Bajrang 11212766

BCSE-506L (Performance Analysis of Programming Languages Lab)

EXPERIMENT NO. 8A2

AIM: Write a program in java to show the difference between minimum and maximum priority that can be assigned to the object of Thread class that you have created.

I had written two program for minimum and maximum priority.

Java Program 1

Source Code:

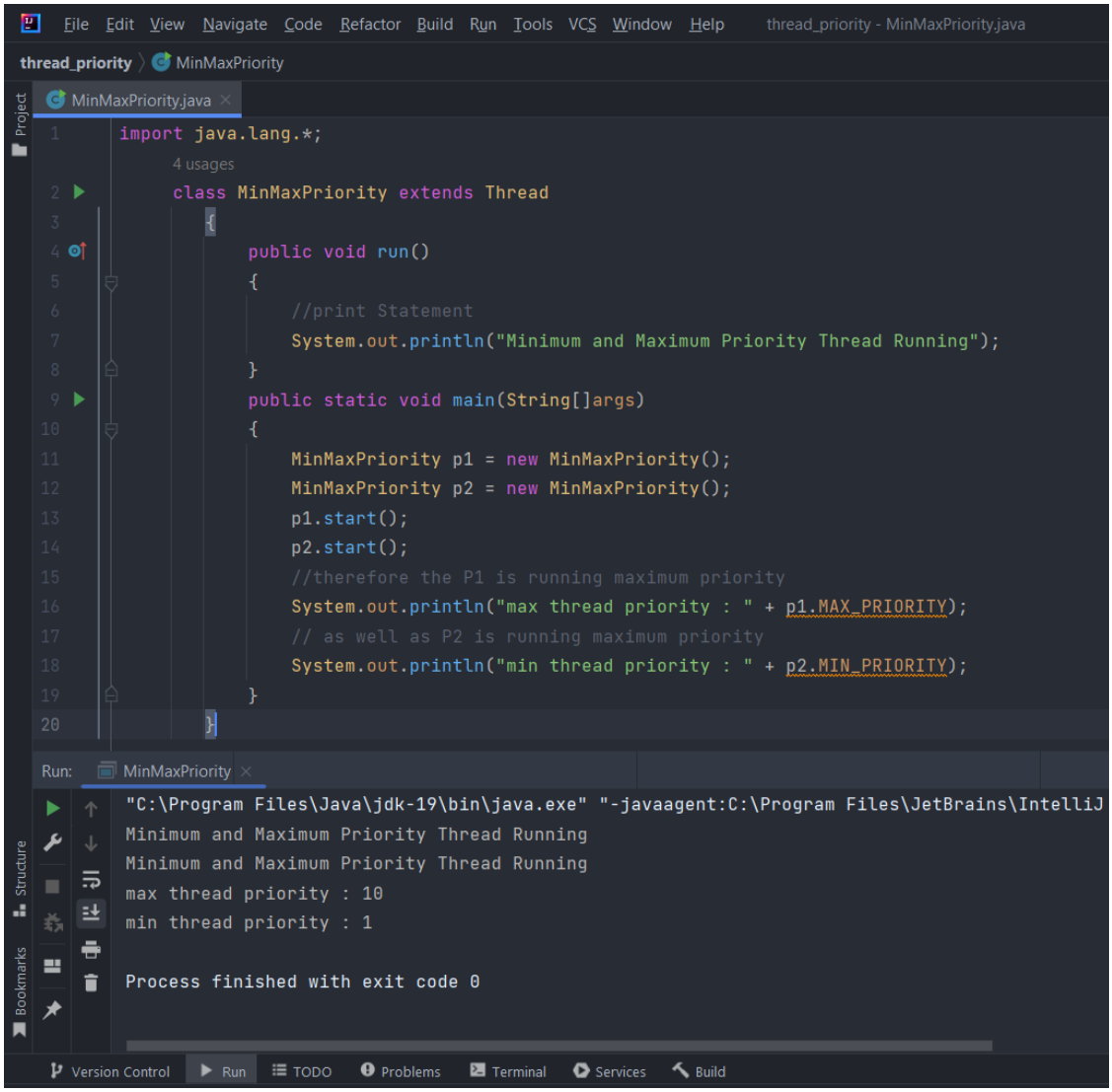
```
import java.lang.*;
   class MinMaxPriority extends Thread
     {
        public void run()
        {
           //print Statement
           System.out.println("Minimum and Maximum Priority Thread Running");
        }
        public static void main(String[]args)
        {
           MinMaxPriority p1 = new MinMaxPriority();
           MinMaxPriority p2 = new MinMaxPriority();
           p1.start();
           p2.start();
           //therefore the P1 is running maximum priority
           System.out.println("max thread priority : " + p1.MAX_PRIORITY);
           // as well as P2 is running maximum priority
           System.out.println("min thread priority : " + p2.MIN_PRIORITY);
        }
     }
```

OUTPUT:

```
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:C:\Program
Files\JetBrains\IntelliJ IDEA Community Edition
2022.2.3\lib\idea_rt.jar=52022:C:\Program Files\JetBrains\IntelliJ IDEA
Community Edition 2022.2.3\bin" -Dfile.encoding=UTF-8
-Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath "E:\Java
Project\thread_priority\out\production\thread_priority" MinMaxPriority
Minimum and Maximum Priority Thread Running
Minimum and Maximum Priority Thread Running
max thread priority : 10
min thread priority : 1

Process finished with exit code 0
```

IDE INPUT & Output:



JAVA PROGRAM 2

Source Code:

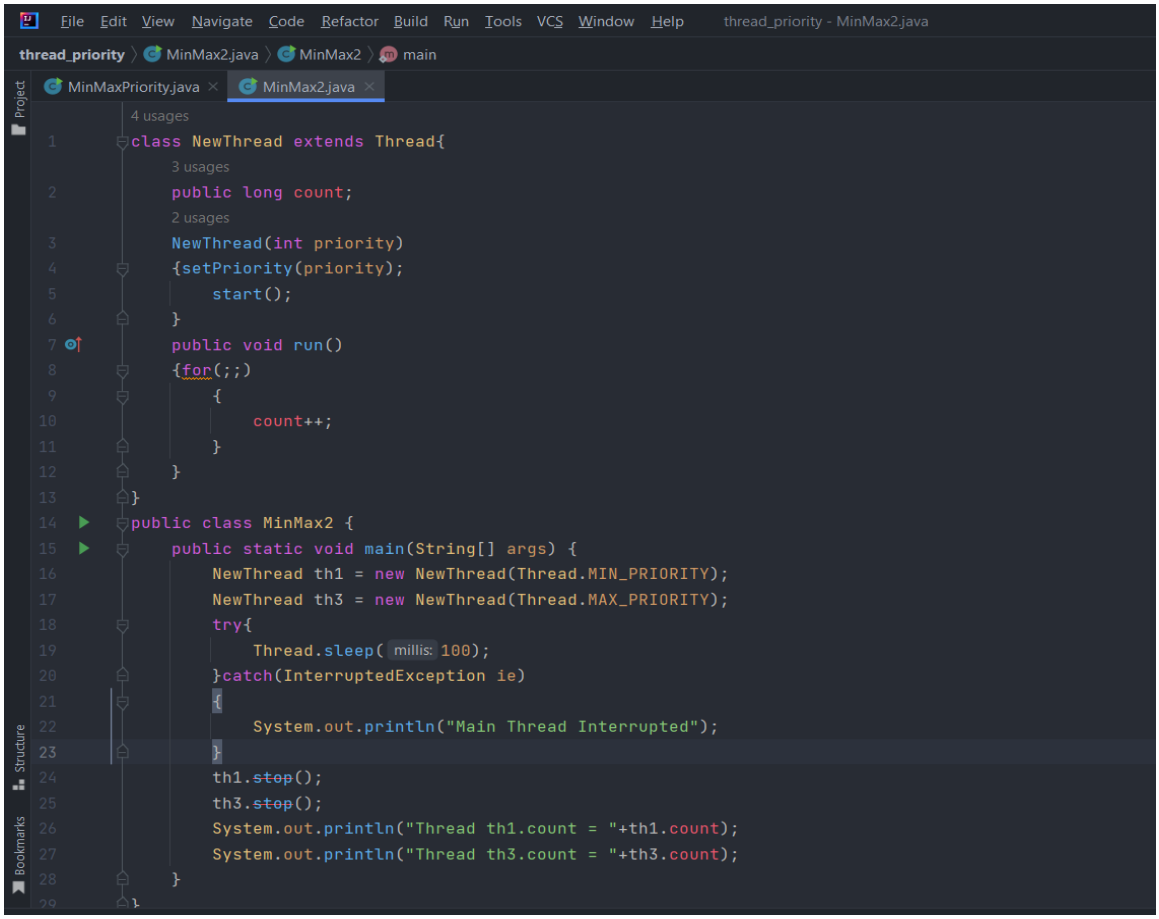
```
class NewThread extends Thread{
  public long count;
  NewThread(int priority)
  {setPriority(priority);
     start();
  }
  public void run()
  {for(;;)
     {
        count++;
     }
  }
}
public class MinMax2 {
  public static void main(String[] args) {
     NewThread th1 = new NewThread(Thread.MIN_PRIORITY);
     NewThread th3 = new NewThread(Thread.MAX_PRIORITY);
     try{
        Thread.sleep(100);
     }catch(InterruptedException ie)
     {
        System.out.println("Main Thread Interrupted");
     }
     th1.stop();
     th3.stop();
     System.out.println("Thread th1.count = "+th1.count);
     System.out.println("Thread th3.count = "+th3.count);
  }
}
```

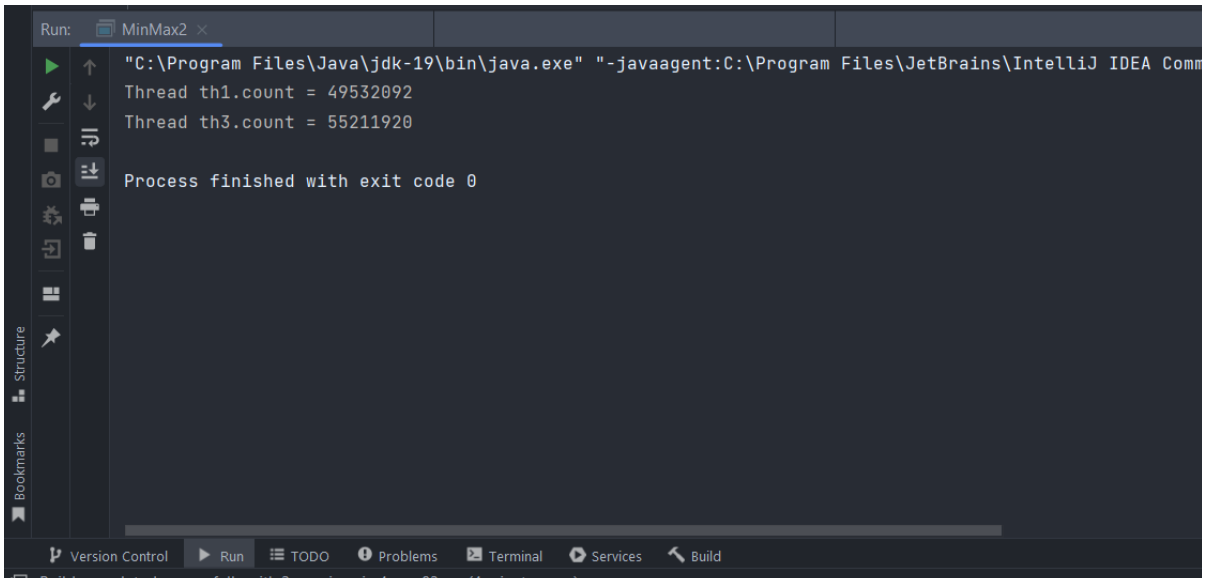
Output:

```
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:C:\Program
Files\JetBrains\IntelliJ IDEA Community Edition
2022.2.3\lib\idea_rt.jar=52069:C:\Program Files\JetBrains\IntelliJ IDEA
Community Edition 2022.2.3\bin" -Dfile.encoding=UTF-8
-Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath "E:\Java
Project\thread_priority\out\production\thread_priority" MinMax2
Thread th1.count = 49532092
Thread th3.count = 55211920

Process finished with exit code 0
```

OUTPUT From IDE:





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