**Experiment no 8**

**MULTITHREADING**

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SE/IT/A Batch B

A].WAP to create userdefined thread to print 1AB3C4D5E6F7G8H9I10J

class alpha extends Thread

{

public void run()

{

for(char i = 65; i<=74; i++)

{

System.out.println(i);

try{

Thread.sleep(1000);

//Change this Value if u don't get desired output

} catch(InterruptedException e){}

}

}

}

class digit extends Thread

{

public void run()

{

for(int i=1; i<=10; i++)

{

System.out.println(i);

try{

Thread.sleep(1000);

//Change this Value if u don't get desired output

} catch(InterruptedException e){}

}

}

}

public class multithreadpattern

{

public static void main(String[] args)

{

digit a = new digit();

alpha b = new alpha();

a.start();

b.start();

try

{

a.join();

b.join();

}catch(InterruptedException e){}

}

}

/\* Output

C:\Users\abhishek123\Desktop>javac multithreadpattern.java

C:\Users\abhishek123\Desktop>java multithreadpattern

1

A

B

2

C

3

4

D

5

E

6

F

7

G

8

H

9

I

10

J

**8 B]. WAP to Implement Concept of Thread Synchronization**

class PrintDemo {

public void printCount() {

try {

for(int i = 5; i > 0; i--) {

System.out.println("Counter --- " + i );

}

} catch (Exception e) {

System.out.println("Thread interrupted."); }

}

}

class ThreadDemo extends Thread {

private Thread t;

private String threadName;

PrintDemo PD;

ThreadDemo( String name, PrintDemo pd) {

threadName = name;

PD = pd; }

public void run() {

PD.printCount();

System.out.println("Thread " + threadName + " exiting.");}

public void start () {

System.out.println("Starting " + threadName );

if (t == null) {

t = new Thread (this, threadName);

t.start (); }

}

}

public class TestThread {

public static void main(String args[]) {

PrintDemo PD = new PrintDemo();

ThreadDemo T1 = new ThreadDemo( "Thread - 1 ", PD );

ThreadDemo T2 = new ThreadDemo( "Thread - 2 ", PD );

T1.start();

T2.start(); // wait for threads to end

try {

T1.join();

T2.join();

} catch ( Exception e) {

System.out.println("Interrupted"); }

}

}

Output

C:\Users\abhishek123\Desktop\java docs>javac TestThread.java

C:\Users\abhishek123\Desktop\java docs>java TestThread

Starting Thread - 1

Starting Thread - 2

Counter --- 5

Counter --- 5

Counter --- 4

Counter --- 4

Counter --- 3

Counter --- 3

Counter --- 2

Counter --- 2

Counter --- 1

Counter --- 1

Thread Thread - 2 exiting.

Thread Thread - 1 exiting.

C:\Users\abhishek123\Desktop\java docs>javac TestThread.java

C:\Users\abhishek123\Desktop\java docs>java TestThread

Starting Thread - 1

Starting Thread - 2

Counter --- 5

Counter --- 5

Counter --- 4

Counter --- 4

Counter --- 3

Counter --- 3

Counter --- 2

Counter --- 2

Counter --- 1

Counter --- 1

Thread Thread - 2 exiting.

Thread Thread - 1 exiting.