

CSE1322L - Lab 11

Objective:

Using Runnable to employ Multithreading in Java

Using Threads to employ Multithreading in C#

Introduction:

Congratulations, you just had Quintuplets. You'll be putting them all to sleep, and each one of them will wake up at different times. Hopefully, you can have a nap while they sleep...good luck.

For this lab you'll be creating a Baby class. Then you'll create 5 babies objects in separate threads. Each thread will run independently. Follow the instructions for your language below:

Java:

- Create a Baby class which implements Runnable
- It should have variables: time (int) and name (String).
- Write a constructor which takes in a name
 - Set the name variable in the object with the name you were passed.
 - Create a Random object
 - Set the time variable to your Random Object's .nextInt(5000)
- Create a method run() with no parameters
 - Print out "My name is X I am going to sleep for Yms" X should be the objects name, Y should be the time you randomly chose.
 - Call Thread.sleep(time);
 - Print out "My name is X, I am awake, feed me!!!"
 - You will need to wrap the contents of your run method in a try/catch block, catching InterruptedException.
- In your main class's main method, do the following:
 - Thread b1 = new Thread(new Baby("Noah"));
 - Repeat this for b2, b3, b4, b5. They should be named Noah, Olivia, Liam, Emma, Amelia.
 - Start all 5 babies with a statement like "b1.start();"

C#:

- Using System.Threading
- Create a Baby class
- It should have variables: time (int) and name (String).
- Write a constructor which takes in a name
 - Set the name variable in the object with the name you were passed.
 - Create a Random object

- Set the time variable to your Random Object's .Next(5000)
- Create a method Run() with no parameters
 - Print out "My name is X I am going to sleep for Yms" X should be the objects name, Y should be the time you randomly chose.
 - Call Thread.Sleep(time);
 - Print out "My name is X, I am awake, feed me!!!"
 - You will need to wrap the contents of your run method in a try/catch block, catching ThreadInterruptedException.
- In your main class's main method, do the following:
 - Create 5 babies as follows:
 - Baby b1 = new Baby("Noah");
 - Repeat this for b2, b3, b4, b5. They should be named Noah, Olivia, Liam, Emma, Amelia.
 - Create 5 threads as follows:
 - Thread t1 = new Thread(b1.Run);
 - Repeat this for t2, t3, t4 and t5.
 - Start all 5 babies with a statement like "t1.Start();"
 - Repeat this for t2, t3, t4 and t5.

Sample Output:

```
My name is Noah and I am going to sleep for 3398ms
My name is Olivia and I am going to sleep for 1687ms
My name is Amelia and I am going to sleep for 448ms
My name is Emma and I am going to sleep for 4792ms
My name is Liam and I am going to sleep for 2671ms
My name is Amelia and I'm awake,feed me!!!
My name is Olivia and I'm awake,feed me!!!
My name is Liam and I'm awake,feed me!!!
My name is Noah and I'm awake,feed me!!!
My name is Emma and I'm awake,feed me!!!
```

*Note the order the children will wake up is random.

Submission Guidelines:

You will turn in one program.

Please follow the posted submission guidelines here:

<https://ccse.kennesaw.edu/fye/submissionguidelines.php>

Ensure you submit before the deadline listed on the lab schedule for CSE1322L here:

<https://ccse.kennesaw.edu/fye/courseschedules.php>