** marks.*"
4. WAP to compute GCD of two numbers using recursive function.
5. WAP to print the following pattern

```
5 5 5 5 5
5 4 4 4 4
5 4 3 3 3
5 4 3 2 2
5 4 3 2 1
```

6. Consider any problem and WAP to illustrate the function that returns multiple values using pointer.
7. WAP to convert binary to hexadecimal number.
8. WAP using all 32 keywords available in ANSI C.

9. WAP to count trailing zeros in a binary number using bitwise operator.
10. Write a C program to read the previous meter and current meter reading from user keyboard and calculate total electricity bill according to the given condition:

    For first 100 units Nu. 0.5/unit
    For next 100 units Nu. 1.50/unit
    For unit above 250 Nu. 2.50/unit
    An additional surcharge of 30% is added to the bill