C# Programming Reference Sheet

Built In Data Types & Literals

Integers
```
Int, long, uint, ulong
```
Floating Point Numbers
```
Float, double
```
Strings and Characters
```
String, char
```
Boolean
```
Boolean
```

Working with Strings

Assignment (giving a string a value)
```
Word = "Hello Teacher";
```
Concatenation (joining strings)
```
String join = "Hello" + "Teacher";
```
Comparison
```
Abc == bcdl;
```
Construction from other types:
```
Xyz = xyz.TOString();
```

Simple Programming Statements

Constant declaration
```
Private const int months = 12;
```
Variable declaration
```
Double half = 0.5;
```
Assignment
```
Win = 100;
```
Method call

Sequence of statements – grouped
{}

Structured Programming Statements

If statement
```
If(condition) then{} else {}
```
Case statement
```
Switch(variable){case1: statement; break;
default: statement; break;
```

While loop
```
While(condition) do{…}
```
Repeat loop
```
Do( m +1,m++;} while(m < 1)
```
For loop
```
For(statement1, statement2, statement3
){statement4;}
```

Declaring Methods

Declare a method with parameters:
```
Public double sum_two_num(double n1,
double n2){}
```
Declare a method that returns data:
```
Public double sum_two_num(double n1,
double n2){ return n1 + n2}
```
Pass by reference:
```
Example = 10000;
Reference(ref example)
Console.WriteLine(Example);
```

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;
```

Custom Types

Classes
```
Public class example{
}
```
Enumerations
```
Enum card_type{heart, spade,diamond,
club};
```
Structs
```
Struct Student{ public string
firstname; public string surname;}
```

Arrays

Declaration
```
double[] price;
```
Access
```
Price[0]= 2.5;
```
Loop with index i
```
For(int i=n, i<x, i++){statement;}
```
For each loop
```
Forach(string items in price)
{
Statement;
}
```

Programs and Modules

Creating a program
```
Class Main{
Public static void Manclass()
}
```

Using a class from a library
```
Using [classname]
Ex: Using SwinGameSDK;
```

Other Things

Reading from Terminal
```
Console.Readlin();
```
Writing to Terminal
```
Consolde.Write();
Console.WriteLine();
```
Comments
```
// Single line comment
/* */ paragraph comment
```