

Will Townsend
Homework_02
COSC 420
Dr. Enyue Annie Lu

Source Code (threadingEx.java):

```
// Homework 02
// Will Townsend
//
// 09-09-2022

class FactorialThread extends Thread {

    private Thread t;
    private String tname;

    FactorialThread(String name){
        tname = name;
        System.out.println("Creating " + tname);
    }

    public void run(){

        int val = 1;

        System.out.println("Running " + tname);

        for(int i = 1; i <= 5; i++){

            val *= i;
            System.out.println( tname + ":" + i + "! = " + val);

        }

        System.out.println(tname+" Exiting...");
    }

    public void start(){
        System.out.println("Starting " + tname);
        if(t==null){

            t = new Thread(this, tname);
            t.start();
        }
    }
}

public class threadingEx {
    public static void main(String args[]){

        FactorialThread ft1 = new FactorialThread("Thread1");
        ft1.start();

        FactorialThread ft2 = new FactorialThread("Thread2");
        ft2.start();
    }
}
```

```
Homework — -zsh — 204x60
((base) williamtownsend@Wills-MacBook Homework % javac threadingEx.java
((base) williamtownsend@Wills-MacBook Homework % java threadingEx
Creating Thread1
Starting Thread1
Creating Thread2
Starting Thread2
Running Thread1
Running Thread2
Thread1:1! = 1
Thread1:2! = 2
Thread1:3! = 6
Thread1:4! = 24
Thread1:5! = 120
Thread2:1! = 1
Thread2:2! = 2
Thread2:3! = 6
Thread2:4! = 24
Thread2:5! = 120
Thread1 Exiting...
Thread2 Exiting...
((base) williamtownsend@Wills-MacBook Homework % java threadingEx
Creating Thread1
Starting Thread1
Creating Thread2
Starting Thread2
Running Thread1
Running Thread2
Thread1:1! = 1
Thread1:2! = 2
Thread1:3! = 6
Thread1:4! = 24
Thread1:5! = 120
Thread1 Exiting...
Thread2:1! = 1
Thread2:2! = 2
Thread2:3! = 6
Thread2:4! = 24
Thread2:5! = 120
Thread2 Exiting...
((base) williamtownsend@Wills-MacBook Homework % java threadingEx
Creating Thread1
Starting Thread1
Creating Thread2
Starting Thread2
Running Thread1
Running Thread2
Thread2:1! = 1
Thread2:2! = 2
Thread2:3! = 6
Thread2:4! = 24
Thread2:5! = 120
Thread1:1! = 1
Thread2 Exiting...
Thread1:2! = 2
Thread1:3! = 6
Thread1:4! = 24
Thread1:5! = 120
Thread1 Exiting...
((base) williamtownsend@Wills-MacBook Homework %
```