Python – C# Comparison Sheet #1

Topics	Python	C#

Comments	`# A line beginning with '#' is a comment.`
	
	`"""`
	`In Python, you can use multiple-line`
	`strings as a multi-line comments.`
	`We have not learned this in class.`
	`"""`
		`// A line beginning with '//' is a comment`
		`/*`
		`   If you want multiline comments,`
		`   Put them in a pair of a slash-star`
		`   and a star-slash.`
		`*/`

Types	`int, float, str`	`int, double, string`
Declaration	`(no variable declaration)`	`type variablename;`

Type conversion	`int("100") → 100`
	`int(5.4) → 5`
	`float(10) → 10.0`
	`str(10) → '10'`
	`str(10.5) → '10.5'`
		`int.Parse("100") → 100`
		`(int)(5.4) → 5`
		`(double)(10) → 10.0`
		`10.ToString() → '10'`
		`(10.5).ToString → '10.5'`

Input	`a = input()`
	`x = int(input())`
	`y = float(input())`
		`string a = Console.ReadLine();`
		`int x = int.Parse(Console.ReadLine());`
		`double y = double.Parse(Console.ReadLine());`

Input /w prompt	`b = input("Enter B: ")`	`Console.Write("Enter B: ");` `b = Console.ReadLine();`
Output	`print("Hello, world")` `print('Cost =',10,'baht')`	`Console.WriteLine("Hello, world");` `Console.WriteLine("Cost = {0} baht",10);`
Output/no newline	`print("Hello, ",end='')` `print("world")`	`Console.Write("Hello, ");` `Console.WriteLine("world");`

Blocks (with examples of conditional "if" statements)	`# Python uses indentation`
	`if a < 10:`
	`    print("hello")`
	`    while b > 100:`
	`        print(b)`
	`        b -= 1`
	`print("good bye")`
		`// C# uses {}`
		`if(a < 10)`
		`{`
		`   Console.WriteLine("hello");`
		`   while(b > 100)`
		`   {`
		`     Console.WriteLine(b);`
		`     b--;`
		`   }`
		`}`
		`Console.WriteLine("good bye");`

If-else	`if a > 10:`
	`   print("Good")`
	`   if a < 5:`
	`     print("Bad")`
	`else:`
	`   print("Normal")`
		`if(a > 10)`
		`{`
		`   Console.WriteLine("Good");`
		`   if(a < 5)`
		`     Console.WriteLine("Bad");`
		`}`
		`else`
		`   Console.WriteLine("Normal");`

While	`i = 10`
	`while i<=20:`
	`    print(i)`
	`    i += 1`
		`int i = 10;`
		`while(i<=20)`
		`{`
		`   Console.WriteLine(i);`
		`   i++;`
		`}`

Do-while	`(no do-while loop)`	`int i = 10;`
		`do`
		`{`
		`   Console.WriteLine(i);`
		`   i--;`
		`}`
		`while(i > 0);`

Random example	`import math`
	`r = float(input("Enter radius: "))`
	`print("The area is", math.pi * r * r)`
		`Console.Write("Enter radius: ");`
		`double r = double.Parse(Console.ReadLine());`
		`Console.WriteLine("The area is {0}",`
		`                Math.PI * r * r);`

Note: Codes in shade are outside the scope of the course.

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