

Assignment 01 OOP

Part 01 Enum and Struct

- 1- Create an enum called "WeekDays" with the days of the week (Monday to Sunday) as its members. Then, write a C# program that prints out all the days of the week using this enum.
2. Define a struct "Person" with properties "Name" and "Age". Create an array of three "Person" objects and populate it with data. Then, write a C# program to display the details of all the persons in the array.
3. Create an enum called "Season" with the four seasons (Spring, Summer, Autumn, Winter) as its members. Write a C# program that takes a season name as input from the user and displays the corresponding month range for that season. Note range for seasons (spring march to may , summer june to august , autumn September to November , winter December to February)
- 4- Assign the following Permissions (Read, write, Delete, Execute) in a form of Enum.
 - Create Variable from previous Enum to Add and Remove
Permission from variable, check if specific Permission is existed
inside variable
5. Create an enum called "Colors" with the basic colors (Red, Green, Blue) as its members. Write a C# program that takes a color name as input from the user and displays a message indicating whether the input color is a primary color or not.
6. Create a struct called "Point" to represent a 2D point with properties "X" and "Y". Write a C# program that takes two points as input from the user and calculates the distance between them.
7. Create a struct called "Person" with properties "Name" and "Age". Write a C# program that takes details of 3 persons as input from the user and displays the name and age of the oldest person.

Part 02 :Encapsulation

1. Design and implement a Class for the employees in a

company:

- Employee is identified by an ID, Name, security level, salary, hire date and Gender.

2. Develop a Class to represent the Hiring Date Data:

- consisting of fields to hold the day, month and Years.

3. We need to restrict the Gender field to be only M or F [Male or Female]

4. Assign the following security privileges to the employee (guest, Developer, secretary and DBA) in a form of Enum

5. We want to provide the Employee Class to represent Employee data in a string Form (override ToString ()), display employee salary in a currency format. [use String.Format Function]

6. Create an array of Employees with size three a DBA, Guest and the third one is security officer who have full permissions. (Employee [] EmpArr;)

Notes:

- Implement All the Necessary Member Functions on the Class (Getters, Setters)
- Define all the Necessary Constructors for the Class
- Allow NO RUNTIME errors if the user inputs any data

- Write down all the necessary Properties (Instead of setters and getters)