IDNO:180030548

NAME:G.NIKHITHA

Date:-13-05-2021

**WTN PROGRAMS**

* **OVERLOAD PROGRAM:-**

**package** session3;

**publicclass**TestoverloadDemo

{

**publicstaticint** max(**int**n1,**int**n2)

{

**if**(n1>n2)

**return**n1;

**else**

**return**n2;

}

**publicstaticdouble** max(**double**n1,**double**n2)

{

**if**(n1>n2)

**return**n1;

**else**

**return**n2;

}

**publicstaticdouble** max(**double**n1,**double**n2,**double**n3)

{

**return***max*(*max*(n1,n2),n3);

}

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

System.***out***.println("The maximum of 3 and 4 :"+*max*(3,4));

System.***out***.println("The maximum of 4.0 and 5.0: "+*max*(4.0,5.0));

System.***out***.println("The maximum of 4.5,5.6,6.7: "+*max*(4.5,5.6,6.7));

}

}

**OUTPUT:-**

The maximum of 3 and 4 :4

The maximum of 4.0 and 5.0: 5.0

The maximum of 4.5,5.6,6.7: 6.7

* **OVERRIDING:-**

**package** session3;

**class** A

{

**int**a,b;

A(**int**x,**int**y)

{

a=x;

b=y;

}

**void** show()

{

System.***out***.println("The value of a is: "+a);

System.***out***.println("The value of b is: "+b);

}

}

**class** B **extends** A

{

**int**c;

B(**int**x,**int**y,**int**z)

{

**super**(x,y);

c=z;

}

**void** show()

{

**super**.show();

System.***out***.println("The value of c is:"+c);

}

}

**publicclass**OverrideDemo

{

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

B ob=**new** B(10,20,30);

ob.show();

}

}

**OUTPUT:-**

The value of a is: 10

The value of b is: 20

The value of c is:30

* **HERIARICAL OVERRIDING:-**

**package** session3;

**class** People

{

**int**pid;

String name;

People(**int**pid,Stringname)

{

**this**.pid=pid;

**this**.name=name;

}

**void** show()

{

System.***out***.println("Person details");

System.***out***.println("Person id: "+pid);

System.***out***.println("Person name: "+name);

}

}

**class** Student **extends** People

{

**int**secno;

**int**marks;

Student(**int**pid,Stringname,**int**secno,**int**marks)

{

**super**(pid,name);

**this**.secno=secno;

**this**.marks=marks;

}

**void** show()

{

**super**.show();

System.***out***.println("Student Details");

System.***out***.println("Student secno: "+secno);

System.***out***.println("Student marks: "+marks);

}

}

**class** Faculty **extends** People

{

**int**persal,totsal;

Faculty(**int**pid,Stringname,**int**persal)

{

**super**(pid,name);

**this**.persal=persal;

}

**void**calSalary()

{

totsal=30\*persal;

System.***out***.println("Total Salary of Person : "+totsal);

}

**void** show()

{

**super**.show();

System.***out***.println("Employee Details");

System.***out***.println("Employee id: "+pid);

System.***out***.println("Employee name: "+name);

System.***out***.println("PerDay Salary: "+persal);

}

}

**publicclass**HerirachialOverride {

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

Student s=**new** Student(12345,"Lasya",6,48);

Faculty p=**new** Faculty(456,"Rani",1500);

s.show();

p.show();

}

}

**OUTPUT:-**

Person details

Person id: 12345

Person name: Lasya

Student Details

Student secno: 6

Student marks: 48

Person details

Person id: 456

Person name: Rani

Employee Details

Employee id: 456

Employee name: Rani

PerDay Salary: 1500

* **DYNAMIC DISPATCH METHOD:-**

**package** session3;

**class** P

{

**void** m1()

{

System.***out***.println("M1 method in super class");

}

}

**class** Q **extends** P

{

**void** m1()

{

System.***out***.println("M1 method in sub class");

}

}

**class** D **extends** Q

{

**void** m1()

{

System.***out***.println("M1 method in sub-sub class");

}

}

**publicclass**DispatchDemo {

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

P p=**new** P();

Q q=**new** Q();

D d=**new** D();

P ref;

ref=p;

ref.m1();

ref=q;

ref.m1();

ref=d;

ref.m1();

}

}

**OUTPUT:-**

M1 method in super class

M1 method in sub class

M1 method in sub-sub class

* **DYNAMIC DISPATCH METHOD USING HERIARICHAL :-**

**package** session3;

**class** Figure

{

**double**dim1,dim2;

Figure(**double**a,**double**b)

{

dim1=a;

dim2=b;

}

**double** area()

{

**return** 0;

}

}

**class** Rectangle **extends** Figure

{

Rectangle(**double**a,**double**b)

{

**super**(a,b);

}

**double** area()

{

**return**dim1\*dim2;

}

}

**class** Triangle **extends** Figure

{

Triangle(**double**a,**double**b)

{

**super**(a,b);

}

**double** area()

{

**return**dim1\*dim2/2;

}

}

**publicclass**FigureDemo {

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

Figure f=**new** Figure(10,20);

Rectangle r=**new** Rectangle(20,30);

Triangle t=**new** Triangle(30,40);

Figure figref;

figref=f;

System.***out***.println("Area of figure= "+figref.area());

figref=r;

System.***out***.println("Area of Rectangle= "+figref.area());

figref=t;

System.***out***.println("Area of Triangle= "+figref.area());

}

}

**OUTPUT:-**

Area of figure= 0.0

Area of Rectangle= 600.0

Area of Triangle= 600.0

* **ABSTRACTION:-**

**package** session3;

**abstractclass** V

{

**int**a,b;

V(**int**a,**int**b)

{

**this**.a=a;

**this**.b=b;

}

**abstractvoid** sum();

**void**mul()

{

**int**c=a\*b;

System.***out***.println("Multiplication of two numbers: "+c);

}

}

**class** X **extends** V

{

X(**int**a,**int**b)

{

**super**(a,b);

}

**void** sum()

{

**int**c=a+b;

System.***out***.println("Sum of two numbers: "+c);

}

}

**publicclass**AbstractDemo {

**publicstaticvoid** main(String[] args) {

// **TODO** Auto-generated method stub

X x=**new** X(10,20);

x.sum();

x.mul();

}

}

**OUTPUT:-**

Sum of two numbers: 30

Multiplication of two numbers: 200