Chittagong University of Engineering and Technology
CUET-CSE Digital Skills Training for Students
Venue: IICT, CUET

Mid-Term Examination
Level: Intermediate **Batch No:** I-015

Total Duration: 2 Hours (120 Minutes)   **Full Marks: 100**

Instructions:

- Complete all tasks using ASP.NET 6.0, SQL Server, React.
- Submit your relevant files and screenshots of outputs as required.

Question 1: Project Setup and Routing (60 minutes)   **50**

1. **Apply your understanding on OOP:**   **20**

   C# supports Multilevel Inheritance but not multiple inheritance for classes. Interface is the best choice to resolve these issues and to achieve abstractions.

   Deliverables:

   Now, provide a source code how this Multiple Inheritance employs through C# considering three or more classes or interfaces in a Console Application.

   Provide the necessary screenshot of your Output.

2. **ASP.Net 6.0 Web Application:**   **30**

   Consider any table with at least 5 columns in SQL Server . You can use Code First or Database First approach to create the relation.

   Deliverables:

   Now, Make a Web Application in ASP.NET 6.0 MVC where you can perform CRUD (Create, Update, Delete) Operations in a single page.

   Provide the screenshot of your Output.

- **Question 2: React Project (60 minutes)**   **50**

  Create a counter app using state management (redux/recoil)

  Task: Create a temperature converter that converts temperatures between Celsius and Fahrenheit.

  Requirements:

  Use `useState` to store the temperature value and the unit (Celsius or Fahrenheit).

  Use `useEffect` to automatically update the converted temperature whenever the user changes the input value or the selected unit.