


Module 10 Iteration

Lecture Foreach 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

Last time, we used a for loop to clean dead teddies out of a list

This time, we'll discuss foreach loops, which give us another way to iterate over arrays and collections

In-Lecture Quiz

The default loop to use in C# when iterating over an array or collection is the

- A: if statement
 - B: loop-de-loop
 - C: for loop
 - D: foreach loop
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In-Lecture Quiz

We need to use a for loop instead of a foreach loop if we need to

- A: know the index of the element we're processing
 - B: loop without iterating over an array or collection
 - C: change the contents of the collection we're iterating over
 - D: eat, drink, and be merry
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In-Lecture Quiz

You can change the collection you're iterating over inside a foreach loop

- A: Tuesday during Happy Hour
 - B: never
 - C: always
 - D: if you feel like it
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In-Lecture Quiz

Assuming entities is an array (not a collection)

```
foreach (GameEntity entity in entities)
{
    entity.Update( );
}
```

would

- A: not compile because foreach should be for
 - B: loop infinitely because the array index is never incremented
 - C: update each game entity in the array
 - D: blow up if any element of the entities array is null
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In-Lecture Quiz

Nested loops are

- A: evil, and I'll never use them
 - B: useful in some cases
 - C: smelly, and I HATE THEM!
 - D: filled with twigs and small birds
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- Recap

- We learned how we can use foreach loop to iterate over an array or collection

- Next Time

- We'll learn about the loop we use when we don't know how many times we're going to loop
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