Assignment 4

[29.12.2020 – Tuesday – Lab 4]

Common to All Students:

Write a C Program for the following problem statements

1. Check Whether a Character is a Vowel or Consonant (Using if)
2. Find Roots of a Quadratic Equation (Using else if ladder)
3. Check Leap Year (Using if..else)
4. check which number nearest to the value 100 among two given integers. Return 0 if the two numbers are equal. (Using nested if…else)
5. check three given integers (small, medium and large) and return true if the difference between small and medium and the difference between medium and large is same. (Using nested if…else)

6. Calculate and print the Electricity bill of a given customer. The customer id., name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charge are as follow :

Unit	Charge/unit
upto 199	@1.20
200 and above but less than 400	@1.50
400 and above but less than 600	@1.80
600 and above	@2.00

   If bill exceeds Rs. 400 then a surcharge of 15% will be charged and the minimum bill should be of Rs. 100/- (Using else if ladder)

7. The marks obtained by a student in 3 different subjects are input by the user. Your program should calculate the average of subjects. The student gets a grade as per the following rules: (Using else if ladder)

Average	Grade
90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

8. print total number of days in a month using switch case.
9. create Simple Calculator using switch case.

10. Prompts the user to enter grade. Your program should display the corresponding meaning of grade as per the following table (Using Switch Case)

Grade	Meaning
A	Excellent
B	Good
C	Average
D	Deficient
F	Failing

Practice Questions [Optional]:

Write a C Program for the following problem statements

11. Check whether a triangle is Equilateral, Isosceles or Scalene.
12. Check Whether a Number is Even or Odd
13. Check Whether a Character is an Alphabet or not
14. Find the Largest Number Among Three Numbers
15. find the larger from two given integers. However, if the two integers have the same remainder when divided by 5, then the return the smaller integer. If the two integers are the same, return 0

16. Find the eligibility of admission for a professional course based on the following criteria: Eligibility Criteria : Marks in Maths >=65 and Marks in Phy >=55 and Marks in Chem>=50 and Total in all three subject >=190 or Total in Maths and Physics >=140. Calculate the monthly telephone bills as per the following rule:
Minimum Rs. 200 for up to 100 calls.
Plus Rs. 0.60 per call for next 50 calls.
Plus Rs. 0.50 per call for next 50 calls.
Plus Rs. 0.40 per call for any call beyond 200 calls.
17. Read temperature in centigrade and display a suitable message according to temperature state below :
    Temp < 0 then Freezing weather
    Temp 0-10 then Very Cold weather
    Temp 10-20 then Cold weather
    Temp 20-30 then Normal in Temp
    Temp 30-40 then Its Hot
    Temp >=40 then Its Very Hot
18. check whether a number is positive, negative or zero using switch case.
19. print day of week name using switch case.
20. find roots of a quadratic equation using switch case.

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Compiled by : M. Thangavel, AP – CSE, ITER, SOA