1. Use HashSet to hold employee object.

package generic;

import java.util.HashSet;

public class example {

public static void main(String[] args)

{

HashSet<emp>set=new HashSet<emp>();

emp e=new emp(1,"Ram","Systemadmin",30000.25);

set.add(e);

for(emp e1:set)

{

System.out.println(e.id+" "+e.name+" "+e.dep+" "+e.sal);

}

}

}

package generic;

public class emp {

int id;

String name,dep;

double sal;

/\*\*

\* @param id

\* @param name

\* @param dep

\* @param sal

\*/

public emp(int id, String name, String dep, double sal) {

super();

this.id = id;

this.name = name;

this.dep = dep;

this.sal = sal;

}

}

Output:

1 Ram Systemadmin 30000.25

1. Create HashMap application

package generic2;

import java.util.HashMap;

import java.util.Map;

public class mapping {

public static void main(String[] args)

{

HashMap<Integer ,Double>map=new HashMap<Integer,Double>();

map.put(1, 1.23);

map.put(5, 5.5);

map.put(2, 2.5);

map.put(67, 23.85);

map.put(89, 0.5);

System.out.println("hashmap:");

for(Map.Entry m:map.entrySet())

{

System.out.println(m.getKey()+" "+m.getValue());

}

}

}

map.put(3, 3.25);

map.put(8, 8.5);

map.put(10, 10.95);

map.put(100, 105.5);

map.put(54, 89.5);

Output:

hashmap:

1 1.23

2 2.5

3 3.25

67 23.85

100 105.5

5 5.5

54 89.5

8 8.5

89 0.5

10 10.95

1. (a).HashMap application for key=string,value=string

package generic3;

import java.util.HashMap;

import java.util.Map;

public class example {

public static void main(String[] args)

{

HashMap<String ,String>map=new HashMap<String,String>();

map.put("1", "Apple");

map.put("10", "Chicku");

System.out.println(map);

/\*for(Map.Entry m:map.entrySet())

{

System.out.println(m.getKey()+" "+m.getValue());

}\*/

}

}

Output:

{1=Apple, 10=Chicku}

b. key=string value=date

package generic3;

import java.util.Date;

import java.util.HashMap;

import java.util.Map;

public class example {

public static void main(String[] args)

{

HashMap<String ,Date>map=new HashMap<String,Date>();

map.put("Today is", new java.util.Date());

System.out.println(map);

}

}

Output:

{Today is=Sat Jan 15 22:59:49 IST 2022}

1. Swapping of 2 numbers in array list

package swap;

import java.util.Arrays;

public class swap1 {

public static <T> void swap(int[] arr ,int i1,int i2)

{

int temp = arr[i2];

arr[i2]=arr[i1];

arr[i1]=temp;

}

private static void swap3() {

// TODO Auto-generated method stub

int[] arr= {1,5,3,6,7};

swap(arr,0,2);

System.out.println("swapped" +Arrays.toString(arr));

}

public static void main(String[] args)

{

swap3();

}

}

Output:

swapped[3, 5, 1, 6, 7]