

## variables & method arguments

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*"if you don't understand something well enough to explain it then you don't understand it well enough"*

### brief

This note highlights some issues about variables & method arguments (args). You should be able to understand & explain (in detail) all the terms used.

### *variables*

```
int x;           // declaration
int y = 5;      // initialisation

x = 6;         // assignment
y = y + x;
```

### *method arguments*

declared when a method is defined, eg...

```
public void paint( Graphics g )           // declare argument called g
{ ...
}
```

assigned when a method is called, eg...

```
...
int size = 20;
g.drawRect( 100, 200, size, size );
...
```

### *applying methods to objects*

in example above...

```
g.drawRect( 100, 200, size, size );
```

the **drawRect** method is applied to the Graphics object **g**

## defining your own methods

### defining a method

```
public void debugPrint( String text, int value )
{   System.out.println( "the value of [" +text+ "] is" +value );
}
```

note the highlighted terms

### calling the method

```
int x = 5;
debugPrint( "new x value", x );
```

Q: when a method call does not *explicitly* state which object it should be applied to (as in the example above) – which object is it applied to?

### another example...

```
public int myAdd( int x, int y )
{   return x + y;
}
```

note the highlighted terms

### calling the method

```
int a = 10;
int b = 5;
int c = myAdd( a, b );
debugPrint( "a+b", c );
```

### other issues...

- what do we mean by "*primitive data types*"?
- what is the difference between primitive types & object types?