Trainer Notes

.Net
Week 2 - Day 10 & 11
(WNWD10 & 11)

Table of contents

Session Details

Duration: 6 hours

Time Division:

	Tasks Day 10	Duration
1	Recap of the previous lessons & Objective of the day	10 min
2	● Brainstorming	10 min
3	● What is C#? ● C# Get Started	2 hrs
4	● C# Install & Create a New Project ● Comments in C#	1.5 hrs
5	● C# Variables ● C# OOP ● Abstraction	1 hrs
6	● Encapsulation	1 hrs
7	Homework	10 min
	Tasks Day 11	Duration
1	● Recap of the previous lessons & Objective of the day	10 min
2	● Brainstorming	20 min
3	● C# Polymorphism and Overriding Methods ● C# Interface	2 hrs
4	● C# Classes & Structures	1.5 hrs
5	● C# - Struct ● C# Enumerations	1 hrs
6	● C# LINQ- architecture and their advatages	1 hrs

Learning Objectives

By the end of this session, the students will have developed an understanding of:

● What is C#

- C# Syntax
- Abstraction, Polymorphism, Encapsulation
- Enumerations
- Overriding
- Interfaces
- Classes & Structures
- LINQ

Recap

(15 -20 min)

- The trainer will ask the students about any ambiguities (if any) they have related to the previous lesson.
- The list of recap topics is given on the slides. The trainer may add more topics to the list.
- If there will be any, the trainer will explain them as much as required.
- Then the trainer will share today's learning objectives with the students and begin the day.

- Slides have all the relevant information about the creation of development of the first application.
- Before starting the development, the trainer will ensure that all the prerequisites are installed and downloaded.

Important Steps to conduct the session:
- To keep the students engaged in hands-on activities and practice, the activities will be conducted in the following manner:
  - Step 1: The trainer will first ask the students questions about the definition of the concepts shown on the slides. Then, after taking some random responses from the students, they will share a brief explanation of the concept given on the slide(s). The trainer will make sure and make a class rule that every time the trainer will ask a question a new student will respond instead of taking answers from some particular active and efficient students only.
  - Step 2: The trainer will demonstrate the code on their computer.
  - Step 3: The students will follow the trainer and practice writing the same code on their computers or the trainer could give them another code from the examples given on the slides to write and practice.
  - Step 4: The trainer will sum up a topic by reiterating important points from the topic before moving on to the next one.

Homework:

Students will practice exercises of the topics covered today from this link:

[Extend C# console app and debug in Visual Studio](#)

Support links for Trainer

The trainer is encouraged to take out more real life examples from the following links and from their own experience to share with the students.

1. What is C#: https://mmcgbl.com/what-is-c-sharp-development/
2. Variables: https://www.geeksforgeeks.org/c-sharp-variables/?ref=lbp
3. OOP: https://docs.microsoft.com/en-us/dotnet/csharp/fundamentals/tutorials/oop
4. Abstraction:https://www.c-sharpcorner.com/uploadfile/4624e9/abstraction-in-C-Sharp/
5. Enums: https://docs.microsoft.com/en-us/dotnet/csharp/language-reference/builtin-types/enum
6. Encapsulation:
    a. https://www.geeksforgeeks.org/c-sharp-encapsulation/?ref=lbp
    b. https://www.tutorialspoint.com/csharp/csharp_encapsulation.htm
7. Overriding method: https://www.geeksforgeeks.org/c-sharp-method-overriding/?ref=lbp
8. Interfaces:
    a. https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/interfaces/explicit-interface-implementation
    b. https://www.tutorialspoint.com/csharp/csharp_interfaces.htm
    c. https://www.w3schools.com/cs/cs_interface.php
9. Class:
    a. https://www.tutorialsteacher.com/csharp/csharp-class
    b. https://www.tutorialspoint.com/csharp/csharp_classes.htm
    c. https://www.w3schools.com/cs/cs_classes.php