

I. **What's Enum data type, when is it used? And name three common built_in enums used frequently?**

1. Enum data type:

It's a value type variable that defines some named constants representing integral values (It means that we assign an integer to a name that each number can represent the number).

It enhances code readability and maintainability.

The names used in it are constants that can't be changed.

The integers assigned to names start from 0 by default, and can be changed manually.

The integers can't be any symbols or to be assigned to more than 1 name.

2. When to use:

We can use it to group some related constants, can be changed logically which enhances maintainability, makes the code more readable.

3. 3 Common built-ins:

- **System.DayOfWeek:**

It represents the day of the week. It's used to get day of the week.

- **System.ConsoleColor:**

It represents the colors that can be used in console output. It can be used to change the background color of console.

- **System.FileAccess:**

It represents the access mode for a file either read, write or read/write. It's used when opening the file to determine the access level of the file.

II. **what are scenarios to use string Vs StringBuilder?**

1. String :

- Any process which string doesn't need to be modified.
- Dealing with constant texts.
- Dealing with small and simple strings like: Hello
- Concatenating few strings together.
- When using String Format & String Interpolation.
- When performance isn't a concern.

2. StringBuilder:

- When string is often modified.
- When doing concatenation, replacement, insertion or working with large strings.
- When dealing with large-scale string concatenation.
- When manipulating large strings or text files.
- When performance or memory efficiency is a concern.
- When appending a string.