Implementing a queue :

package queuedemo;  
  
import java.util.Objects;  
  
public class MyQueue {  
 private String [] arr;  
 int startOfQueue;  
 int endOfQueue;  
  
 public MyQueue(int size) {  
 arr = new String[size];  
 startOfQueue = 0;  
 endOfQueue = 0;  
 }  
  
 public void add(String element){  
 arr[endOfQueue] = element;  
 endOfQueue = endOfQueue+1;  
 if(endOfQueue >= arr.length){  
 endOfQueue = endOfQueue % arr.length;  
 }  
 }  
  
 public String remove(){  
 String element = arr[startOfQueue];  
 arr[startOfQueue] = null;  
 startOfQueue = startOfQueue+1;  
 if(startOfQueue >= arr.length){  
 startOfQueue = startOfQueue % arr.length;  
 }  
 return element;  
 }  
  
 public void printQueue(){  
 for(String str : arr){  
 if (Objects.*nonNull*(str)) {  
 System.*out*.print(str + "|");  
 }  
 }  
 System.*out*.println("");  
 }  
}

package queuedemo;  
  
public class MyQueueDemo {  
 public static void main(String[] args) {  
 MyQueue queue = new MyQueue(3);  
  
 queue.add("abc");  
 queue.printQueue();  
  
 queue.add("def");  
 queue.printQueue();  
  
 queue.add("ijk");  
 queue.printQueue();  
  
  
 queue.add("xyz");  
 queue.printQueue();  
  
  
  
 }  
}

Hash map demo :

package setdemo;  
  
import iteratordemo.Person;  
  
import java.util.HashSet;  
import java.util.Iterator;  
import java.util.Set;  
import java.util.TreeSet;  
  
public class HashSetDemo {  
 public static void main(String[] args) {  
 Set<Person> pSet = new HashSet<>();  
 Person p1 = new Person(20, "John1");  
 Person p2 = new Person(20, "John1");  
 Person p3 = new Person(20, "John3");  
 Person p4 = new Person(20, "John4");  
 pSet.add(p1);  
 pSet.add(p2);  
 pSet.add(p3);  
 pSet.add(p4);  
 //Added p1 again  
 pSet.add(p1);  
 System.*out*.println("Size is "+pSet.size());  
 Iterator<Person> pIterator = pSet.iterator();  
 //loop till hasNext method returns false which will be end of the list  
 while (pIterator.hasNext()){  
 Person p = pIterator.next();  
 System.*out*.println("Name of person id "+p.getName());  
 }  
 Set<String> strSet = new HashSet<>();  
 strSet.add("abc");  
 strSet.add("def");  
 strSet.add("abc");  
  
 System.*out*.println("Size of strSet : "+strSet.size());  
  
 }  
}

package mapdemo;  
  
import iteratordemo.Person;  
  
import java.util.HashMap;  
import java.util.Map;  
import java.util.Set;  
  
public class MapDemo {  
 public static void main(String[] args) {  
 //Sun -> Sunday  
  
 Map<String, String > weekDayMap = new HashMap<>();  
  
 weekDayMap.put("Sun", "Sunday");  
 weekDayMap.put("Mon", "Monday");  
 weekDayMap.put("Tue", "Tuesday");  
  
 String day = weekDayMap.get("Mon");  
 System.out.println("day is "+day);  
  
 System.out.println(weekDayMap);  
  
 Person p1 = new Person(20, "John1");  
 Person p2 = new Person(20, "John2");  
 Person p3 = new Person(20, "John3");  
 Person p4 = new Person(20, "John4");  
  
  
 Map<String , Person> personMap = new HashMap<>();  
  
 personMap.put("1234567856", p1);  
 personMap.put("98445164545", p2);  
 System.out.println("Adding p3"+personMap.put("77455", p3));  
 System.out.println(personMap);  
 System.out.println("Adding p4"+personMap.put("77455", p4));  
 System.out.println(personMap);  
  
 System.out.println("===================================");  
  
 System.out.println("no keyh present"+personMap.get("8856"));  
  
 Person punknown = personMap.get("98445164545");  
 System.out.println(punknown);  
  
 System.out.println(personMap);  
  
 System.out.println("is it contain 77455 phone number"+ personMap.containsKey("77455"));  
 System.out.println("is it contain 123 phone number"+ personMap.containsKey("123"));  
  
 Set<Map.Entry<String, Person>> entrySet = personMap.entrySet();  
  
 for(Map.Entry<String , Person> entry : entrySet){  
 if(entry.getValue().equals(p2)){  
 System.out.println("person found and its phone numerb is "+ entry.getKey());  
 }  
 }  
  
  
  
 }  
}