//program in java with reader/writer

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Import java.io.\*;

Class Control {

Static boolean flag = false;

Void read(int a) {

System.out.println(“Reading…”);

Try {

Thread.sleep(3000);

} catch (InterruptedException e) {

e.printStackTrace();

}

System.out.println(“Reading completed”);

}

Synchronized void read() {

System.out.println(“Reading…”);

Try {

Thread.sleep(3000);

} catch (InterruptedException e) {

e.printStackTrace();

}

System.out.println(“Reading completed”);

}

Synchronized void write() {

Flag = true;

System.out.println(“Writing…”);

Try {

Thread.sleep(50);

} catch (InterruptedException e) {

e.printStackTrace();

}

System.out.println(“Writing completed”);

Flag = false;

}

}

Class Read extends Thread {

Control ob;

Read(Control d) {

This.ob = d;

Start();

}

Public void run() {

If (!Control.flag) {

Ob.read(1);

} else {

Ob.read();

}

}

}

Class Write extends Thread {

Control ob;

Write(Control c) {

This.ob = c;

Start();

}

Public void run() {

Ob.write();

}

}

Public class RWProblem {

Public static void main(String args[]) throws Exception {

Int ch = 0;

Control ob = new Control();

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

Do {

System.out.println(“\nMENU\n1.Read\n2.Write\n3.Exit\n\nEnter your choice:”);

Ch = Integer.parseInt(br.readLine());

Switch (ch) {

Case 1:

New Read(ob);

Break;

Case 2:

New Write(ob);

Break;

Case 3:

Break;

Default:

System.out.println(“Wrong Choice”);

}

} while (ch != 3);

}

}

**OUTPUT**

**MENU**

1.Read

2.Write

3.Exit

Enter your choice:

1

MENU

1.Read

2.Write

3.Exit

Enter your choice:

Reading…

Reading completed

2

MENU

1.Read

2.Write

3.Exit

Enter your choice:

Writing…

Writing completed