Date/Time Handling Lab

Lab 1: Date/Time Properties

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine($"Date = {dt.Date}");
Console.WriteLine($"Day = {dt.Day}");
Console.WriteLine($"DayOfWeek = {dt.DayOfWeek}");
Console.WriteLine($"DayOfYear = {dt.DayOfYear}");
Console.WriteLine($"Month = {dt.Month}");
Console.WriteLine($"Year = {dt.Year}");
Console.WriteLine($"Hour = {dt.Hour}");
Console.WriteLine($"Minute = {dt.Minute}");
Console.WriteLine($"Second = {dt.Second}");
Console.WriteLine($"Millisecond = {dt.Millisecond}");
Console.WriteLine($"Kind = {dt.Kind}");
Console.WriteLine($"Ticks = {dt.Ticks}");
Console.WriteLine($"TimeOfDay = {dt.TimeOfDay}");
```

Try It Out

Run the application and view the output.

Lab 2: Date/Time Methods

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine($"ToString() = {dt.ToString()}");
Console.WriteLine($"ToString() = {dt}");

Console.WriteLine();
Console.WriteLine($"AddDays(1) = {dt.AddDays(1)}");
Console.WriteLine($"AddDays(-1) = {dt.AddDays(-1)}");
Console.WriteLine($"AddHours(5) = {dt.AddHours(5)}");
Console.WriteLine($"AddYears(2) = {dt.AddYears(2)}");

Console.WriteLine();
Console.WriteLine($"IsDaylightSavingTime() =
{dt.IsDaylightSavingTime()}");

Console.WriteLine();
Console.WriteLine($"ToLocalTime() = {dt.ToLocalTime()}");
Console.WriteLine($"ToUniversalTime() = {dt.ToUniversalTime()}");

Console.WriteLine();
Console.WriteLine($"ToLongDateString() = {dt.ToLongDateString()}");
Console.WriteLine($"ToLongTimeString() = {dt.ToLongTimeString()}");
Console.WriteLine($"ToShortDateString() =
{dt.ToShortDateString()}");
Console.WriteLine($"ToShortTimeString() =
{dt.ToShortTimeString()}");
```

Try It Out

Run the application and view the output.

Lab 3: Date/Time Formats

https://bit.ly/3ROQRZ3

All Date Formats

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

for (int index = 0; index < dt.GetDateTimeFormats().Length; index++)
{
  Console.WriteLine($"[{index}] =
{dt.GetDateTimeFormats()[index]}");
}
```

Try It Out

Run the application and view the output.

Long Date Formats

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine(dt.ToString("D"));
```

Try It Out

Run the application and view the output.

Long Date Patterns

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine("** Long Date Patterns **");
for (int index = 0; index < dt.GetDateTimeFormats('D').Length;
index++) {
  Console.WriteLine($"[{index}] =
{dt.GetDateTimeFormats('D')[index]}");
}
```

Try It Out

Run the application and view the output.

Short Date Formats

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine(dt.ToString("d"));
```

Try It Out

Run the application and view the output.

Short Date Patterns

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;
Console.WriteLine("** Short Date Patterns **");
for (int index = 0; index < dt.GetDateTimeFormats('d').Length;
index++) {
  Console.WriteLine($"[{index}] =
{dt.GetDateTimeFormats('d')[index]}");
}
```

Try It Out

Run the application and view the output.

Custom Formats

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateTime dt = DateTime.Now;

Console.WriteLine(dt.ToString("MMMM dd, yyyy"));
```

Try It Out

Run the application and view the output.

Lab 4: DateOnly Properties/Methods

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
DateOnly dt = DateOnly.FromDateTime(DateTime.Now);

Console.WriteLine($"ToString() = {dt}");
Console.WriteLine($"Month = {dt.Month}");
Console.WriteLine($"Day = {dt.Day}");
Console.WriteLine($"Year = {dt.Year}");
```

Try It Out

Run the application and view the output.

Lab 5: TimeOnly Properties/Methods

Open the **Program.cs** file and replace the entire contents of the file with the following code.

```
TimeOnly ti = TimeOnly.FromDateTime(DateTime.Now);

Console.WriteLine($"ToString() = {ti}");
Console.WriteLine($"Hour = {ti.Hour}");
Console.WriteLine($"Minute = {ti.Minute}");
Console.WriteLine($"Second = {ti.Second}");
```

Try It Out

Run the application and view the output.