


# Module 10 Iteration

## Lecture While Loops



# Module 10 Learning Objectives

Bloom Level	Number	Name	Description	Course Learning Objectives
2: Understand	1	For vs Foreach Loops	Describe when to use a for loop instead of a foreach loop	Basic Programming Concepts
3: Apply	2	For Loops	Develop a console application that uses a for loop to do something repeatedly	Basic Programming Concepts
3: Apply	3	Foreach Loops	Develop a console application that uses a foreach loop to iterate over an array or collection	Basic Programming Concepts
2: Understand	4	While vs For/Foreach Loops	Describe when to use a while loop instead of a for/foreach loop	Basic Programming Concepts
3: Apply	5	While Loops	Develop a console application that uses a while loop	Basic Programming Concepts
3: Apply	6	Looping in XNA	Develop an XNA game that uses for and while loops	Basic XNA Concepts, Basic Programming Concepts

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Last time, we finished our discussion of for and foreach loops

This time, we'll look at while loops, which give us a way to iterate when we don't know how many times we'll need to iterate

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## In-Lecture Quiz

The loop we'll use to perform iteration in our C# code when we don't know how many times to loop is the

- A: while loop
  - B: if loop
  - C: Hula Loop
  - D: loopInC# statement
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## In-Lecture Quiz

An infinite loop occurs when we

- A: loop infinitely (duh)
  - B: let our computer run until the end of time
  - C: don't change anything in the body of the loop to affect the test
  - D: use `<` instead of `<=` in our Boolean expression
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## In-Lecture Quiz

We can avoid lots of loop problems by thinking about ITM,  
which means

- A: I Taste Monkeys
  - B: Incas Toast Men
  - C: Initialize Test Modify
  - D: Are you (\*&%#\*# kidding me?
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## In-Lecture Quiz

When we test a while loop we should execute the loop body

- A: 0, 1, and multiple times
  - B: with C4 and a grapefruit
  - C: with a sledgehammer and a melon
  - D: Why? Just ... why?
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- Recap

- We learned how we can use while loops when we don't know how many times we'll need to iterate
- End of Module 10

- Next Time

- We'll start working on designing and implementing our own custom classes
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