

Wk8extr1 - Notepad

File Edit Format View Help

```
import java.util.Scanner;
abstract class Solid{
int r,h,l;
double surf,vol;
void Surfacearea(){};;
void Volume(){};;
}

class Cylinder extends Solid{
Scanner sc=new Scanner(System.in);
void Surfacearea(){
System.out.println("Enter the radius and height of cylinder =");
r=sc.nextInt();
h=sc.nextInt();
surf=2*3.14*r*(r+h);
System.out.println("Surface area of Cylinder =" +(float)surf);
}
void Volume(){
vol=3.14*r*r*h;
System.out.println("Volume of Cylinder =" +(float)vol);
}
}

class Cone extends Solid{
Scanner sc=new Scanner(System.in);
void Surfacearea(){
System.out.println("Enter the Radius and slant height of cone =");
r=sc.nextInt();
l=sc.nextInt();
System.out.println("Enter the height of cone =");
h=sc.nextInt();
surf=3.14*r*(r+l);
System.out.println("Surface area of Cone =" +(float)surf);
}
void Volume(){
vol=3.14*r*r*h/3.
```

Wk8extr1 - Notepad

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```
void Volume(){
vol=3.14*r*r*h/3;
System.out.println("Volume of Cone =" +(float)vol);
}

class Sphere extends Solid{
Scanner sc=new Scanner(System.in);
void Surfacearea(){
System.out.println("Enter the Radius of sphere =");
r=sc.nextInt();
surf=4*3.14*r*r;
System.out.println("Surface area of sphere =" +(float)surf);
}
void Volume(){
vol=4*3.14*r*r*r/3;
System.out.println("Volume of sphere =" +(float)vol);
}
}

class Wk8extr1{
public static void main(String[] args){
Cylinder c=new Cylinder();
Cone co=new Cone();
Sphere s=new Sphere();
c.Surfacearea();
c.Volume();
co.Surfacearea();
co.Volume();
s.Surfacearea();
s.Volume();
}
}
```

C:\WINDOWS\system32\cmd.exe

C:\Users\AKSHAY RASTOGI\Desktop\java prog>javac Wk8extr1.java

C:\Users\AKSHAY RASTOGI\Desktop\java prog>java Wk8extr1

Enter the radius and height of cylinder =

2

3

Surface area of Cylinder =62.8

Volume of Cylinder =37.68

Enter the Radius and slant height of cone =

1

5

Enter the height of cone =

2

Surface area of Cone =18.84

Volume of Cone =2.0933332

Enter the Radius of sphere =

5

Surface area of sphere =314.0

Volume of sphere =523.3333

C:\Users\AKSHAY RASTOGI\Desktop\java prog>

Week 8 (Extra Programs)

```
1) import java.util.Scanner;  
abstract class Solid {  
    int r, h; // radius and height  
    double surf, vol;  
    void Surfacearea () {};  
    void Volume () {};  
}  
  
class Cylinder extends Solid {  
    Scanner sc = new Scanner (System.in);  
    void Surfacearea () {  
        System.out.println ("Enter the radius and height of cylinder = ");  
        r = sc.nextInt ();  
        h = sc.nextInt ();  
        Surf = 2 * 3.14 * r * (r + h);  
        System.out.println ("Surface area of cylinder = " + float) surf);  
    }  
}
```

3
void Volume() {

vol = $3.14 * \pi * r^2 * h / 3;$

System.out.println("Volume of cylinder = " + (float) vol);
}

}

class Cone extends Solid {

Scanner sc = new Scanner(System.in);

void Surfacearea() {

System.out.println("Enter the radius and slant height of cone = ");

r = sc.nextInt();

l = sc.nextInt();

System.out.println("Enter height of cone = ");

h = sc.nextInt();

surf = $3.14 * \pi * r^2 * (r + l);$

System.out.println("Surface area of cone = " + (float) surf);
}

void Volume() {

vol = $3.14 * \pi * r^2 * h / 3;$

System.out.println("Volume of Cone = " + (float) vol);
}

}

}

class Sphere extends Solid {

Scanner sc = new Scanner(System.in);

void Surfacearea() {

System.out.println("Enter the radius of Sphere = ");

r = sc.nextInt();

surf = $4 * 3.14 * \pi * r^2;$

System.out.println("Surface area of sphere = " + (float) surf);
}

void Volume() {

vol = $4 * 3.14 * \pi * r^2 * r / 3;$

System.out.println ("Volume of Sphere = " + (float) vol);

{

{

{

class Wk8ex1 {

public static void main (String [] args) {

Cylinder c = new Cylinder ();

Cone co = new Cone ();

Sphere s = new Sphere ();

c.surfacearea ();

c.Volume ();

co.surfacearea ();

co.Volume ();

s.surfacearea ();

s.Volume ();

{

{

Wk8extr2 - Notepad

```
File Edit Format View Help
import java.util.Scanner;
class Person{
String name;
Scanner sc = new Scanner(System.in);
void Details1(){
System.out.println("Enter the name of the person :");
name = sc.next();
}
void gDetails1(){
System.out.println("name:"+name);
}
}

class Employee extends Person{
int emp_id;
Scanner sc = new Scanner(System.in);
void Details2(){
System.out.println("Enter the employee id:");
emp_id = sc.nextInt();
}
void gDetails2(){
System.out.println("Id:"+emp_id);
}
}

class Student extends Person{
int st_id;
Scanner sc = new Scanner(System.in);
void Details3(){
System.out.println("Enter the student id:");
st_id = sc.nextInt();
}
void gDetails3(){
System.out.println("Id:"+st_id);
}
}

class Teaching extends Employee{
double sal;
Scanner sc = new Scanner(System.in);
void Details4(){
Details1();
<
```

Wk8extr2 - Notepad

```
File Edit Format View Help
Scanner sc = new Scanner(System.in);
void Details4(){
Details1();
Details2();
System.out.println("Enter the teaching employee sal:");
sal = sc.nextDouble();
System.out.println("<----->");
gDetails1();
gDetails2();
System.out.println("Salary:"+sal+"\n");
}
}

class Nonteaching extends Employee{
double sal;
Scanner sc = new Scanner(System.in);
void Details5(){
Details1();
Details2();
System.out.println("Enter the non-teaching employee sal:");
sal = sc.nextDouble();
System.out.println("<----->");
gDetails1();
gDetails2();
System.out.println("Salary:"+sal+"\n");
}
}

class UG extends Student{
int sem;
Scanner sc = new Scanner(System.in);
void Details6(){
Details1();
Details3();
System.out.println("Enter the semester for UG students:");
sem = sc.nextInt();
System.out.println("<----->");
gDetails1();
gDetails3();
System.out.println("Semester:"+sem+"\n");
}
}
```

Wk8extr2 - Notepad

```
File Edit Format View Help
Scanner sc = new Scanner(System.in);
void Details6(){
Details1();
Details3();
System.out.println("Enter the semester for UG students:");
sem = sc.nextInt();
System.out.println("<----->");
gDetails1();
gDetails3();
System.out.println("Semester:"+sem+"\n");
}
}

class PG extends Student{
int sem;
Scanner sc = new Scanner(System.in);
void Details7(){
Details1();
Details3();
System.out.println("Enter the semester for PG students:");
sem = sc.nextInt();
System.out.println("<----->");
gDetails1();
gDetails3();
System.out.println("Semester:"+sem+"\n");
}
}

class Wk8extr2{
public static void main(String args[]){
Teaching T1 = new Teaching();
T1.Details4();
Nonteaching N1 = new Nonteaching();
N1.Details5();
UG U1 = new UG();
U1.Details6();
PG P1 = new PG();
P1.Details7();
}
}
```

I

Type here to search

C:\Users\AKSHAY RASTOGI\Desktop\java prog>java Wk8extr2

Enter the name of the person :

Akshay

Enter the employee id:

3245

Enter the teaching employee sal:

30000

<----->

name:Akshay

Id:3245

Salary:30000.0

Enter the name of the person :

Westlie

Enter the employee id:

3565442

Enter the non-teaching employee sal:

45000

<----->

name:Westlie

Id:3565442

Salary:45000.0

Enter the name of the person :

Sam

Enter the student id:

32542

Enter the semester for UG students:

3

<----->

name:Sam

Id:32542

Semester:3

Enter the name of the person :

Dora

Enter the student id:

5362

Enter the semester for PG students:

2

<----->

name:Dora

Id:5362

Semester:2

```
2) import java.util.Scanner;  
class Person {  
    String name;  
    Scanner sc = new Scanner(System.in);  
    void Details1() {  
        System.out.println("Enter the name of the person : ");  
        name = sc.next();  
    }  
    void gDetails1() {  
        System.out.println("name : " + name);  
    }  
}
```

```
class Employee extends Person {
```

classmate
Date _____
Page _____

```
int emp_id;
Scanner sc = new Scanner (System.in);
void gDetails() {
    System.out.println ("Enter the Employee id : ");
    emp_id = sc.nextInt();
}
void gDetails() {
    System.out.println ("ID : " + emp_id);
}
```

```
class Student extends Person {
    int st_id;
    Scanner sc = new Scanner (System.in);
    void Details () {
        System.out.println ("Enter the student Id : ");
        st_id = sc.nextInt();
    }
    void gDetails () {
        System.out.println ("ID : " + st_id);
    }
}
```

```
class Teaching extends Employee {
    double sal;
    Scanner sc = new Scanner (System.in);
    void Details () {
        Details1 ();
        Details2 ();
        System.out.println ("Enter the teaching employee salary : ");
        sal = sc.nextDouble ();
        System.out.println ("<----->");
    }
}
```

```
gDetails1();
```

```
gDetails2();
```

```
System.out.println("Salary : " + sal + "\n");
```

```
}
```

```
}
```

```
class NonTeaching extends Employee {
```

```
double sal;
```

```
Scanner sc = new Scanner(System.in);
```

```
void Details5() {
```

```
System.out.println("Enter the non-teaching employee salary : ");
```

```
sal = sc.nextDouble();
```

```
System.out.println("<----->");
```

```
gDetails1();
```

```
gDetails2();
```

```
System.out.println("Salary : " + sal + "\n");
```

```
}
```

```
}
```

```
class UG extends Student {
```

```
int sem;
```

```
Scanner sc = new Scanner(System.in);
```

```
void Details6() {
```

```
Details1();
```

```
Details3();
```

```
System.out.println("Enter the semester for UG student : ");
```

```
sem = sc.nextInt();
```

```
System.out.println("<----->");
```

```
gDetails1();
```

```
gDetails3();
```

```
System.out.println("Semester : " + sem + "\n");
```

```
}
```

```
}
```

class PG extends Student {
int sem;

Scanner sc = new Scanner(System.in);
void Details() {

Details1();

Details3();

System.out.println("Enter the sem for PG students:");

sem = sc.nextInt();

System.out.print(" < - - - - - - - - - - > ");

gDetails1();

gDetails3();

System.out.println("Semester : " + sem + "\n");

}

}

class Wk8ext2 {

public static void main(String args[]) {

Teaching T1 = new Teaching();

T1 ~~Details4();~~; T1.Details4();

NonTeaching N1 = new NonTeaching();

N1.Details5();

UG U1 = new UG();

U1.Details6();

PG P1 = new PG();

P1.Details7();

}

}