



# From Pascal to Java



*Submitted  
as "other  
work" by a  
student in  
233, Sept  
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*Used with  
permission.*

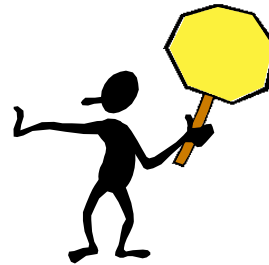
# Variable Declaration – Pascal Vs. Java

## Pascal:

var: <name of variable> : <data type>;

### **Example:**

```
var num : integer;
```



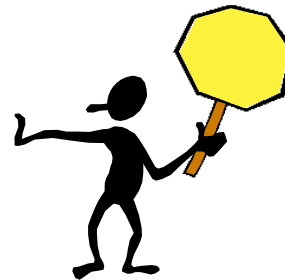
**Note:** Variable names in Pascal must begin with letters.

## Java:

<data type> <variable name>;

### **Example:**

```
int num;
```



**Note:** Variable names in Java must begin with the underscore, dollar sign or a letter.

# Assigning Values to Variables

## Pascal:

<variable name> := expression;       $\longrightarrow$       num := 1;

## Java:

<variable name> = expression;       $\longrightarrow$       num = 5;

To compare between variables use the following operators:

“==“ equal to

“<=“ less than or equal to

“!=“ not equal to

“>=“ bigger than or equal to



# If Loops – Pascal Vs. Java

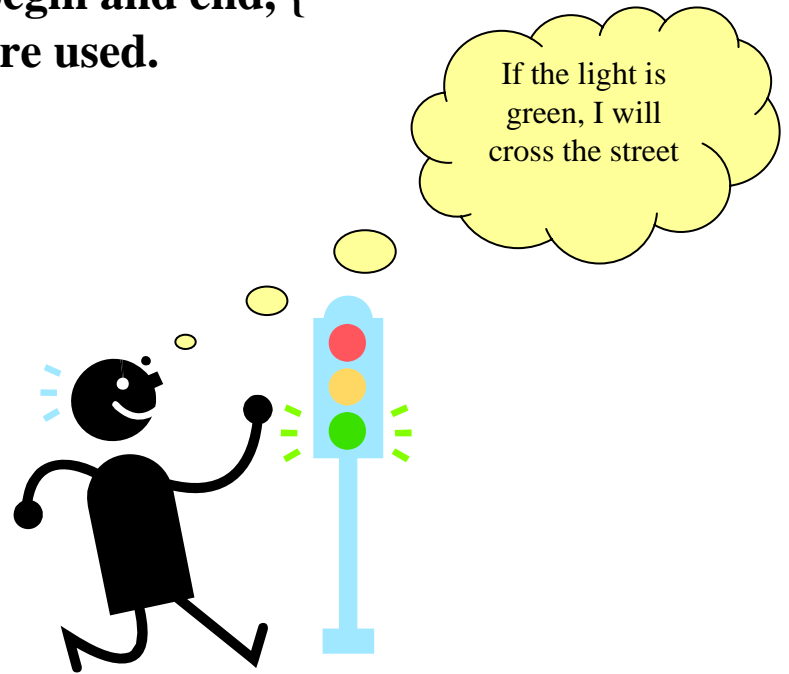
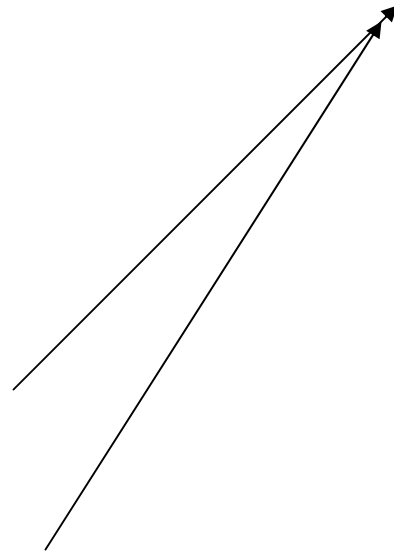
## Pascal:

```
if (boolean condition) then  
  begin  
    <body of loop>  
  end
```

## Java:

```
if (boolean condition)  
{  
  <body of loop>  
}
```

In Java, instead of using begin and end, { and } are used.



# If...Else Loops

## Pascal:

```
if (boolean expression) then
  begin
    <body of if statement>
  end
else
  begin
    <body of else>
  end;
```

## Java:

```
if <boolean condition>
{
  <body of if statement>
}
else
{
  <body of else>
}
```

# While Loops

## Pascal:

while (boolean expression) do

begin

<body of while loop>

end;

The only difference between the syntax is that Pascal uses begin and end statements while Java uses { and }

## Java:

while (boolean condition)

{

<body of while loop>

}



# For Loops

## Pascal:

```
for <variable> := <initial value> to <final value> do
begin
  <body of for loop>
end;
```

### **Example:**

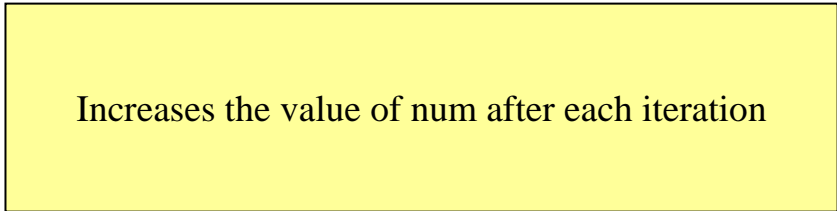
```
for num := 1 to 3 do
begin
  writeln(num);
end;
```

## Java:

```
for (initial condition; loop condition; update condition)
{
  <body of for loop>
}
```

### **Example:**

```
for (num = 1; num < 10; num = num + 1)
{
  System.out.println("hi");
}
```



Increases the value of num after each iteration

# Documentation

## Pascal:

In Pascal, documentation are enclosed within (\* and \*). For instance,

```
(*  
    <documentation>  
*)
```

## Java:

In Java, there are two ways to include documentation.

“//” is used for single line comments.

/\* and \*/ are used for comments that are multiple lines long

## *Examples*

```
// <documentation>
```

```
/* <documentation */
```



# Compiling and Running the Program

## In Pascal

*To Compile:*

```
gpc <filename>.pas
```

*To Run:*

```
./a.out
```



## In Java

*To Compile:*

```
javac <filename>.java
```

*To Run:*

```
java <filename>
```



# Sample Java Program

This is a simple Java program that prints out the message “Hi, my name is Blah”.



```
public class Example
{
    public static void main(String[]args)
    {
        System.out.println("Hi, my name is Blah");
    }
}
```

**Note:** This program must be saved in a file named “Example.java”. The name of the file must match the name of the class.



Sample Run:

Hi, my name is Blah