Data Types

byte	8 bits
short	16 bits
int	32 bits
long	64 bits
boolean	(no bit just true/ false)
char	16 bit unicode
float	32 bit decimal
double	64 bit decimal

Swap

```
package com.company;
import java.lang.System;
public class Main {
    public static void swap(int[]
list, int e1, int e2)
    {
        int temp;
        temp = list[e1];
        list[e1] = list[e2];
        list[e2] = temp;
        System.out.print("\nafter
swap: ");
        for (int i = 0; i < 5; i++)
        {
            System.out.print(list[i
] + " ");
        }
    }
    public static void
main(String[] args)
    {
        int [] mylist = new int []
{1, 2, 3, 4, 5};
        System.out.print("before
swap: ");
        for (int i = 0; i < 5; i++)
        {
            System.out.print(mylist
[i] + " ");
```

Swap (cont)

```
        }
        swap(mylist, 1, 2);
        swap(mylist, 0, 4);
        swap(mylist, 1, 3);
    }
}
```

notes

/n = new line
/t = tap
/" = "
/* = multiple
Make new class:
Click src > main > new > Java class (then type
the code)

Arrays

```
- List use when shopping
- can make 2 ways:
int[] ex1 = new int [3];
ex1[0]= 1;
ex2[1]= 2;
ex3[2]= 3;
```

While loops

```
While loops
        int count = 0;
        while (count <
mylist.lenght) {
            System.out.print(
mylist[count] + "");

            count ++;
```

Do...While

```
- It make the code run and check
the condition.
(if the condition correct or not
and have 1 letter)
int count=0;
do{
        System.out.print(count +
" ");
        count ++ ;
}while (count < 10);
Ans 0 1 2 3 4 5 6 7 8 9
```

Java Programming Process

Java is a high level programming language that
is readable by human called JVM (Java Virtual
Machine).

Compiler - translate the program into machine
language that can be executed directly on the
computer.

(called native compiler because it produces on
executable).

Java bytecodes - the java complier translate
your java program to be an intermediate level,
which can be executed only by JVM.

JVM is the another run program of Java. It
referred to Java runtime.

The standard environment is distribute by
Oracle and is called the Java runtime
environment (JRE).

Java runtime a program that execute compiled
Java byte codes.

JDK (Java Development Kit) contains a
complete class library of utilities that help you
accomplish most common tasks.

String

String (same with array int but int use for the number but string use for word.)
String name = "Yuyu"

Char

Char is same with string but char for only letter!!
String letter = "A";

For loops

```
For loops (do everything in () )
        Characters
        String name = "yuyu";
          for (char y :
name.toCharArray()){
               System.out.print(y + " ");
          }
        Ans y u y u


          int [] mylist = {2,4,6};
          for (int i = 0; i <
mylist.length; i++)
          {
               System.out.print( mylist
[i] + " ");
          }
        Ans 2 4 6
```