

PSLG Session 4

Ran by Amy and Ben

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DLSH Brightspace enrollment QR code

ICTLC Online QR Code:



The Agenda

- printf
- Rerun through while loops.
-

printf

- Specifies format of the output and avoids the concatenation of `System.out.print`.
 - Basic flags:
 - `%d` = integer value
 - `%s` = string value
 - `%f` = floating point & decimal numbers
 - Put your flags and text first, then value at the end e.g:
 - `System.out.printf("%s", "You are the imposter");`

Note: escape sequences such as `'\n'` create a newline.

Example output :

```
You are the imposter  
Process finished with exit code 0
```

Printf problem:

Create a class called `problem1` and make a main method.

Initialise separate variables to hold a name, an age and a decimal variable to hold that persons QCA.

Use `printf` to display this information in a formatted way and ensure each piece of information is displayed on a new line.

Solution

```
1 ▶ public class problem1 {  
2 ▶     public static void main(String[] args) {  
3  
4         String name = "Patricia";  
5         int age = 23;  
6         double qca = 3.63;  
7  
8         System.out.printf("Nme : %s \n" + "Age : %d \n" + "QCA : %f \n", name, age, qca);  
9  
10    }  
11 }
```

While loops

Syntax:

```
int iterate = 0;
While(condition){
    Program Statement;
    iterateChanges;
}
```

Example:

```
int i = 0;
While (i<3){
    System.out.print(i);
    i++;
}
```


While loop problem :

Create a class called `problem2` and make a main method.

Initialise a variable with the value ten and use a while loop to countdown from that variable to 0, printing each number in the countdown.

Solution

```
1 ▶ public class problem2 {  
2 ▶     public static void main(String[] args) {  
3  
4         //the start of the countdown  
5         int countdownStart = 10;  
6  
7         //loop to decrease the value of countdownStart and print out each value of the countdown  
8         while(countdownStart >= 0){  
9             System.out.println(countdownStart);  
10            countdownStart--;  
11        }  
12    }  
13 }
```

While loop Problem 2.

Initialise a class titled MultiplicationTable and a main method.

In this class initialise a randomly generated number between 1 and 12 and a variable to store products. using a while loop to iterate up to the number 10 and print the products of your initial number and the current iterate like follows:

$$7 \times 1 = 7$$

$$7 \times 2 = 14 \dots$$

Solution

```
1  ▶ public class MultiplicationTable {
2  ▶  ▶ public static void main(String[] args) {
3      //Declaring our random variable and iterate
4      int randNum = (int) ((Math.random()*12) +1);
5      int i = 0;
6
7      //Initialising our product variable
8      int product;
9
10     //While Loop
11     while(i<=10){
12         product = i * randNum;
13         System.out.printf("%d x %d = %d \n",randNum,i,product);
14         i++;
15     }
16 }
17 }
```