Assignment 2

Practical Exercises

Programming Fundamentals

Instructions:

1. Read all instructions.
2. Prepare your algorithms
3. Write your program code.

Total : _____/70

Practical Exercises : Programming Fundamentals

For each of the following problems, start by developing the program logic, (Flowchart, or algorithm (pseudocode), then develop each solution in C# code.
Each question - 10 Marks

Q1. First, create a main program as in the first exercise.

Next, define a new class in its own file. Call the class **Car**. Give it a single method called "Start". Make the method simply print "Car started!".

In your main program, create a new **Car** object and call its Start() method.

Your final program should simply therefore display the text "Car started!".

Q2. Write a program in C# Sharp to create a nested struct to store two data for an employee in an array.
Test Data:
Create a nested struct and store data in an array :
- -
Name of the employee : H.Rana
Input day of the birth : 05
Input month of the birth : 02
Input year for the birth : 58

Name of the employee: S. Mathur
Input day of the birth: 04
Input month of the birth: 08
Input year for the birth: 59

Q3. Write a C# program to check if the first element or the last element of the two arrays (length 1 or more) are equal.
Test Data:
Array1: [1, 2, 2, 3, 3, 4, 5, 6, 5, 7, 7, 7, 8, 8, 1]
Array2: [1, 2, 2, 3, 3, 4, 5, 6, 5, 7, 7, 7, 8, 8, 5]
Check if the first element or the last element of the two arrays (length 1 or more) are equal.
Sample Output
True

Q4. Write a C# program to check if a given string is a palindrome or not.
Sample Example:
For 'aba' the output should be true
For 'abcd' the output should be false

Q5. Create a function **add()** that will receive any number of integer parameters at runtime and returns the sum of all those numbers. Use params array to achieve this goal in C#.

Q6. Write a program in C# Sharp to copy the elements one array into another array.

Test Data :
Input the number of elements to be stored in the array :3
Input 3 elements in the array :
element - 0 : 15
element - 1 : 10
element - 2 : 12
Expected Output:
The elements stored in the first array are :
15 10 12
The elements copied into the second array are :
15 10 12

Q7. Write a program in C# Sharp to sort elements of the array in descending order.
Test Data :
Input the size of array : 3
Input 3 elements in the array :
element - 0 : 5
element - 1 : 9
element - 2 : 1
Expected Output :
Elements of the array in sorted descending order:
9 5 1