|  |  |
| --- | --- |
| Course- BTech | Type- Core |
| Course Code- **CSET** | Course Name- **Object Oriented Programming Using Java** |
| Year- First | Semester- Even Batch- BTech 2nd Semester |

**Tutorial-6**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tutorial No.** | **Name** | **CO1** | **CO2** | **CO3** |
| **1** | **Basics** |  | **--** | **--** |

6.1 What will be the Output of the below code:

class ObjectPassDemo {

int a, b;

ObjectPassDemo(int i, int j) {

a = i; b = j;

}

boolean equalTo(ObjectPassDemo o) {

return (o.a == a && o.b == b);

}

}

public class test {

public static void main(String args[]) {

ObjectPassDemo ob1 = new ObjectPassDemo(100, 22);

ObjectPassDemo ob2 = new ObjectPassDemo(100, 22);

ObjectPassDemo ob3 = new ObjectPassDemo(-1, -1);

System.out.println("ob1 == ob2: "+ ob1.equalTo(ob2));

System.out.println("ob1 == ob3: "+ ob1.equalTo(ob3));

}

}

Output -

ob1 == ob2: true

ob1 == ob3: false

6.2 What will be the output of the following program?

class test {

static int ans[];

test(){

this(6,4);

}

test(int a, int b) {

ans = new int[2];

ans[0] = a + b;

ans[1] = a - b;

}

public static void main(String[] args) {

test t=new test();

System.out.println("Add= " + ans[0]);

System.out.println("Sub = " + ans[1]);

}

}

Output -

Add= 10

Sub = 2

6.3 What is the result of the following code?

class Data {

int data1;

int data2;

}

class SetData {

void setData(Data da,int d1,int d2) {

da.data1 = d1;

da.data2 = d2;

}

void getData(Data da) {

System.out.println("data1 : "+da.data1);

System.out.println("data2 : "+da.data2);

}

}

public class test {

public static void main(String[] args) {

Data da = new Data();

SetData sd = new SetData();

sd.setData(da,50,100);

sd.getData(da);

}

}

Output -

data1 : 50

data2 : 100

6.4 What is the output of following code?

class ObjectReturnDemo {

int a;

ObjectReturnDemo(int i) {

a = i;

}

ObjectReturnDemo incrByTen() {

ObjectReturnDemo temp = new ObjectReturnDemo(a + 10);

return temp;

}

}

public class test {

public static void main(String args[])

{

ObjectReturnDemo ob1 = new ObjectReturnDemo(2);

ObjectReturnDemo ob2;

ob2 = ob1.incrByTen();

System.out.println("ob1.a: " + ob1.a);

System.out.println("ob2.a: " + ob2.a);

}

}

Output -

ob1.a: 2

ob2.a: 12

6.5 What would be the result of the following code?

public class test {

test(int a, int b){

System.out.println(multiply(a,b));

}

public static int multiply(int a, int b) {

return a \* b;

}

public static void main(String[] args) {

int x = 2;

int y = 5;

new test(x,y);

}

}

Output -

10

6.6 What will be the output of the following program?

import java.util.Arrays;

class test {

String arr[];

test(String arr[]) {

this.arr=arr;

}

void show() {

String s = Arrays.toString(arr);

System.out.println(s);

}

public static void main(String[] args) {

String arr[]={ "The", "quick", "brown", "fox", "jumps","over", "the", "lazy", "dog" };

test t1=new test(arr);

t1.show();

}

}

Output -

[The, quick, brown, fox, jumps, over, the, lazy, dog]

6.7 What will be the Output of the below code:

class Add {

int a;

Add(String a) {

this.a=a.length();

this.sum(this);

}

void sum(Add A1)

{

int len=A1.a;

System.out.println("String length is:"+len);

}

}

public class test {

public static void main(String arg[]) {

Add A1=new Add("bennett");

}

}

Output -

String length is:7

6.8 What is the result of the following code?

public class test {

public static void main(String[] args) {

Object[] dataArray = new Object[3];

dataArray[0] = Integer.valueOf(0);

dataArray[1] = String.valueOf("1");

dataArray[2] = Boolean.valueOf(false);

for(Object data: dataArray){

if(data instanceof Integer){

System.out.println(((Integer) data).intValue());

}

if(data instanceof String){

System.out.println(data);

}

if(data instanceof Boolean){

System.out.println(((Boolean) data).booleanValue());

}

}

}

}

Output -

0

1

false

6.9 What is the output of following code?

import java.util.\*;

public class test {

public static void main(String args[]) {

Student var = new Student();

Student[] student = new Student[3];

student[0] = var;

student[1] = new Student();

var.setData("Aryan", 21);

student[1].setData("Aniket", 22);

System.out.println("Original Array of Student objects:");

System.out.println(Arrays.toString(student));

}

}

class Student {

String name;

int age;

public void setData(String name, int age) {

this.name = name;

this.age = age;

}

public String toString() {

return "{" + "name='" + name + '\'' + ", Age=" + age + '}';

}

}

Output -

Original Array of Student objects:

[{name='Aryan', Age=21}, {name='Aniket', Age=22}, null]

6.10 What will be the output of following code? Resolve error.

import java.util.Arrays;

public class test {

public static void main(String args[]){

Object[] objArray = {21.87, 58, 69.43, 33, 65.37};

int length = objArray.length;

int intArray[] = new int[length];

for(int i=0; i<length; i++){

//intArray[i] = (int) objArray[i];

//intArray[i] = Integer.valueOf(objArray[i].toString());

intArray[i] = (int)Math.round((Double)objArray[i]);

System.out.println(intArray[i]);

}

System.out.println("Contents of the integer array: "+Arrays.toString(intArray));

}

}

Output -

Error:class java.lang.Integer cannot be cast to class java.lang.Double

6.11 What would be the result of the following code?

import java.util.Arrays;

public class test {

public static void main(String args[]){

Object[] objArray = {1, 2.8, 3, 4.4, 5};

int length = objArray.length;

Integer[] intArray = Arrays.copyOf(objArray, length, Integer[].class);

System.out.println(Arrays.toString(intArray));

}

}

Output -

arraycopy: element type mismatch: can not cast one of the elements of java.lang.Object[] to the type of the destination array, java.lang.Integer

6.12 What will be the Output of the below code: import java.util.\*;

import java.util.Arrays;

public class test {

public static void main(String[] args) {

Object[] ob1 = new Object[] { 10, 20 };

System.out.println("The array is:");

for (Object number : ob1) {

System.out.println("Number = " + number);

}

System.out.println("The string representation of array is:");

System.out.println(Arrays.toString(ob1));

}

}

Output -

The array is:

Number = 10

Number = 20

The string representation of array is:

[10, 20]