**Java Class Note**

**//1. Project: Y2S1JavaClassNote [Part-1]**

**[Part-X] 🡪 working in the same code but the class is different.**

package first\_class;

public class Student {

int id;

String name;

void display(){

System.out.println("Name: "+name);

System.out.println("ID: "+id);

}

public static void main(String[] args) {

Student s1 = new Student();

Student s2 = new Student();

s1.id = 101;

s1.name = "Omar";

s2.id = 202;

s2.name = "Nahid";

s1.display();

s2.display();

}

}

**//2. Project: Y2S1JavaClassNote [Part-1]**

package class\_2nd;

public class Box {

double width;

double height;

double depth;

}

**//2. Project: Y2S1JavaClassNote [Part-2]**

package class\_2nd;

public class BoxRun {

public static void main(String[] args) {

Box mybox1 = new Box();

Box mybox2 = new Box();

mybox1.width = 10;

mybox1.height = 10;

mybox1.depth = 10;

double vol = mybox1.width \* mybox1.height \* mybox1.depth;

System.out.println("Volume is: "+vol);

mybox2.width = 20;

mybox2.height = 20;

mybox2.depth = 20;

vol = mybox2.width \* mybox2.height \* mybox2.depth;

System.out.println("Volume is: "+vol);

}

}

**//3. Project: Y2S1JavaClassNote [Part-1]**

package class\_3rd;

public class Box {

double length;

}

**//3. Project: Y2S1JavaClassNote [Part-2]**

package class\_3rd;

public class BoxCube {

public static void main(String[] args) {

Box mybox = new Box();

double vol;

mybox.length = 2;

vol = mybox.length \* mybox.length \* mybox.length;

System.out.println("Volume: "+vol);

}

}

**//4. Project: Y2S1JavaClassNote [Part-1]**

package class\_3rd;

public class Rectangle {

double height;

double width;

}

**//4. Project: Y2S1JavaClassNote [Part-2]**

package class\_3rd;

public class RecArea {

public static void main(String[] args) {

Rectangle r = new Rectangle();

r.height = 10;

r.width = 2;

double area = r.height \* r.width;

System.out.println("Area: "+area);

}

}

**//5. Project: Y2S1JavaClassNote [Part-1]**

package class\_4th;

public class Box {

double width;

double height;

double depth;

Box(){

System.out.println("Constructing Box.");

width = 10;

height = 10;

depth = 10;

}

double volume(){

return width\*height\*depth;

}

}

**//5. Project: Y2S1JavaClassNote [Part-2]**

package class\_4th;

public class BoxOmar {

public static void main(String[] args) {

Box mybox1 = new Box();

Box mybox2 = new Box();

double vol = mybox1.volume();

System.out.println("Volume is: "+vol);

vol = mybox2.volume();

System.out.println("Volume is: "+vol);

}

}

**//6. Project: Y2S1JavaClassNote [Part-1]**

package class\_4th;

public class Box2 {

double width;

double height;

double depth;

Box2(double w, double h, double d){

width = w;

height = h;

depth = d;

}

double volume(){

return width\*height\*depth;

}

}

**//6. Project: Y2S1JavaClassNote [Part-2]**

package class\_4th;

public class BoxOmar2 {

public static void main(String[] args) {

Box2 mybox1 = new Box2(10,20,15);

Box2 mybox2 = new Box2(3,6,9);

double vol = mybox1.volume();

System.out.println("Volume is: "+vol);

vol = mybox2.volume();

System.out.println("Volume is: "+vol);

}

}

**//7. Project: Y2S1JavaClassNote [Part-1]**

package class\_5th;

public class Overload {

void test(){

System.out.println("No parameter.");

}

void test(int a){

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

}

void test(int a,int b){

System.out.println("a and b: "+a+" "+b);

}

double test(double a){

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

return a\*a;

}

}

**//7. Project: Y2S1JavaClassNote [Part-2]**

package class\_5th;

public class OverloadTest {

public static void main(String[] args) {

Overload ob = new Overload();

Overload ob1 = new Overload();

double result,result1;

ob.test();

ob.test(10);

ob.test(10,20);

result = ob.test(12.3);

System.out.println("Result of ob.test(12.3): "+result);

System.out.println("");

ob1.test();

ob1.test(20);

ob1.test(15,25);

result1 = ob1.test(5.5);

System.out.println("Result of ob1.test(5.5): "+result1);

}

}

**//8. Project: Y2S1JavaClassNote [Part-1]**

package class\_6th;

public class Test {

int a;

public int b;

private int c;

void setc(int i){

c=i;

}

int getc(){

return c;

}

}

**//8. Project: Y2S1JavaClassNote [Part-2]**

package class\_6th;

public class AccessDemo {

public static void main(String[] args) {

Test ob = new Test();

ob.a = 10;

ob.b = 20;

ob.setc(30);

System.out.println("a, b and c: "+ob.a+" "+ob.b+" "+ob.getc());

}

}

**//9. Project: Y2S1JavaClassNote{Inheritance} [Part-1]**

package class\_7th;

//Create a super class/parent class / base class.

public class A {

int i,j;

void showij(){

System.out.println("i and j: "+i+" "+j);

}

}

**//9. Project: Y2S1JavaClassNote{Inheritance} [Part-2]**

package class\_7th;

//Create a sub class/child class / derive class.

public class B extends A {

// i,j

int k;

void showk(){

System.out.println("k: "+k);

}

void sum(){

System.out.println("i+j+k: "+(i+j+k));;

}

}

**//9. Project: Y2S1JavaClassNote{Inheritance} [Part-3]**

package class\_7th;

public class SimpleInheritance {

public static void main(String[] args) {

A superOb = new A();

B subOb = new B();

superOb.i = 10;

superOb.j = 20;

System.out.println("Contents of superOb..");

superOb.showij();

System.out.println("");

subOb.i = 7;

subOb.j = 8;

subOb.k = 9;

System.out.println("Contents of subOb..");

subOb.showij();

subOb.showk();

System.out.println("");

System.out.println("Sum of i,j and k in subOb");

subOb.sum();

}

}

**//10. Project: Y2S1JavaClassNote [Part-1]**

package class\_8th;

public class A {

int i;

int j;

void setij(int x, int y){

i = x;

j = y;

}

}

**//10. Project: Y2S1JavaClassNote [Part-2]**

package class\_8th;

public class B extends A {

int total;

void sum(){

total = i+j;

}

}

**//10. Project: Y2S1JavaClassNote [Part-3]**

package class\_8th;

public class Access {

public static void main(String[] args) {

B ob = new B();

ob.setij(10,20);

ob.sum();

System.out.println("Total is: "+ob.total);

}

}

**//11. Project: Y2S1JavaClassNote{Multilevel Inheritance} [Part-1]**

package class\_9th\_lab\_2;

public class A {

A(){

System.out.println("Inside A method...");

}

}

**//11. Project: Y2S1JavaClassNote{Multilevel Inheritance} [Part-2]**

package class\_9th\_lab\_2;

public class B extends A {

B(){

System.out.println("Inside B method...");

}

}

**//11. Project: Y2S1JavaClassNote{Multilevel Inheritance} [Part-3]**

package class\_9th\_lab\_2;

public class C extends B {

C(){

System.out.println("Inside C method...");

}

}

**//11. Project: Y2S1JavaClassNote{Multilevel Inheritance} [Part-4]**

package class\_9th\_lab\_2;

public class CallingCons {

public static void main(String[] args) {

C c = new C();

}

}

**//12. Project: Y2S1JavaClassNote{Method Overriding} [Part-1]**

package class\_10th;

public class A {

int i,j;

A(int a, int b){

i = a;

j = b;

}

void show(){

System.out.println("i and j: "+i+" "+j);

}

}

**//12. Project: Y2S1JavaClassNote{Method Overriding} [Part-2]**

package class\_10th;

public class B extends A {

int k; //i.j

B(int a, int b, int c){

super(a,b);

k = c;

}

@Override

void show(){

System.out.println("i, j and k: "+i+" "+j+" "+k);

}

}

**//12. Project: Y2S1JavaClassNote{Method Overriding} [Part-3]**

package class\_10th;

public class OverridingDemo {

public static void main(String[] args) {

B ob = new B(1,2,3);

ob.show();

}

}

**//13. Project: Y2S1JavaClassNote{Encapsulation} [Part-1]**

package class\_10th;

public class EncapsulationDemo {

int a;

public int b;

private int c;

void set(int i){

c = i;

}

int get(){

return c;

}

}

**//13. Project: Y2S1JavaClassNote{Encapsulation} [Part-2]**

package class\_10th;

public class EncapsulationTest {

public static void main(String[] args) {

EncapsulationDemo t = new EncapsulationDemo();

t.a = 5;

t.b = 7;

t.set(8);

System.out.println("a, b and c: "+t.a+" "+t.b+" "+t.get());

}

}

**//14. Project: Y2S1JavaClassNote{Abstract class} [Part-1]**

package class\_11th;

abstract class A {

abstract void callme();

void callmetoo(){

System.out.println("Concrete mehtod.");

}

}

**//14. Project: Y2S1JavaClassNote{Abstract class} [Part-2]**

package class\_11th;

public class B extends A {

@Override

void callme(){

System.out.println("B's implement of callme.");

}

}

**//14. Project: Y2S1JavaClassNote{Abstract class} [Part-3]**

package class\_11th;

public class AbstractTest {

public static void main(String[] args) {

B b = new B();

b.callme();

b.callmetoo();

}

}

**//15. Project: Y2S1JavaClassNote{Dynamic Method Dispatch} [Part-1]**

package class\_12th;

public class A {

void callme(){

System.out.println("Inside A class");

}

}

**//15. Project: Y2S1JavaClassNote{Dynamic Method Dispatch} [Part-2]**

package class\_12th;

public class B extends A {

@Override

void callme(){

System.out.println("Inside B class");

}

}

**//15. Project: Y2S1JavaClassNote{Dynamic Method Dispatch} [Part-3]**

package class\_12th;

public class C extends A {

@Override

void callme(){

System.out.println("Inside C class");

}

}

**//15. Project: Y2S1JavaClassNote{Dynamic Method Dispatch} [Part-4]**

package class\_12th;

public class Dispatch {

public static void main(String[] args) {

A a = new A();

B b = new B();

C c = new C();

A r;

r = a;

r.callme();

r = b;

r.callme();

r = c;

r.callme();

}

}