WRITTEN TEST – 02

1.Explain different types of iterative statements in java?

\* for loop : The java for loop is used to iterate a part of the program several times.

Program:

Class calculation {

Public static void main(String[]args) {

Int Sum = 0;

For(int j = 1; j<=10; j++) {

Sum = sum + j;

}

System.out.println(“The sum of first 10 natural numbers is “+Sum);

}

}

\*while loop : The while loop is consider as a repeating if statement.

Program:

Class Calculation {

Public static void main(String[]args) {

Int i = 0;

System.out.println(“Printing the list of first 10 even number \n”);

While (i< = 10) {  
System.out.println(i);

i=i+2;

}

}

}

\*Do-while loop : Java do-while loop is called an exit control loop.

Program:

Class calculation {

Public static void main(String[]args) {

Int I = o;

System.out.println(“printing the list of first 10 even numbers\n);

Even number\n”);

Do {

System.out.println (i);

i=i+2;

while (i<=10);

}

}

2.Explain Decision making statement?

\*If statement : use the if statement to specify a block of code to be executed if a condition is true.

Program:

Class IfDemo {

Public static void main (String[] args){

Int i= 10;

If(i<15);

System.out.println(“10 is less than 15”);

}

}

\*if else statement: use the if statement to specify a block od code to be executed if a condition is false.

Program:

Public class class A{

Public static void main(Strings[] args) {

Int (time<18);

If(System.out.println(“GM”)

}

Else{

System.out.println(“GE”)

}

}

\*Switch statement

Use the switch statement to select one of many codes blocks to be executed.

Program:

Int count(3);

Switch(count) {

Case 0:

System.out.println(“count is equal to 0”)

Break;

Case 1:

System.out.println (“count is equal to 1”)

Break;

Defalt;

System.out.println(“count is either thane 0,or higher than 1”)

Break;

}

}

3.What is encapsulation? How to achive encapsulation in java?

Encapsulation is a provides a security for data.

Program:

Class EncapTest {

Private String name;

Private int age;

Pubic int get Age () {

return age;

}

Public String getName() {

return name;

Public void SetAge(int new Age) {

Age = newAge;

}

Public void SetName (String newname) {

Name = newname;

}

}

Class RunEncap {

Public static void main(String args[]) {

EncapTest encap = new EncapTest();

Encap.setName(“Bindu”);

Encap.setAge(37);

System.out.println(“Name:”+encap.getName()+”\n Age:”+encap.getAge());

}

}

4.what is package ?write an example program for package.

A package can be defined as a grouping of related types of classes interface and sub-packages.

Example:

Package pack:

Public class A {

Public void main msg() { System.out.println(“hello java”):}

}

Package mypack:

Import pack:

Class B {

Public static void main(String argd[]) {

A obj = new A():

Obj.msg():

}

}

5.What do u mean by single responsibility principle ? Explain with an explain.

\* SRP stands for single responsibility principle

\* SRP is focus on the single responsibility or single task.

Example:

Class calculator {

addition a = new addition ();

subtraction s = new subtraction ();

multiplication m = new multiplication ();

division d = new division ();

void performAddition(int x , int y) {

a.add(x,y);

void performsubtraction(int x, int y) {

s.sub(x,y);

void performmultiplication(int x,int y) {

m.mul(x,y);

void performdivision(int x,int y) {

d.div(x,y);

}

}

Class addition {

int res ;

Void add(int a,int b) {

res = a+b;

System.out.println(“Addition of two numbers = “+res);

}

}

Class subtraction {

int res;

Void sub(int a,int b) {

res = a-b;

System.out.println(“Subtraction of two umbers = “+res);

}

}

Class multiplication {

int res;

Void mul(int a, int b ) {

res = a\*b;

System.out.println(“multiplication of two numbers =”+res);

}

}

Class division {

int res;

Void div(int a, int b) {

res = a/b;

System.out.println(“Division of two numbers =”res);

}

}

Public class testCalculator {

Public static void main(String args[]) {

Calculator c = new calculator();

c.performaddition(1,2);

c.performsubtraction(10,2);

c.performmultiplication(10,5);

c.performdivision(10,2);

}

}

6.what is an array ?how to implement array in java.

An array is a collection of similar types of elements which has contiguous memory location.

Example :

Class Testarray {

Public static void main(String args[]) {

int a [] = new int [5];

a [0] = 10;

a [1] = 20;

a [2] = 30;

a [3] = 40;

a [4] = 50;

for(int I = 0; i<a.length;i++)

system.out.println(a[i]);

}

}

7.How to create string in java?

A String isa sequence of characters or group of charaters

Example:

Class StringExample {

Public static void main(String args[]) {

String s1 = “Bindu”;

Char ch[]={‘R’,’O’,’S’,’E’};

String s2=new string(ch);

String s3= new string(:Swathi”);

System.out.println(s1);

System.out.println(s2);

System.out.println(s3);

}

}

8.Explain inheritance with an example?

The base properties is reuseability from the sub class.

Example:

Class Employee {

Float Salary =40000;

}

Class programmer extends employee {

Int bonus = 10000;

Public static void main(String args[]) {

Programmer p = new programmer();

System.out.println(“programmer salary is:”+p.salary);

System.out.println(“Bonus of programmer is :”+p.bonus);

}

}

9.What do u mean by opened closed principle in java and what are are its benefits.

“Software componets should be open for extension,but closed for modification.

Example:

Class Animal {

Void eat()

{

System.out.println(“eating….”);

}

}

Class dog extends Animal {

Void bark ()

{

System.out.println(“barking….”);

}

}

Class TestInheritance {

Public static void main(String args[]) {

Dog d = new Dog();

d.bark();

d.eat();

}

}

10.What do you mean by polymorphism in java write a program to implement static and dynamic polymorphism.

Static:It happens compile time.

Class Dog1 {

Private void eat()

{

System.out.println(“dog is eating…”);

}

Public static void main(String args[]) {

Dog d1 = new Dog();

D1.eat();

}

}

Dynamic:It happens runtime

Class Animal {

Void eat()

{

System.out.println(“animal is eating…”);

}

}

Class dog extends Animal

{

Void eat()

{

System.out.println(“Dog is eating….”);

]

Public static void main(Strings args[]){

Animal a= new Dog();

a.eat();

}

}

11.Explain overloading and overriding in java?

Overloading: Same method name different parameters

Example:

Class overloading Calculation {

Void sum(int a , int b) { System.out.println(a+b); }

Void sum(int a , int b) {System.out.println(a+b+c);}

Public static void main(String args[]){

Overloading Calculation obj = new overloading Calculation();

Obj.Sum(20,20);

Obj.Sum(20,20,20);

}

}

Overriding :run time polymorphirm.

Example:

Class vehicle {

Void runs{System.out.println(“vehivle is running”);}

}

Class bike extends vechicle {

Public static void main(String args[]) {

Bike obj – new Bike();

Obj.run();

}

}