C# Programming Reference Sheet

Built In Data Types & Literals

Integers
Int, uint, long, ulong (eg- 5,10,15,20)
Floating Point Numbers
Float,double (eg- 1.5, 5.5)
Strings and Characters
String,char (eg- “Jack”, “id”)
Boolean
Boolean (eg- True or False)

Simple Programming Statements

Constant declaration
```
Private const int age = 22
```
Variable declaration
```
Int I = 0;
```
Assignment
```
A = 1;
```
Method call
```
<return type> <method name>
(parameter list)
```
Sequence of statements - grouped
```
{}
```

Declaring Methods

Declare a method with parameters:
```
Public int Add(int num1, int num2){}
```
Declare a method that returns data:
```
Public int Add(int num1, int num2)
{
Return num1 + num2;
}
```
Pass by reference:
```
Age = 22;
squareRef(ref Age);
Console.WriteLine(arg);
```

Custom Types

Classes
```
Public class students
{

}
```
Enumerations
```
Enum Planets{Mercury,Venus,Earth};
```
Structs
```
Struct Books{ public string Title,
Public string Author}
```

Working with Strings

Assignment (giving a string a value)
Name = “Uzman”

Concatenation (joining strings)
String Name = “Will” + “Smith”

Comparison
```
Name == Name
```
Construction from other types:
Int a = 10;
```
a = A.toString();
```

Structured Programming Statements

If statement
```
Int age = 20
If(age < 18)
        Console.writeline(“Underage”);
```
Case statement
```
Int balance = 1000;
Switch(balance)
{
        Case 1:
                Break;
        Case 2:
                Break;
}
```
While loop
Int I = 0;
While(i<5)
{
}

Repeat loop
Int a = 1
```
Repeat
{
        Console.writrline();
a = a+1;
if(a==10){break;}
}
```
For loop
```
For(i=0; i<=10; I = i++)
{

}
```

Boolean Operators and Other Statements

Comparison: equal, less, larger, not equal, less eq
```
==, <, > !=, <=
```
Boolean: And, Or and Not
```
&,|,!
```
Skip an iteration of a loop
```
continue
```
End a loop early
```
break
```
End a method:
```
return
```

Arrays

Declaration

```
String name[],int age[]
```

Access

```
Console.writeline(name[0]);
Console.writeline(name[1]);
```

Loop with index i

```
(int i=0; i<5; i++)
```

For each loop

```
Foreach (int radius in radii){}
```

Programs and Modules

Creating a program

Class Main
{
}

Using a class from a library

```
Using SubClass;
Public void main()
{
SubClass.print();
}
```

Other Things

Reading from Terminal

```
Console.readline();
```

Writing to Terminal

```
Console.WriteLine();
```

Comments

```
//Single Comment Line
```