

1. Log in

2. Working in Unit 2

- Scanner Input & Decimal Formatting

- If Statements & Relational Operators

- For and While Loops

- Recursion

Oct 16-12:21 PM

Remember the for loop?

```
for(initialize a number ; "controller" ; how to change the number)
{
    do this stuff repeatedly ...
}
```

```
for(i=1 ; i<=5 ; i++)
{
    System.out.print(i);
}
```

Oct 20-12:48 PM

The while loop ...

```
while(controller)
{
    do this stuff repeatedly ...
    the "controller" is usually changed inside the loop...
}
```

While the control statement is true ...

keep doing "this stuff"

Oct 21-10:04 AM

Simple Comparison ...

The for loop

```
for(int i=1; i<=5; i++)
    System.out.print(i);
```

The while loop

```
int i=1;
while(i<=5)
{
    System.out.print(i);
    i++;
}
```

* The output is the same for both of these!! 12345

Oct 20-12:52 PM

Compare the Gauss Problem

for loop

```
int sum=0;

for(int j=1 ; j<=100 ; j++)
    sum+=j;

System.out.println(sum);
```

while loop

```
int sum=0, k=1;

while(k<=100)
{
    sum+=k;
    k++;
}

System.out.println(sum);
```

Oct 22-8:58 AM

A very simple while loop game ...

```
Scanner getNumber = new Scanner(System.in);

int userNumber=1;

while(userNumber != 0)
{
    System.out.println("Enter an integer (when tired of this game, enter 0): ");
    userNumber=getNumber.nextInt();
    System.out.println("You typed "+userNumber+".");
}

System.out.println("GAME OVER! Thanks for playing!");
```

Oct 22-8:58 AM

Do you remember the break statement???

```
break;
```

*This will exit any current loop that the program is in.
This can be used in for loops and while loops!*

Oct 22-8:59 AM

What would happen now in our game???

```
Scanner getNumber = new Scanner(System.in);
int userNumber=1;
while(userNumber != 0)
{
    System.out.println("Enter an integer (when tired of this game, enter 0): ");
    userNumber=getNumber.nextInt();
    if(userNumber==1)
        break;
    System.out.println("You typed "+userNumber+".");
}
System.out.println("GAME OVER! Thanks for playing!");
```

Oct 22-8:59 AM

How about this scenario???

```
Scanner getNumber = new Scanner(System.in);
int userNumber=1;
while(userNumber != 0)
{
    System.out.println("Enter an integer (when tired of this game, enter 0): ");
    userNumber=getNumber.nextInt();
    break;
    System.out.println("You typed "+userNumber+".");
}
System.out.println("GAME OVER! Thanks for playing!");
```

Oct 22-9:00 AM

How about this scenario???

```
Scanner getNumber = new Scanner(System.in);
int userNumber=1;
while(userNumber != 0)
{
    break;
    System.out.println("Enter an integer (when tired of this game, enter 0): ");
    userNumber=getNumber.nextInt();
    System.out.println("You typed "+userNumber+".");
}
System.out.println("GAME OVER! Thanks for playing!");
```

Oct 22-9:00 AM

Things to do ...

1. WS04 Should be wrapped up (For-Loops)
2. How is modifiedPassword going?
3. WS05 (Nested For-Loops) should be about done
4. WS06 While-Loop Worksheet is new today

Oct 16-9:12 AM