1. Sample Progaram

**package** Java;

**public** **class** Sample {

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

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

**int** a=5;

**float** b=6.99f;

**char** c= 'A';

**boolean** d=**false**;

String e="Navanee";

**byte** f=105;

**long** g=6528L;

**short** h=964;

**double** i=658.325;

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

System.***out***.println("Float:"+" " +b);

System.***out***.println("Char:"+" " +c);

System.***out***.println("Boolean:"+" " +d);

System.***out***.println("String:"+" " +e);

System.***out***.println("Byte:"+" " +f);

System.***out***.println("Long:"+" " +g);

System.***out***.println("Short:"+" "+h);

System.***out***.println("Double:"+" " +i);

}

}

1. Arithmetic program

**public** **class** Arith {

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

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

**int** a=10, b=20 ,c=65 ,d=96;

System.***out***.println("Addition: "+ (a+c));

System.***out***.println("Multiplication: "+(b\*d));

System.***out***.println("Division: "+(c/d));

System.***out***.println("Subtraction: "+(d-a));

System.***out***.println("Modulas:"+ (d%a));

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

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

System.***out***.println("Decrement:" + (a--));

System.***out***.println("Decrement:" + (--a));

}

}

1. If Program

**public** **class** If {

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

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

**int** x=200;

**int** y=400;

**if** (x<y) {

System.***out***.println("Scorpio");

}

**else** {

System.***out***.println("Leo");

}

}

}

1. Else If Program

**public** **class** Elseif {

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

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

**int** a = 22;

**if** (a < 10) {

System.***out***.println("Dog");

} **else** **if** (a < 18) {

System.***out***.println("Cat");

} **else** {

System.***out***.println("Tiger");

}

}

}

1. Nested If Program

**public** **class** Nestedif {

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

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

**int** x=8;

**int** y=7;

**if**(x==3)

{

System.***out***.println("Display X");

**if**(y==2)

{

System.***out***.println("Display Y");

}

**else**

{

System.***out***.println("Display z");

}

}

**else**

{

System.***out***.println("Display ZZ");

}

}

}

While Program

**public** **class** While {

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

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

**int** i=0;

**while**(i<10)

{

System.***out***.println(i);

i++;

}

}

}

Do While Program

**public** **class** Dowhile {

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

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

**int** i=1;

**do**

{

System.***out***.println(i);

i++;

}**while**(i<=15);

}

}

ForLoop Program

**public** **class** forloop {

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

**for** (**int** i=0; i<10; i++) {

System.***out***.println(i);

}

}

}

SubArray Program

**import** java.util.Arrays;

**public** **class** SubArray {

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

**int**[] arr = { 27, 5, 3, 80, 7, 9, 12 };

**int** requiredSum = 95;

*findSubArray*(arr, requiredSum);

}

**static** **void** findSubArray(**int**[] arr, **int** requiredSum)

{

**int** sum = arr[0], start = 0;

**for** (**int** i = 1; i < arr.length; i++)

{

**if** (sum == requiredSum) {

System.***out***.print("Continuous Sub Aarray of " + Arrays.*toString*(arr) + " whose sum "

+ requiredSum + " is [ ");

**for** (**int** j = start; j < i; j++)

{

System.***out***.print(arr[j] + " ");

}

System.***out***.println("]");

}

sum = sum + arr[i];

**while** (sum > requiredSum && start <= i - 1)

{

sum = sum - arr[start];

start++;

}

}

}

}

String to Integer Program

**public** **class** String\_to\_Integer {

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

String s="1000";

//Converting String into int using Integer.parseInt()

**int** i=Integer.*parseInt*(s);

System.***out***.println(i);

}

}

Single Inheritance Program

**class** Animal

{

**void** eat()

{

System.***out***.println("Animal is eating");

}

}

**class** Dog **extends** Animal

{

**void** bark()

{

System.***out***.println("Dog is barking");

}

}

**public** **class** Single\_Inheritance {

**public** **static** **void** main(String argsm []) {

Dog d=**new** Dog ();

d.bark();

d.eat();

}

}

Separate Zero from Non Zero Program

**public** **class** Separate\_Zero\_from\_NonZero {

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

**int**[] arr = { 0, 2, 0, 4, 0, 6, 7, 0, 9 ,8,0,24,0,0,45,0,0};

*separateZerosAndNonZeros*(arr);

System.***out***.println("Array after Separating Zero and Non-Zero: ");

**for** (**int** num : arr) {

System.***out***.print(num + " ");

}

}

**static** **void** separateZerosAndNonZeros(**int**[] arr) {

**int** nonZeroIndex = 0;

**for** (**int** i = 0; i < arr.length; i++) {

**if** (arr[i] != 0) {

**int** temp = arr[i];

arr[i] = arr[nonZeroIndex];

arr[nonZeroIndex] = temp;

nonZeroIndex++;

}

}

}

}

Second Largest Element Array Integer Program

**public** **class** Second\_largest\_element\_array\_integer {

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

**int** temp, size;

**int** array[] = {10, 20, 30, 43, 52, 60, 87};

size = array.length;

**for**(**int** i = 0; i<size; i++ ){

**for**(**int** j = i+1; j<size; j++){

**if**(array[i]>array[j]){

temp = array[i];

array[i] = array[j];

array[j] = temp;

}

}

}

System.***out***.println("second largest number is: "+array[size-2]);

}

}

Reverse Array Program

**public** **class** Reverse\_Array {

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

**int**[] arr = { 1,2,3,4,5,6,7,8,9,10 };

*reverseArray*(arr);

System.***out***.println("Reversed Array:");

**for** (**int** num : arr) {

System.***out***.print(num + " ");

}

}

**static** **void** reverseArray(**int**[] arr) {

**int** left = 0;

**int** right = arr.length - 1;

**while** (left < right) {

**int** temp = arr[left];

arr[left] = arr[right];

arr[right] = temp;

left++;

right--;

}

}

}

Passing Parameter Program

**public** **class** PassingParameter {

**public** **static** **void** myMethod(String name, **int** age)

{

System.***out***.println(name + ".A" + " is " + age);

}

**public** **static** **void** add(**int** a, **int** b)

{

**int** c=a+b;

System.***out***.println(c);

}

**public** **static** **int** sub(**int** x, **int** y)

{

**return** x-y;

}

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

{

*myMethod*("Shathyan", 29);

*myMethod*("Navanee", 26);

*myMethod*("Balaji", 24);

*add*(10,20);

**int** z = *sub*(10,5);

System.***out***.println(z);

}

}

Pair Elements Program

**public** **class** Pair\_elements {

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

**int**[] arr = { 2, 4, 3, 5, 7, 8, 9 };

**int** targetSum = 9;

System.***out***.println("Pair with sum " + targetSum + ":");

*findPairsWithSum*(arr, targetSum);

}

**static** **void** findPairsWithSum(**int**[] arr, **int** targetSum) {

**for** (**int** i = 0; i < arr.length - 1; i++) {

**for** (**int** j = i + 1; j < arr.length; j++) {

**if** (arr[i] + arr[j] == targetSum) {

System.***out***.println(arr[i] + " + " + arr[j] + " = " + targetSum);

}

}

}

}

}

Multi-Level Inheritance Program

**class** School{

**void** open()

{

System.***out***.println("School Opened");

}

}

**class** Teacher **extends** School{

**void** work(){

System.***out***.println("Working");

}

}

**class** Student **extends** Teacher{

**void** learn()

{

System.***out***.println("Learning");

}

}

**public** **class** MultiLevel\_Inheritance {

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

Student s= **new** Student();

s.learn();

s.work();

s.open();

}

}

Multi Dimensional Array Program

**public** **class** Multidimensional\_Array {

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

**int**[] [] a= {{1,2,3,4,5}, {9,8,7,6,5,4}};

System.***out***.println(a[0][3]);

String[] Fruits = {"Apple", "Orange", "Watermelon", "Grapes"};

**for**(**int** i = 0; i<Fruits.length; i++) {

System.***out***.println(Fruits[i]);

}

}

}

Method Program

**package** Java;

**import** java.io.\*;

**public** **class** Method {

**static** **int** *num* =10;

**static** String *a*="Navanee";

**static** **void** display()

{

System.***out***.println("Static Number : " +*num*);

System.***out***.println("Static String : " + *a*);

}

**void** nonstatic()

{

*display*();

}

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

Method obj = **new** Method();

obj.nonstatic();

*display*();

}

}

Method OverRiding Program

**class** Wildanimal {

**public** **void** animalSound() {

System.***out***.println("The animal makes a sound");

}

}

**class** Lion **extends** Wildanimal {

**public** **void** animalSound() {

System.***out***.println("Lion Roaring");

}

}

**class** Tiger **extends** Wildanimal {

**public** **void** animalSound() {

System.***out***.println("Tiger Growling");

}

}

**public** **class** Method\_OverRiding {

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

Wildanimal myAnimal = **new** Wildanimal();

Wildanimal myLion = **new** Lion();

Wildanimal myTiger = **new** Tiger();

myAnimal.animalSound();

myLion.animalSound();

myTiger.animalSound();

}

}

Method OverLoading Program

**public** **class** Method\_Overloading {

**static** **int** add(**int** a, **int** b)

{

**return** a+b;

}

**static** **int** add(**int** a, **int** b, **int** c)

{

**return** a+b+c;

}

**static** **float** add(**float** a, **float** b)

{

**return** a+b;

}

**static** **float** add(**float** a, **float** b,**float** c)

{

**return** a+b+c;

}

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

{

//Adder a= new Adder()

System.***out***.println(Method\_Overloading.*add*(4,7));

System.***out***.println(Method\_Overloading.*add*(2,4,3));

System.***out***.println(Method\_Overloading.*add*(4.8f,7.2f));

System.***out***.println(Method\_Overloading.*add*(3.8f,9.4f,5.8f));

}

}

Loop Inner Route Program

**public** **class** loopinnerouter {

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

//outer loop

**for**(**int** i=0; i<=2; i++) {

System.***out***.println("outer: "+i);

//inner loop

**for**(**int** j=1; j<=3; j++ ) {

System.***out***.println("Inner: "+j);

}

}

}}

LinkedList Program

**import** java.util.LinkedList;

**public** **class** Linkedlist\_Program {

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

LinkedList<String> Emp= **new** LinkedList<String>();

Emp.add("Navanee");

Emp.add("Makizh");

Emp.add("Karthi");

Emp.add("Logesh");

Emp.add("Kishore");

Emp.add("Krishna");

Emp.add("Mani");

System.***out***.println(Emp);

}

}

Insertion to Array Program

**public** **class** Insertion\_2Array {

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

**int**[] array1 = {23, 36, 96, 78, 55, 99, 87};

**int**[] array2 = {78, 45, 19, 73, 55, 100, 87};

System.***out***.println("Intersection of Two Arrays :");

**for**(**int** i = 0; i<array1.length; i++ ) {

**for**(**int** j = 0; j<array2.length; j++) {

**if**(array1[i]==array2[j]) {

System.***out***.println(array2[j]);

}

}

}

}

}

Heirarchial Inheritance Program

**class** Office{

**void** Open()

{

System.***out***.println("Office Opened");

}

}

**class** Senior **extends** Office{

**void** organize()

{

System.***out***.println("Organizing the Plan");

}

}

**class** Junior **extends** Office{

**void** execute()

{

System.***out***.println("Executing");

}

}

**public** **class** Hierarchical\_Inheritance {

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

Junior j=**new** Junior();

j.execute();

j.Open();

}

}

Equality to Array Program

**package** Java;

**import** java.util.Arrays;

**public** **class** Equality\_2Array {

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

String[] aaa = {"Navanee", "makizh", "arun", "vino"};

String[] bbb = {"Navanee", "josh", "arun", "jack"};

String[] ccc = {"Navanee", "makizh", "arun", "vino"};

System.***out***.println(Arrays.*equals*(aaa, bbb));

System.***out***.println(Arrays.*equals*(aaa, ccc));

}

}

Encapsulation Program

**package** Java;

**class** EncapsulationDemo{

**private** **int** ssn;

**private** String stuName;

**private** **int** stuAge;

//Getter and setter method

**public** **int** getStuSSN() {

**return** ssn;

}

**public** String getStuName() {

**return** stuName;

}

**public** **int** getStuAge() {

**return** stuAge;

}

**public** **void** setStuAge(**int** newValue) {

stuAge=newValue;

}

**public** **void** setStuName(String newvalue) {

stuName= newvalue;

}

**public** **void** setStuSSN(**int** newvalue) {

ssn= newvalue;

}

}

**public** **class** Encapsulation {

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

EncapsulationDemo Obj=**new** EncapsulationDemo();

Obj.setStuName("Navanee");

Obj.setStuAge(20);

Obj.setStuSSN(423651);

System.***out***.println("Student Name: " + Obj.getStuName());

System.***out***.println("Student SSN: " + Obj.getStuSSN());

System.***out***.println("Student Age: " + Obj.getStuAge());

}

}

Duplicate Array Element Program

**package** Java;

**public** **class** Duplicate\_array\_element {

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

**int**[] arr = {2,7,8,9,0,3,2,8,9,0,6 };

System.***out***.println("Duplicate elements in array:");

**for** (**int** i = 0; i < arr.length - 1; i++) {

**for** (**int** j = i + 1; j < arr.length; j++) {

**if** (arr[i] == arr[j]) {

System.***out***.println(arr[i]);

}

}

}

}

}

Count Occurrence Program

**package** Java;

**import** java.util.Scanner;

**public** **class** Count\_Occurrences {

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

String str;

**int** i, len;

**int** counter[] = **new** **int**[256];

Scanner input = **new** Scanner(System.***in***);

System.***out***.print("Please Enter String: ");

str = input.nextLine();

len = str.length();

**for** (i = 0; i < len; i++)

{

counter[(**int**) str.charAt(i)]++;

}

**for** (i = 0; i < 256; i++)

{

**if** (counter[i] != 0)

{

System.***out***.println((**char**) i + " --> " + counter[i]);

}

}

}

}

Collection Program

**package** Java;

**import** java.util.ArrayList;

**public** **class** Collections {

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

ArrayList<String> fruits=**new** ArrayList<String>();

fruits.add("Apple");

fruits.add("Orange");

fruits.add("Banana");

fruits.add("Grapes");

fruits.add("Mango");

fruits.add("Watermelon");

fruits.add("Pomegranate");

System.***out***.println(fruits);

System.***out***.println(fruits.get(2));

fruits.set(2,"Jackfruit");

System.***out***.println(fruits);

fruits.remove(3);

System.***out***.println(fruits);

System.***out***.println(fruits.size());

}

}

Array to Array List & Array List to Array Program

package Java;

import java.util.Arrays;

import java.util.ArrayList;

import java.util.List;

public class Arr\_Arrlist\_Arrlist\_Arr {

public static void main(String[] args) {

List<String> nameList = new ArrayList<>();

nameList.add("Navanee");

nameList.add("Makizh");

nameList.add("Karthi");

nameList.add("Kishore");

nameList.add("Lokesh");

System.out.println("Converting ArrayList to Array : " );

String[] item = nameList.toArray(new String[nameList.size()]);

for(String s : item){

System.out.println(s);

}

System.out.println("Converting Array to ArrayList : " );

List<String>l2 = new ArrayList<>();

l2 = Arrays.asList(item);

System.out.println(l2);

}

}

Array Program

**package** Java;

**public** **class** Array {

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

String[] Fruits = {"Apple", "Mango", "Banana", "Orange"};

System.***out***.println(Fruits[3]);

}

}