**Task 06**

Dead Lock Problem

**package** com.drucare;

**public** **class** DeadlockProblem {

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

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

String s1 = "Dead";

String s2 = "Lock";

Thread t1 = **new** Thread() {

**public** **void** run() {

**synchronized** (s1) {

System.***out***.println("Thread 1 Locked 1");

**try** {

Thread.*sleep*(2000);

} **catch** (Exception e) {

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

}

**synchronized** (s2) {

System.***out***.println("Thread 1 Locked 2");

}

}

}

};

Thread t2 = **new** Thread() {

**public** **void** run() {

**synchronized** (s2) {

System.***out***.println("Thread 2 Locked 2");

**try** {

Thread.*sleep*(2000);

} **catch** (Exception e) {

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

}

}

**synchronized** (s1) {

System.***out***.println("Thread 2 Locked 1");

}

}

};

t1.start();

t2.start();

}

}

**Output:**

Thread 1 Locked 1

Thread 2 Locked 2

Thread 1 Locked 2

Thread 2 Locked 1

**DeadLock Solution**

**package** com.drucare;

**public** **class** DeadLockSolution {

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

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

DeadLockSolution dls = **new** DeadLockSolution();

resource1 r1 = dls.**new** resource1();

resource2 r2 = dls.**new** resource2();

Runnable runn1 = **new** Runnable() {

@Override

**public** **void** run() {

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

**synchronized** (r2) {

**synchronized** (r1) {

System.***out***.println("Synchronized 1");

}

}

}

};

Runnable runn2 = **new** Runnable() {

@Override

**public** **void** run() {

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

**synchronized** (r1) {

**synchronized** (r2) {

System.***out***.println("Synchronized 2");

}

}

}

};

**new** Thread(runn1).start();

**new** Thread(runn2).start();

}

**class** resource1 {

**int** i = 5;

**public** **int** get() {

**return** i;

}

**public** **void** set() {

**this**.i = i;

}

}

**class** resource2 {

**int** i = 6;

**public** **int** get() {

**return** i;

}

**public** **void** set() {

**this**.i = i;

}

}

}

**Output**:

Synchronized 1

Synchronized 2