GWC Level 3 Week 11

Review and application of classes and Objects

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WIT Shout-Out of the Week
Tessa LauWh

- Known as the "Chief Robot Whisperer" Tessa LauWh is one of the leading women in Artificial Intelligence research and development
- She currently works for a company called Savioke where she pioneers the research for robots that help improve hotels and other service industries. She also spent 11 years working on artificial intelligence for IBM
- She's currently on the board for the CRA-W committee for Women in Computing Research

Video:
https://www.em360tech.com/ai_enterprise/tech-news/top-ten/top-10-pioneering-women-in-ai-and-machine-learning/

Warm-Up

For today's warm up, finish up the shapes
project from last week

Triangle, Circle, Rectangle

- Create a class for each of the three shapes above.

- The Triangle class should include a method to calculate area

- The Circle class should include a method to calculate circumference and a method to calculate area.

- The Rectangle class should include a method to calculate perimeter, a method to calculate area, and a method to determine if the rectangle is a square.

Shapes Driver Program

Create a driver program that allows the user to select what shape they are making, takes user input for the shape measurements, and prints all attributes for that shape.

```
Mono C# compiler version 4.6.2.0
> mcs -out:main.exe circle.cs main.cs rectangle.cs triangle.cs
> mono main.exe
What shape do you want to make?
Enter 't' for triangle
Enter 'c' for circle
Enter 'r' for rectangle or square
t
Enter a base: 10
Enter a height: 5
This triangle has a base of 10, a height of 5, and an area of 25.
```
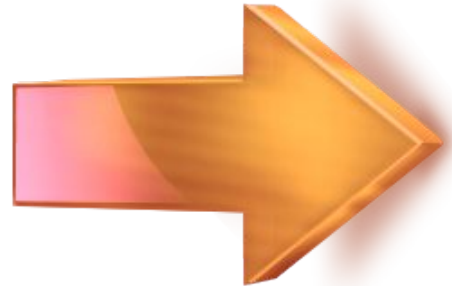
Celebrity Buzzfeed Quiz

Celebrity Buzzfeed Quiz Activity

- Create a "Celebrity" class that has attributes
  - Name,
  - favorite color
  - favorite animal
  - favorite starbucks drink
  - favorite weekend activity
- Make getters and setters
- Make a string override class

Celebrity Quiz

- Create a main method(in the main class) that prompts a user with user input to ask what their favorites are

- Save their answers in a string array

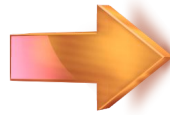- Create an object array that contains the 3-5 celebrity objects that are possible answers

Celebrity Quiz

- Next, Create a method that takes the object array and the string answers array -- use the code template from the website

- Based on the answers (in the string array)-- use a getter to see which object they are most similar with using your different getter methods getColor() or getStarbucks()
    - For this you can use if (string1.Equals(string2)) then
    - Or == comparisons
  - This can be achieved using a for each loop

Celebrity Project Continued

- Create integer sum variables to keep track of the score someone gets based on their answers
    - ex: if for favorite animal someone says cats then the score for katyperry gets +1 because that was defined as the katy perry favorite animal
    - If user answers "cats" and katy perry's object's favorite animal attribute is defined as "cats" -- gain point for katy perry
- Sum the items in the array to get their score
  You will need the "using System.Linq;" for this -- it is in the template
- Based on their score they should be given a celebrity (one of the objects you created)

Sample Output for Celebrity Quiz

```
Mono C# compiler version 4.6.2.0
> mcs -out:main.exe celebrity.cs main.cs
> mono main.exe
Welcome to the Celebrity Quiz.
We will be deciding who you're spirit celebrity is!
Out of these 5, which is your favorite color:
Pink, Blue, Black, or Red?
Pink
Out of these 5, which is your favorite animal:
Seahorse, Cat, Great Dane,French Bulldog, or Lizard?
Seahorse
Out of these 5, which is your favorite Starbucks:
Cloud Macchiato, Vanilla Soy Latte, Matcha Lemonade, Almond Soy Latte,
 Caramel ?
Cloud Macchiato
Out of these 5, which is your favorite activity:
Singing, Crochet, Piano, Reading, or Science?
Singing
Your result is: Your celebrity spirit animal is Arianna Grande
```