

**VB Programming**

**Iteration – For Loops**

To iterate means to Loop, to Repeat. The following exercises make use of one repetition statement called a For Loop. For Loops are used when we know exactly how many times a program is going to loop. E.g this may be a pre-determined number, it may be determined by the users input or it may be determined by another variable (e.g. the length of a password entered).

**Statements Used**

For (initial value; test condition; modification to value)

{

// do some task

}

**The Program**

static void Main(string[] args)

{

/\* Using a For Loop

\* Franklin Computer Science

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// declare variables //

int number = 0;

int noOfMarks = 0;

// for loop //

for (int count = 1; count <= 10; count++)

{

Console.WriteLine(count);

}

Console.ReadLine();

}

**Programming Tasks**

For each of these programming tasks, create and test a program. For each:

* Add comments with a description of the task, your name and the date
* Copy the program to a Word document
* Paste a screen shot of the console as evidence that the program worked
* Check that you have your name, set and date in a header

**Task 1**

Produce a program that has a menu (see sample starter task used in lesson). The menu will have the following options:

1. Display the numbers 1 to 100
2. Display the numbers 3 to 11
3. Display the numbers -10 to 10
4. Display the numbers between two values specified by the user

To complete each of the tasks make use of a For Loop

**Task 2**

Create the following program:

static void Main(string[] args)

{

Console.WriteLine(Convert.ToChar(65));

Console.ReadLine();

}

1. What does it do?
2. What does it do if you change the number to 66?
3. What if you change the number to 80?
4. Alter the program so that it allows the user to type in a number at the console and display the equivalent char(of that number).
5. Produce a program that outputs the letters A to E using a For Loop
6. Produce a program that outputs the letters G to N using a For Loop

**Task 3**

Produce a program that has a menu with the following options all completed using a For Loop (You will need to use the ‘modification to value’ part of the for loop differently than you have up to now.

Remember:

for (initial value; test condition; modification to value)

{

// do some task

}

Eg:

for (int i = 0; i < 100; i = i + 10)

{

Console.WriteLine(i);

}

1. Output odd numbers between 1 and a number specified by the user
2. Output every other letter of the alphabet
3. Ask the user to enter a start number, end number and also an interval – display each number e.g.
   1. Start number is -5 and interval is 5 so it would display -5, 0, 5, 10, 15
4. As of 3 but counting down a series of numbers

**Task 4**

Produce a program that makes use of a For Loop and asks the user to type in ten numbers. The ten numbers are totalled and the total displayed at the end of the program.

Hint:

You only need one line and one variable for the user input

You need a variable to hold the running total