**Session - 1**

1. **create a HashSet class by add 10 numbers by using for loop and extra add some more objects and print the all the values.**

**Code:**

**import** java.util.HashSet;

**public** **class** HashSetEx {

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

HashSet hs= **new** HashSet();

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

hs.add(i);

}

hs.add("sweety");

hs.add("jain");

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

}

}

**Output:**

[0, sweety, 1, 2, 3, 4, 5, 6, 7, 8, 9, jain]

1. **create a LinkedHashSet class by add 10 numbers by using for loop and extra add some more objects and print the all the values.**

**Code:**

**import** java.util.LinkedHashSet;

**public** **class** LinkedHashSetEx {

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

LinkedHashSet lhs= **new** LinkedHashSet();

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

lhs.add(i);

}

lhs.add("sweety");

lhs.add("jain");

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

}

}

**Output:**

[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, sweety, jain]

1. **By using Iterator class iterate the HashSet class Elements.**

**Code:**

**import** java.util.HashSet;

**import** java.util.Iterator;

**public** **class** HashSetIterator {

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

HashSet hs= **new** HashSet();

hs.add("sweety");

hs.add("jain");

hs.add(78);

hs.add(45.06);

hs.add('h');

hs.add("jain");

hs.add(**null**);

Iterator itr = hs.iterator();

**while**(itr.hasNext()) {

System.***out***.print(itr.next()+" ");

}

}

}

**Output:**

sweety null h 45.06 jain 78

1. **By using Iterator class iterate the LinkedHashSet Elements.**

**Code:**

**import** java.util.LinkedHashSet;

**import** java.util.Iterator;

**public** **class** LinkedHashSetIterator {

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

LinkedHashSet lhs= **new** LinkedHashSet();

lhs.add("sweety");

lhs.add("jain");

lhs.add(78);

lhs.add(45.06);

lhs.add('h');

lhs.add("jain");

lhs.add(**null**);

Iterator itr = lhs.iterator();

**while**(itr.hasNext()) {

System.***out***.print(itr.next()+" ");

}

}

}

**Output:**

sweety jain 78 45.06 h null

1. **By using generics cretae hashset class apply some methods,addall(),remove().**

**Code:**

**import** java.util.HashSet;

**public** **class** Generics {

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

HashSet<String> hs= **new** HashSet<String>();

hs.add("sweety");

hs.add("jain");

hs.add("Poornima");

hs.add("college");

hs.add("of ");

hs.add("Engineering");

hs.add(**null**);

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

HashSet<String> hs1= **new** HashSet<String>();

hs1.add("Jaipur");

hs1.add("Rajasthan");

hs.addAll(hs1);

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

hs.remove("Rajasthan");

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

hs.retainAll(hs1);

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

}

}

**Output:**

[sweety, college, null, Engineering, Poornima, of , jain]

[sweety, college, null, Engineering, Poornima, Jaipur, of , jain, Rajasthan]

[sweety, college, null, Engineering, Poornima, Jaipur, of , jain]

[Jaipur]

**Session – 2**

1. **create a class and print the elements by using keySet.**

**Code:**

**import** java.util.Iterator;

**import** java.util.Set;

**import** java.util.TreeMap;

**public** **class** KeySet {

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

TreeMap<Integer,String> t = **new** TreeMap();

t.put(111,"albert");

t.put(222, "john");

t.put(333, "robert");

t.put(444, "marry");

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

Set<Integer> keys = t.keySet();

Iterator itr = keys.iterator();

**while**(itr.hasNext()) {

System.***out***.println(itr.next());

}

}

}

**Output:**

{111=albert, 222=john, 333=robert, 444=marry}

111

222

333

444

1. **Create a class print all the elements with EntrySet.**

**Code:**

**import** java.util.Iterator;

**import** java.util.Map.Entry;

**import** java.util.Set;

**import** java.util.TreeMap;

**public** **class** EntrySet {

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

TreeMap<Integer,String> t = **new** TreeMap();

t.put(111,"albert");

t.put(222, "john");

t.put(333, "robert");

t.put(444, "marry");

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

Set<Entry<Integer,String>> entry = t.entrySet();

Iterator itr = entry.iterator();

**while**(itr.hasNext()) {

System.***out***.println(itr.next());

}

}

}

**Output:**

{111=albert, 222=john, 333=robert, 444=marry}

111=albert

222=john

333=Robert

444=marry

1. **Create a class with HashMap use to print the values.**

**Code:**

**import** java.util.HashMap;

**public** **class** HashMapEx{

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

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

hm.put(101, "sweety");

hm.put(102, "jain");

hm.put(103, "maya");

hm.put(104, "sita");

hm.put(105, "shyam");

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

}

}

**Output:**

{101=sweety, 102=jain, 103=maya, 104=sita, 105=shyam}

1. **By Using LinkedHashMap add elements and print the values.**

**Code:**

**import** java.util.LinkedHashMap;

**public** **class** LinkedHashMapEx {

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

LinkedHashMap lhm = **new** LinkedHashMap();

lhm.put(101, "sweety");

lhm.put(102, "jai");

lhm.put(103, "maya");

lhm.put(104, "sita");

lhm.put(105, "shyam");

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

}

}

**Output:**

{101=sweety, 102=jai, 103=maya, 104=sita, 105=shyam}