Education and Research Department

Demo Programs for Java Programming Part-1

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Contents

Demo Programs for *Java Programming Part 1*

1-Example to demonstrate Classes and Objects

```
**
 * This demo explains Class and Objects creation in
Java
 */
public  class TestClass {

  public static void main(String[] argv) {
    //Creating an object and in invoking method.
    Student student =new Student();
    Student.method();
  }
}
public class Student{

  public static void method() {
    System.out.println("Hello I am from Student
class");
  }

  }
```

2-Example to demonstrate Arrays

```
/**
 * This demo explains Arrays in Java
 */
class TestArray {
     public static void main(String[] args) {
           int[] i = new int[101];
           for (int j = 0; j < ia.length; j++)
                i[j] = j;
           int sum = 0;
           for (int j = 0; j < i.length; i++)
                sum += i[j];
           System.out.println(sum);
      }
     }
```

3-Example to demonstrate Inheritance

```
/**
 * This demo explains how inheritance is
implemented in Java.
 */


class Super {
  int x;
  int y;
  int get(int p, int q){
    x=p; y=q; return(0);
    }
    void Show(){
      System.out.println(x);
      }
}

class Sub extends Super{
  public static void main(String args[]){
    Super a = new Super ();
    a.get(5,6);
    a.Show();
    }
    void display(){
      System.out.println("Sub Class");
      }
}
```

4-Example to demonstrate Abstract class

```
/**
 * This demo explains how Abstract class  is
implemented in Java.
 */


abstract class AbstractTest {
 void display(){
   System.out.println(x);
   }
abstract void show();
}

class SubClass extends AbstractTest  {
 public static void main(String args[]){
  AbstractTest  a = new SubClass();
  a.display();
  a.show();
  }
  void show(){
   System.out.println("This method must be
implemented otherwise Current class will become
abstract");
   }
}
```

5-Example to demonstrate Interface

```
/**
 * This demo explains how interface is implemented
in Java.
 */

interface TestInterface  {
   void show();
}
```

```
class Sub implements TestInterface   {
  public static void main(String args[]){
    TestInterface   a = new Sub ();
        a.show();
    }
    void show(){
    System.out.println("Overriding show() method");
      }
}
```

6-Example to demonstrate Exception Handling-1

```
/**
 * This demo explains how Exception Handling is
implemented in Java.
 */



public class SimpleExceptionHandling {
    public static void main(String args[]){
        try{
         int arr[];
         arr=new int[3];
          arr[10]=76;
        }
       catch(ArrayIndexOutOfBoundsException aeob)
        {
        System.out.println("You are crossing the
boundary of array");
        }
         }
        }
```

7-Example to demonstrate Exception Handling-2

```
/**
```

```
 * This demo explains how Exception Handling is
implemented in Java.
 */


public class TestException {

  public static void main(String[] args) {
    String input = null;
    try {
      String incapital= capital(input);
      System.out.println(incapital);
    } catch (NullPointerException e) {
      System.out.println(e.toString());
    }
  }

  public static String capital (String s) throws
NullPointerException {
    if (s == null) {
      throw new NullPointerException("Your have
passed a null argument");
    }
    Character first = s.charAt(0);
    String theRest = s.substring(1);
    return first.toString().toUpperCase() + theRest;
  }
}
```

8-Example to demonstrate Inner class

```
/**
 * This demo explains how inner class is implemented in
Java.
 */


class OuterTest {
  int outer_x = 100;
  void test() {
    InnerTest  inner = new InnerTest();
    inner.display();
  }

  // this is an inner class
  class InnerTest {
    void display() {
      System.out.println("display: outer_x = " + outer_x);
    }
  }
}

class InnerClassDemo {
  public static void main(String args[]) {
    OuterTest  outer = new OuterTest();
    outer.test();
  }
}
```

9-Example to demonstrate System class

```
/**
 * This demo explains how System class can be
implemented in Java.
 */


import java.util.*;

class  TestSystemProperties{
  public static void main(String[] args) {
  Properties prop = System.getProperties();
    Enumeration keys = prop.keys();
    while (keys.hasMoreElements()) {
```

```
    String key = (String)keys.nextElement();
    String value = (String)p.get(key);
    System.out.println(key + ": " + value);
   }
  }
}
```

End of Demo Document