Inspiring Young Minds to Innovate . Collaborate . Create

RED LEVEL

INTRO TO JAVA WITH MINECRAFT MODS

PROGRAMMING BASICS

Assignment 2.1:

On your way home from school, you find a pile of 100 bunnies! You decide to help each of these bunnies find a loving home, and you want to write a Java program to demonstrate your progress.

Write, compile and run a java program which has: a *while* loop, a variable, a comparison operator, and print statements. For an example of a *while* loop, refer back to the example we discussed in class. You will need to:

1) Open Eclipse and create a new workspace.

2) Create a new project called JavaPractice.

2) Create a new class named SimpleWhileLoop in your project.

You should see a file for SimpleWhileLoop.java now in Eclipse.

3) Create an empty *main* method in your program:

```
public class SimpleWhileLoop{

    public static void main(String[] args){

        //Your loop will be going here

    }
}
```

4) Save your file!

5) Create a variable called numBunnies to store the 100 bunnies you found.

```
int numberOfBunnies = 100;
```

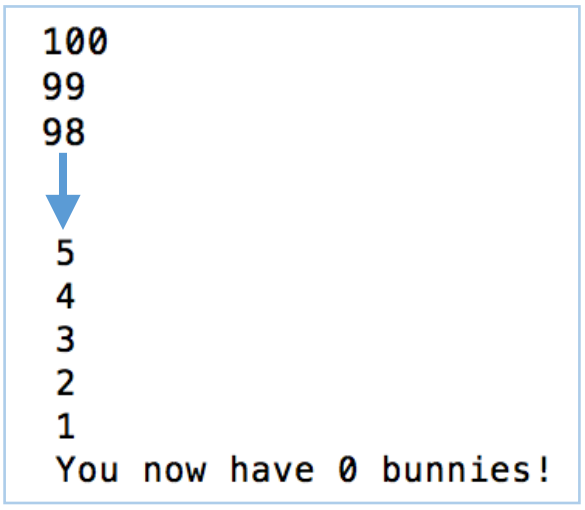
6) Now you need to create the while loop.

The logic that you need to turn into code is:

```
while ( you have greater than zero bunnies ) {
        print out the number of bunnies you have
        subtract one bunny from the number of bunnies you have
}
print out "You now have 0 bunnies!" after your loop
```

7) Save and run your program.

Program Output:



Assignment 2.2:

In class, we also discussed looping construct called a *for* loop. What would SimpleWhileLoop.java look like if we had used a *for* loop instead of a *while* loop? Let's create a new program without the *while* loop to find out!

Solve the bunny problem using a *for* loop instead of a *while* loop. You will write, compile and run a java program which has: a *for* loop, a variable, a comparison operator, and print statements. For an example of a *for* loop, refer back to the example we discussed in class. You will need to:

1) Create a new class named SimpleForLoop in your project.

You should see a file for SimpleForLoop.java now in Eclipse.

2) Create an empty *main* method in this new class, just how you did for the SimpleWhileLoop class.

```
public class SimpleForLoop {

    public static void main(String[] args){

        //Your loop will be going here

    }
}
```

3) Save your file!

It's good practice to save your work often! This prevents you from losing any of the hard work you've done!

4) Now you need to create the for loop.

The logic that you need to turn into code is:

```
for ( every bunny from 100 to 0 ) {
        print out the number of bunnies you have
}
print out "You now have 0 bunnies!" after your loop
```

Your for loop will need to be counting down from 100 to 0, which means:

- numberOfBunnies should be set to 100 as a starting point.
- This for loop should run so long as numberOfBunnies > 0.
- You will need to use the decrement operator.

5) Save and run your program.

Program Output: