**Axis Fintech | Assignment Day 10 | 24/03/2023**

**Nitish Raj ||** [**Nitishrajrocks@gmail.com**](mailto:Nitishrajrocks@gmail.com)

**1.PROGRAM ON ARRAYLIST**

import java.util.ArrayList;

import java.util.Iterator;

// ArrayList Example

// Author : Nitish Raj

public class ArrayListExample {

    public static void main(String[] args) {

        // Create a ArrayList of Strings

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

        // Adding Elements

        fruits.add("Apple");

        fruits.add("Banana");

        fruits.add("Orange");

        //Printing Contents

        System.out.println("Fruits in the ArrayList");

        for(String fr : fruits)

        {

            System.out.println(fr);

        }

        // Adding Element at specific Location

        fruits.add(1, "grape");

        // Printing Updated Contents

        System.out.println("\nFruits in the ArrayList | Grape Added");

        for(String fr : fruits)

        {

            System.out.println(fr);

        }

        // Removing Elements

        fruits.remove(2);

        // Print After Removing

        System.out.println("\nFruits in the ArrayList | Orange Removed");

        for(String fr : fruits)

        {

            System.out.println(fr);

        }

        // Getting Size of ArrayList

        System.out.println("\nSize of ArrayList: " + fruits.size());

        // Checking Element at Index No. 1

        System.out.println("\nGetting Index(1) Element : " + fruits.get(1));

        // Using Iterator

        Iterator<String> it = fruits.iterator();

        System.out.println("\nUsing Iterator Here : " + it.next());

    }

}

**2. PROGRAM ON VECTOR EXAMPLE.**

import java.util.Iterator;

import java.util.Vector;

// Vector Example

// Nitish Raj

public class VectorExample {

    public static void main(String[] args) {

        // Creating a Vector of integers

        Vector<Integer> numbers = new Vector<Integer>();

        // Adding Elements to the Vector

        numbers.add(10);

        numbers.add(20);

        numbers.add(30);

        // Printing Vector Contents

        System.out.println("Numbers in the Vector:");

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

            System.out.println(numbers.get(i));

        }

        // Adding Elements in vector

        numbers.add(1, 15);

        // Printing Vector Contents

        System.out.println("\nNumbers in the Vector after adding 15:");

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

            System.out.println(numbers.get(i));

        }

        // Remove an element from the Vector

        numbers.remove(2);

        // Print the updated contents of the Vector

        System.out.println("\nNumbers in the Vector after removing 30:");

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

            System.out.println(numbers.get(i));

        }

        // Get the size of the Vector

        System.out.println("\nSize of the Vector: " + numbers.size());

        // Using Iterator

        Iterator<Integer> it = numbers.iterator();

        System.out.println("\nUsing Iterator Here : " + it.next());

    }

}

**3. PROGRAM ON HASHMAP EXAMPLE.**

import java.util.HashMap;

public class HashMapExample

// HashMap Example || nitish Raj

{

    public static void main(String[] args) {

        // Creating a HashMap of String and Integer Values

        HashMap<String, Integer> scores = new HashMap<String, Integer>();

        // Adding Elements

        scores.put("Nitish",79);

        scores.put("Ceyana",45);

        scores.put("Shahrukh",44);

        // Printing Contents

        System.out.println("Scores in the HashMap: ");

        for(String name : scores.keySet())

        {

            int score = scores.get(name);

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

        }

        // Updating Elements

        scores.put("Sidharth", 66);

        // Printing Update

        System.out.println("\nScores in the HashMap | After Updation");

        for (String name : scores.keySet())

        {

            int score = scores.get(name);

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

        }

        // Removing Entry from HashMap

        scores.remove("Shahrukh");

        // Printing updated contents

        System.out.println("\nScores in the HashMap | Shahrukh Removed:");

        for (String name : scores.keySet())

        {

            int score = scores.get(name);

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

        }

         // Getting the Size of the HashMap

         System.out.println("\nSize of the HashMap: " + scores.size());

    }

**4. PROGRAM ON HASHTABLE EXAMPLE.**

import java.util.Hashtable;

// HashMap Example || nitish Raj

public class HashtableExample {

    public static void main(String[] args) {

        // Creating a Hashtable

        Hashtable<String, Integer> ht = new Hashtable<String, Integer>();

        // Addding key-value pairs to the Hashtable

        ht.put("Nitish", 29);

        ht.put("Ceyana", 26);

        ht.put("Shahrukh", 50);

        // Printing the Hashtable

        System.out.println("Hashtable: " + ht);

        // Get the value associated with a key

        int age = ht.get("Nitish");

        System.out.println("Nitish's age is " + age);

        // Check if a key exists in the Hashtable

        boolean exists = ht.containsKey("Ceyana");

        System.out.println("Ceyana exists in the Hashtable: " + exists);

        // Remove a key-value pair from the Hashtable

        ht.remove("Shahrukh");

        System.out.println("Hashtable after removing Shahrukh: " + ht);

        // Iterate over the keys in the Hashtable

        System.out.println("Keys in Hashtable:");

        for (String key : ht.keySet()) {

            System.out.println(key);

        }

        // Iterate over the values in the Hashtable

        System.out.println("Values in Hashtable:");

        for (int value : ht.values()) {

            System.out.println(value);

        }

    }

}

**4. PROGRAM ON ENUMERATION EXAMPLE.**

package Assignment.Day10;

import java.util.Enumeration;

import java.util.Vector;

public class EnumerationExample {

    public static void main(String[] args) {

        //Creating a new vector and adding elements

        Vector<String> v = new Vector<String>();

        v.add("Nitish");

        v.add("Syed");

        v.add("Shahrukh");

        // Getting Enumeration for the Vector

        Enumeration<String> e = v.elements();

        // Printing Elements in the Vector using Enumnertaion

        System.out.println("Elements in the Vector");

        while(e.hasMoreElements())

        {

            String element = e.nextElement();

            System.out.println(element);

        }

    }

}