Read Me:-

i. Before going through below exercises please visit the link given below, where you can experience the coding standard that each and every developer should follow.

ii. This Code Conventions for the Java Programming Language document contains the standard conventions that Sun follow and recommend that we should follow. It covers filenames, file organization, indentation, comments, declarations, statements, white space, naming conventions, programming practices and includes a code example.

iii. LINK - http://www.oracle.com/technetwork/java/codeconv-138413.html

Multithreading Lab Exercise Day-4
Duration: 2 Hours

Program on multiple threads action on single object (without synchronization)

```
class Reserve implements Runnable{
  int available=1;
  int wanted;
 Reserve(int i){
         wanted=i;
         System.out.println("Available Breaths="+available);
              }
    public void run(){
     if(available>=wanted){
      String name=Thread.currentThread().getName();
      System.out.println(wanted+"Berths Reserved For"+name);
                        try{
                                Thread.sleep(1500);
                                available=available-wanted;
                        }
                        catch(InterruptedException ie){
                                ie.printStackTrace();
                        }
                }
                else
                        System.out.println("Sorry, no breaths");
        }
}
public class SingleObject {
        public static void main(String[] args) {
```

```
        Reserve obj=new Reserve(1);
        Thread t1=new Thread(obj);
        Thread t2=new Thread(obj);
        t1.setName("First Person");
        t2.setName("Second Person");
        t1.start();
        t2.start();
    }
}
```

Program: Thread Synchronization Example with synchorinied method

```
class Reserve2 implements Runnable{
    int available=1;
    int wanted;
    Reserve2(int i){
    wanted=i;
        System.out.println("Available Breaths="+available);
    }
    public synchronized void reservation(){
        if(available>=wanted){
String name=Thread.currentThread().getName();
System.out.println(wanted+"Berths Reserved For"+name);
            try{
                Thread.sleep(1500);
                available=available-wanted;
            }catch(InterruptedException ie){
                ie.printStackTrace();
            }
        }
        else
            System.out.println("Sorry, no breaths");
    }
    public void run(){
        reservation();
    }
}public class SynchronizationTest {
    public static void main(String[] args) {
        Reserve2 obj=new Reserve2(1);
        Thread t1=new Thread(obj);
        Thread t2=new Thread(obj);
        t1.setName("First Person");
```

```
                t2.setName("Second Person");
                t1.start();
                t2.start();
        }
}
```

Program: Synchronization example with synchronized block

```
class Reserve1 implements Runnable{
        int available=1;
        int wanted;
        Reserve1(int i){
                wanted=i;
        }
        public void run(){
                synchronized(this){
                System.out.println("Available Breaths="+available);
                if(available>=wanted){
                        String name=Thread.currentThread().getName();
                        System.out.println(wanted+"Berths Reserved For"+name);
                        try{
                                Thread.sleep(1500);
                                available=available-wanted;
                        }
                        catch(InterruptedException ie){
                            ie.printStatckTrace();
                        }
                }
                else
                        System.out.println("Sorry, no breaths");
        }
    }

}
public class  SynBlock{
        public static void main(String[] args) {
                Reserve1 obj=new Reserve1(1);
                Thread t1=new Thread(obj);
                Thread t2=new Thread(obj);
                t1.setName("First Person");
                t2.setName("Second Person");
                t1.start();
                t2.start();
        }
}
```

All the Best