**Assignment of Collections**

Q1) Declare suitable collection at the position //insert code here

class CollectionTypes {

public static void main(String[ ] args) {

// insert code here

x.add(“one”);

x.add(“two”);

x.add(“one”);

System.out.println(x.poll()); }

Ans1) Queue is suitable collection for this code

Queue<String> X=new LinkedList<>();

Q2) What is the result of compiling and running the following program?

public class Tester {

public static void main(String[] args) {

List list1 = new ArrayList(); //line 1

List<Object> list2 = list1; //line2

list2.add(new Integer(12)); //line 3

System.out.println(list2.size());//line 4 } }

Ans 2) Compilation Error in line 2 Type Mismatch

Q3) What is the result of compiling and running the following program?

import java.util.\*;

public class TestGenericConversion {

public static void main(String s[ ]){

List list=new ArrayList( );

list.add("one");

list.add(2);

System.out.println(list.get(0).length(); } } }

Ans 3) Compilation Error (Integer is not compatible for type String)

Q4) What is the result of compiling and running the following program?

public class Test {

public static void main(String[] args){

Integer a = new Integer(4);

Integer b = new Integer(8);

Integer c = new Integer(4);

HashSet hs = new HashSet();

hs.add(a);

hs.add(b);

hs.add(c);

System.out.println(hs); } }

Ans 4) [4,8]

Q 5) Create a class with a method which can remove all the elements from a list other than the collection of elements specified.

**package** com.collecassignment;

**import** java.util.List;

**import** java.util.ArrayList;

**public** **class** ListManagerRemove{

**public** **static** List removeElement(List list1, List list2) {

list1.retainAll(list2);

**return** list1;

}

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

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

List<String> list1=**new** ArrayList<>();

list1.add("Java");

list1.add("Python");

list1.add("Android");

list1.add("PHp");

list1.add("Ruby");

list1.add("Perl");

List<String> list2=**new** ArrayList<>();

list2.add("Java");

list2.add("Python");

list2.add("Ruby");

list2.add("Perl");

list1=*removeElement*(list1,list2);

System.***out***.println("After removal: "+ list1);

}

}

Q 6) Create a class that can accept an array of String objects and return them as a sorted List

**package** com.collecassignment;

**import** java.util.List;

**import** java.util.ArrayList;

**import** java.util.Collections;

**public** **class** ListManagerSort {

**public** **static** List getArrayList(String[] arr) {

List<String> lst=**new** ArrayList<>();

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

{

lst.add(arr[i]);

}

Collections.*sort*(lst);

**return** lst;

}

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

String [] str= {"Monday","Tuesday","Wednesday","Thursday","Friday","Saturday","Sunday"};

List list1=*getArrayList*(str);

System.***out***.println(list1);

}

}

Q 7) Create a method that returns collection that contain only unique String object in the sorted order.

**package** com.collecassignment;

**import** java.util.Set;

**import** java.util.TreeSet;

**public** **class** UniqueCollection {

**public** **static** Set getCollection(String[] arr)

{

Set<String> str=**new** TreeSet<>();

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

{

str.add(arr[i]);

}

**return** str;

}

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

String[] arr= {"One","Two","Four","One","Five","Six","Two","Seven"};

Set st=*getCollection*(arr);

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

}

}

Q 8) Create a class which accepts a HashMap and returns the keys in the Map

**package** com.collecassignment;

**import** java.util.Map;

**import** java.util.HashMap;

**import** java.util.Set;

**import** java.util.HashSet;

**public** **class** MapManager {

**public** **static** Set getKeys(Map<String, Integer> hmap)

{

Set<String> hset=**new** HashSet<>();

**for**(String key:hmap.keySet())

{

hset.add(key);

}

**return** hset;

}

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

Map<String,Integer> hmap=**new** HashMap<>();

hmap.put("One",1);

hmap.put("Two",2);

hmap.put("Three",3);

hmap.put("Three",4);

hmap.put("Five",5);

Set st=*getKeys*(hmap);

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

}

}