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Roll No.:A-22

Expt\_No.:6

Expt\_Name:Heirarchical Inheritance

\*/

**import** java.util.Scanner;

**abstract** **class** shape

{

**int** area;

**public** **static** Scanner *sc*=**new** Scanner(System.*in*);

**abstract** **void** area();

}

**class** Square **extends** shape

{

**int** x=0;

**public** **void** getdata()

{

System.*out*.println("\n 1.Square:\t");

System.*out*.println("\n Enter length of a side \n");

x=*sc*.nextInt();

}

**void** area() {

getdata();

area=x\*x;

System.*out*.println("\n Area of square is:"+area);

}

}

**class** Triangle **extends** shape

{

**int** b,h;

**void** getdata()

{ System.*out*.println("\n 2.Triangle:\t");

System.*out*.println("\n enter base\n");

b=*sc*.nextInt();

System.*out*.println("\n Enter Height\n");

h=*sc*.nextInt();

}

**void** area() {

getdata();

area=(b\*h)/2;

System.*out*.println("\n Area of Triangle is:"+area);

}

}

**class** Rectangle **extends** shape

{

**int** l,b;

**void** getdata()

{

System.*out*.println("\n 3.Rectangle:\t");

System.*out*.println("\n enter Length\n");

l=*sc*.nextInt();

System.*out*.println("\n enter Breadth \n");

b=*sc*.nextInt();

}

**void** area() {

getdata();

area=l\*b;

System.*out*.println("\n Area of Rectangle is:"+area);

}

}

**class** Circle **extends** shape

{

**int** r;

**double** area;

**void** getdata()

{

System.*out*.println("\n 4.Rectangle:\t");

System.*out*.println("\n Circle:\t");

System.*out*.println("\n enter Radius\n");

r=*sc*.nextInt();

}

**void** area() {

getdata();

area=3.1415\*r\*r;

System.*out*.println("\n Area of Rectangle is:"+area);

}

}

**public** **class** Hdemo36 {

**public** **static** **void** main(String[] args)

{

Square sq=**new** Square();

sq.area();

Triangle tl=**new** Triangle();

tl.area();

Rectangle tr=**new** Rectangle();

tr.area();

Circle c1=**new** Circle();

c1.area();

}

}

**Output**:

1.Square:

Enter length of a side

2

Area of square is:4

2.Triangle:

enter base

2

Enter Height

3

Area of Triangle is:3

3.Rectangle:

enter Length

3

enter Breadth

4

Area of Rectangle is:12

4.Rectangle:

Circle:

enter Radius

4

Area of Rectangle is:50.264