1. what are the Primitive variables and non-primitive or reference variables give some examples

Ans – Primitive variable – int, long, double, short etc.

Ex – int a = 100;

A is a variable of int data type and is assigned a value of 100.

Reference variable –

Through reference variable only, we can access the object. Reference variable can be declared as static variable , instance variable ,local variable and method parameters. If a reference variable is declared as final then, It can’t be reassigned to refer to a different object.

2. Why objects are referred as reference type ?

Ans – It hold a new reference to memory location.

3. Trace the output

Class Rectangle{

int len;

int bred;

public Rectangle(){

sysout("Constructor called");

this.len = 100;

this.bred = 20;

}

public void calArea(){

sysout("Area is " + len\*bred);

}

public int getLength(){

return this.len;

}

public int getBredth(){

return this.len;

}

public void setLength(int len){

this.len = len;

}

public void setBredth(int bred){

this.bred = bred;

}

}

Trace the output:

a.)

Rectangle rec = new Rectangle();

rec.calArea();

output::

Constructor called

Area is 2000

b)

Rectangle rec1 = new Rectangle();

Rectangle rec2 = new Rectangle();

if(rec1 == rec2){

sysout("Equal");

}

else{

sysout("Not Equal");

}

output:

Constructor called

Constructor called

Not Equal

c)

Rectangle rec1 = new Rectangle();

Rectangle rec2 = new Rectangle();

if(rec1.getLength == rec2.getLength){

sysout("Equal");

}

else{

sysout("Not Equal");

}

output:

Constructor called

Constructor called

Equal

d)

Rectangle rec1 = new Rectangle();

Rectangle rec2 = new Rectangle();

rec1.setLength(12);

if(rec1.getLength == rec2.getLength){

sysout("Equal");

}

else{

sysout("Not Equal");

}

output:

Constructor called

Constructor called

Not Equal

e)

Rectangle rec1 = new Rectangle();

Rectangle rec2 = new Rectangle();

rec1= rec2

if(rec1 == rec2){

sysout("Equal");

}

else{

sysout("Not Equal");

}

output:

Constructor called

Constructor called

Equal