* **THE IF STATEMENT :**

/\*

Demonstrate the if.

\*/

class IfSample {

public static void main(String args[]) {

int x, y;

x = 10;

y = 20;

if(x < y) System.out.println("x is less than y");

x = x \* 2;

if(x == y) System.out.println("x now equal to y");

x = x \* 2;

if(x > y) System.out.println("x now greater than y");

// this won't display anything

if(x == y) System.out.println("you won't see this");

}

}

**The output generated by this program is shown here:**

x is less than y

x now equal to y

x now greater than y

Notice one other thing in this program. The line

int x, y;

declares two variables, x and y, by use of a comma-separated list.

* **FOR LOOP :**

/\*

Demonstrate the for loop.

\*/

class ForTest {

public static void main(String args[]) {

int x;

for(x = 0; x<10; x = x+1)

System.out.println("This is x: " + x);

}

}

**This program generates the following output:**

This is x: 0

This is x: 1

This is x: 2

This is x: 3

This is x: 4

This is x: 5

This is x: 6

This is x: 7

This is x: 8

This is x: 9

* **USING OF BLOCK CODE :**

/\*

Demonstrate a block of code.

\*/

class BlockTest {

public static void main(String args[]) {

int x, y;

y = 20;

// the target of this loop is a block

for(x = 0; x<10; x++) {

System.out.println("This is x: " + x);

System.out.println("This is y: " + y);

y = y - 2;

}

}

}

**The output generated by this program is shown here:**

This is x: 0

This is y: 20

This is x: 1

This is y: 18

This is x: 2

This is y: 16

This is x: 3

This is y: 14

This is x: 4

This is y: 12

This is x: 5

This is y: 10

This is x: 6

This is y: 8

This is x: 7

This is y: 6

This is x: 8

This is y: 4

This is x: 9

This is y: 2

* **FOR LONG INTEGER :**

// Compute distance light travels using long variables.

class Light {

public static void main(String args[]) {

int lightspeed;

long days;

long seconds;

long distance;

// approximate speed of light in miles per second

lightspeed = 186000;

days = 1000; // specify number of days here

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seconds = days \* 24 \* 60 \* 60; // convert to seconds

distance = lightspeed \* seconds; // compute distance

System.out.print("In " + days);

System.out.print(" days light will travel about ");

System.out.println(distance + " miles.");

}

}

**This program generates the following output:**

In 1000 days light will travel about 16070400000000 miles.

Clearly, the result could not have been held in an int variable.

* **FOR BOOLEANS :**

// Demonstrate boolean values.

class BoolTest {

public static void main(String args[]) {

boolean b;

b = false;

System.out.println("b is " + b);

b = true;

System.out.println("b is " + b);

// a boolean value can control the if statement

if(b) System.out.println("This is executed.");

b = false;

if(b) System.out.println("This is not executed.");

// outcome of a relational operator is a boolean value

System.out.println("10 > 9 is " + (10 > 9));

}

}

**The output generated by this program is shown here:**

b is false

b is true

This is executed.

10 > 9 is true