Practice Problems

Easy (Decision Making & loops)

1. Write a program which accepts amount as integer and display total number of Notes of

Rs. 500, 100, 50, 20, 10, 5 and 1. For example, when user enter a number, 575, the results
would be like this: 500: 1, 100: 0, 50: 1, 20: 1, 10: 0, 5: 1, 1: 0

2. Write a program that accepts seconds from the keyboard as integers. Your program should convert seconds into hours, minutes and seconds. Your output should like this: Enter seconds: 13400 Hours: 3 Minutes: 43 Seconds: 20

3. Write a program that prompts the user to enter a number in two variables and swap the contents of the variables.

4. Write a Program that Prompts the user to enter a number and Prints its Multiplication Table.

Moderate (Loops & if-else combined)

5. Write a program that prompts the user to input a number and prints its factorial. The factorial of an integer n is defined as n! = 1 x 2 x 3 x ... x n; if n > 0 = 1; if n = 0 For instance, 6! can be calculated as 1 x 2 x 3 x 4 x 5 x 6.

6. A palindromic number is a number that remains the same when its digits are reversed. For example, 16461. Write a program that prompts the user to input a number and determine whether the number is palindrome or not.

Moderate (Array)

7. Write a program to find out the sum of the elements present in array.

8. Write a program to find out maximum and minimum element from an array.

9. Write a program to reverse a 1D array

10. Write a program to find out No. of occurrences of an element in array

11. Write a program to search an element whether it is present in a 2d array or not

12. Write a program to reverse a 2D array.

Hard (Menu Driven Program & Array Continued)

13. Given two arrays of integers A and B of sizes M and N respectively. Write a function named MIX () with four arguments, which will produce a third array named C. such that the following sequence is followed.
    All even numbers of A from left to right are copied into C from left to right.
    All odd numbers of A from left to right are copied into C from right to left.
    All even numbers of B from left to right are copied into C from left to right.
    All old numbers of B from left to right are copied into C from right to left.
    A, B and C are passed as arguments to MIX (). e.g., A is {3, 2, 1, 7, 6, 3} and B is {9, 3, 5, 6, 2, 8, 10} the resultant array C is {2, 6, 6, 2, 8, 10, 5, 3, 9, 3, 7, 1, 3}

14. Write a menu driven program to do following operation on two dimensional array A of size m x n. You should use user-defined functions which accept 2-D array A, and

its size a.
b. c. d. e. f.
m and n as arguments. The options are:
To input elements into matrix of size m x n
To display elements of matrix of size m x n
Sum of all elements of matrix of size m x n
To display row-wise sum of matrix of size m x n
To display column-wise sum of matrix of size m x n To create transpose of matrix B of size n x m

Tricky (String Handling)

15. Write a program to find the length of string.

16. Write a program to display string from backward.

17. Write a program to compare two strings they are exact equal or not.

18. Write a program to convert a string in lowercase.

19. Write a program to find a substring within a string. If found display its starting position.