Day 4

Assignment

1. Write a program to multiply the two numbers using Russian peasant method. Russian peasant method multiplies any two positive numbers using multiplication by 2, division by 2, and addition. Here the first number is divided by 2(integer division), and the second number is multiplied by 2 repeatedly until the first number reduces to 1. Suppose we have to multiply 19 by 25, we write the result of division and multiplication by 2,in the two columns like this :

19	**25**	ADD
9	**50**	ADD
4	100	
2	200	
1	**400**	ADD
	475	

Now to get the product we will add those values of the right hand columns, for which the corresponding left columns values are odd. So 25, 50, 400 will be added to get 475, which is the product of 19 and 25.

2. Write a program to find out the prime factors of the given number.
   Ex. Prime factors of 56 are 2, 2, 2, and 7
3. Write a program that will display the grade of student the using if else statement and by using switch operator if the marks are less than thirty five grade will be fail. If marks are greater than or equal to thirty five and less than fifty grades will be third. If marks are greater than or equal to fifty and less than sixty grades will be second. If marks are greater than or equal to sixty and less than hundred grades will be first.
4. An electricity board charges the following rates to domestic users to discourage large consumption of energy:
   For the first 100 units : 1 Rs 20P per unit
   For next 200 units : 2 Rs 60P per unit
   Beyond 300 units : 3 Rs 80P per unit
   All users are charged a minimum of Rs 50.00. If the total amount is more than Rs. 300.00 Then additional surcharge of 15% is added.
   Write a program to read the names of users and number of units consumed and print out The charges with names.
5. Write an ATM program, that tells you how many number of 100, 50, 20, 10, 5, 2, and 1 Rs notes will be needed for given amount of money. For example if the total amount is Rs 645 then six 100 Rs

notes, two 20 Rs notes, and one five Rs note will be needed. This sort of program in used in ATM machine.

6. Write a program to enter a number and a digit is present in number or not. If present then count the number of times it occurs in the number.
7. Write a program to calculate a expression:

   $\sin(x) = x-(x^3/3!)+ (x^5/5!)- (x^7/7!) + (x^9/9!)+-----+..$ N terms

8. Develop a software program for medical store. The program should store medicine detail like -> Name of the medicine, price, and quantity, whenever a user buys some medicines, the program should able to calculate the total amount of purchased medicine. Display the detail of purchased items.
9. Write a program that takes three variables x, y, z in as separate parameters and rotates the values stored so that value a goes to be, b, to c and c to a.
10. Write a program to convert decimal to hexadecimal and decimal to binary number system.
11. Write a program to find the largest of three numbers using ternary operator.

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