Strings

String Concatenation

```
string a = "Hello";
string b = a + " World"; // Hello World
a += " World";           // Hello World
```

Special Characters

Backslash notation is used to write special characters

Character	Meaning
\n	newline
\t	horizontal tab
\v	vertical tab
\b	backspace
\r	carriage return
\0	null character

Character	Meaning
\f	form feed
\a	alert sound
\’	single quote
\”	double quote
\\	backslash
\uFFFF	Unicode character (4-digit hex number)

```
string e = "c:\\Windows\\System32\\cmd.exe";
string f = @"c:\Windows\System32\cmd.exe";
```

Strings

```
string a = "String";
string b = a.Replace("i", "o"); // Strong
b = a.Insert(0, "My ");  // My String
b = a.Remove(0, 3);      // ing
b = a.Substring(0, 3);   // Str
b = a.ToUpper();         // STRING
int i = a.Length;           // 6
```

*__Note__: there are no methods for changing a string. Methods that appear to modify a string actually always return a completely new string. This is because the string class is immutable. The content of a string variable cannot be changed, unless the whole string is replaced.

StringBuilder Class

- StringBuilder is a mutable string class. Because of the performance cost associated with replacing a string, the StringBuilder class is a better alternative when a string needs to be modified many times.

```
System.Text.StringBuilder sb = new System.Text.StringBuilder("Hello");

sb.Append(" World");   // Hello World
sb.Remove(0, 5);       // World
sb.Insert(0, "Bye");   // Bye World

string s = sb.ToString(); // Bye World
```

Composite Formatting

- Each format item takes the following form and consists of the following components:

{ *index*[**,***alignment*][**:***formatString*]**}**

```
string myName = "Fred";
String.Format("Name = {0}, hours = {1:hh}", myName, DateTime.Now);
```

- Doc - http://msdn.microsoft.com/en-us/library/txafckwd(v=vs.110).aspx

Custom DateTime Formatting

- Code Example: ILoveDatesandTimes.zip
- There are following custom format specifiers y (year), M (month), d (day), h (hour 12), H (hour 24), m (minute), s (second), f (second fraction), F (second fraction, trailing zeroes are trimmed), t (P.M or A.M) and z (time zone).

- You can use also date separator / (slash) and time sepatator : (colon). These characters will be rewritten to characters defined in the current DateTimeFormatInfo.DateSeparator and DateTimeForma-tInfo.TimeSeparator.

Standard DateTime Formatting

Specifier	DateTimeFormatInfo property	Pattern value (for en-US culture)
t	ShortTimePattern	h:mm tt
d	ShortDatePattern	M/d/yyyy
T	LongTimePattern	h:mm:ss tt
D	LongDatePattern	dddd, MMMM dd, yyyy
f	*(combination of D and t)*	dddd, MMMM dd, yyyy h:mm tt
F	FullDateTimePattern	dddd, MMMM dd, yyyy h:mm:ss tt
g	*(combination of d and t)*	M/d/yyyy h:mm tt
G	*(combination of d and T)*	M/d/yyyy h:mm:ss tt
m, M	MonthDayPattern	MMMM dd
y, Y	YearMonthPattern	MMMM, yyyy
r, R	RFC1123Pattern	ddd, dd MMM yyyy HH':'mm':'ss 'GMT' *(*)*
s	SortableDateTimePattern	yyyy'-'MM'-'dd'T'HH':'mm':'ss *(*)*
u	UniversalSortableDateTimePat-tern	yyyy'-'MM'-'dd HH':'mm':'ss'Z' *(*)*

(*) = culture independent