Assignment 1

create a multi-threaded application by using "extends Thread " method.create 2 threads. they should display characters from A to J.

public class Demo extends Thread{

public void run() {

char ch = 'A';

while(ch <= 'J') {

System.***out***.print(getName()+" "+ch+" | ");

ch++;

}

}

public static void main(String[] args) {

Demo d1 = new Demo();

Demo d2 = new Demo();

d1.setName("(d1)");

d2.setName("d2");

d1.start();

d2.start();

}

}

Assignment 2

above program using "implements Runnable" method.

public class Demo implements Runnable{

public void run() {

char ch = 'A';

while(ch <= 'J') {

System.***out***.print(Thread.*currentThread*().getName()+" "+ch+" | ");

ch++;

}

}

public static void main(String[] args) {

Demo d1 = new Demo();

Thread t1 = new Thread(d1);

Thread t2 = new Thread(d1);

t1.setName("(d1)");

t2.setName("d2");

t1.start();

t2.start();

}

}

Assignment 3

create 3 threads in such a way that while one thread is executing, 2 threads cannot interfere. they should display output "Exec 0" to "Exec 5".

public class Demo implements Runnable{

synchronized public void run() {

for(int i=0;i<6;i++) {

System.***out***.println("Exec "+i +" "+ Thread.*currentThread*().getName());

}

}

public static void main(String[] args) {

Demo d1 = new Demo();

Thread t1 = new Thread(d1);

Thread t2 = new Thread(d1);

Thread t3 = new Thread(d1);

t1.start();

t2.start();

t3.start();

}

}

Assignment 4

create 2 threads. Write a program which displays number 1 to 10 using class lock.

[hint:- use "implements Runnable" and synchronized block]

public class Demo implements Runnable{

static void disp1() {

synchronized(Demo.class) {

for(int i=1;i<11;i++) {

System.***out***.print(Thread.*currentThread*().getName()+" "+i + " | ");

try{

Thread.*sleep*(200);

}

catch(InterruptedException ie){

System.***out***.println("in catch block");

}

}

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

}

}

public void run() {

*disp1*();

}

public static void main(String[] args) {

Demo d1 = new Demo();

Demo d2 = new Demo();

Thread t1 = new Thread(d1, "ta");

Thread t2 = new Thread(d2, "tb");

t1.start();

t2.start();

}

}

Assignment 5

create 2 threads

one thread will display 1 to 50

second thread will display 50 to 1

both the threads should start simultaneously.

(use implements method)

public class Demo implements Runnable{

private boolean isAscending;

public Demo(boolean isAscending) {

this.isAscending = isAscending;

}

public void run() {

if(isAscending) {

for(int i=1;i<51;i++) {

System.***out***.print(Thread.*currentThread*().getName()+" "+i+" | ");

try {

Thread.*sleep*(200);

}catch(InterruptedException ie) {}

}

}

else {

for(int i=50;i>0;i--) {

System.***out***.print(Thread.*currentThread*().getName()+" "+i+" | ");

try {

Thread.*sleep*(200);

}catch(InterruptedException ie) {}

}

}

}

public static void main(String[] args) {

Demo ascending = new Demo(true);

Demo descending = new Demo(false);

Thread t1 = new Thread(ascending, "ta");

Thread t2 = new Thread(descending, "tb");

t1.start();

t2.start();

}

}