Assignment 6

Due date – 11/11/2023, 11:59PM PT

1. Run the following code. Insert screenshot of the output in the submission document and explain why you see that result. <mark>(2 Points)</mark>

```java
class a6 extends Thread{
    public void run(){
        for(int i=1;i<4;i++){
            System.out.println(i);
        }
    }
    public static void main(String args[]){
        a6 t1=new a6();
        a6 t2=new a6();
        t1.start();
        t2.start();
    }
}
```

2. Modify the above code to print the below output. Highlight modifications by making comments in the lines that you have changed and give explanations in the comments. Make sure to run the code several times to make sure you always get this output. Submit a screenshot in the pdf. <mark>(2 Points)</mark>

   Expected output –

   1
   1
   2
   2
   3
   3
   4
   4

3. Explain the output lag, if any. (Is the output printed slowly? Or immediately. Why?) <mark>(1 Point)</mark>

4. Write a program and use the concept of multi-threading. Make LOGICAL use of the following in your program. No need to include this in the document. Only .java file with comments will do. – <mark>(4 Points)</mark>

   a. yield()
   b. sleep()
   c. getName()

d. join()
e. Comment in the code WHY you are using the method (to achieve what) to demonstrate your understanding of the concept.

5. Give one real life example, where you can apply multi-threading concept, what methods from those mentioned in question 4 can be applied? How? (1 Point)

Make sure that you submit **ONLY** 2 files. –
   1. LastnameFirstNameA6.java (includes the code and comments as required in question 4)
   2. LastnameFirstNameA6.pdf (includes screenshots and explanations of first 3 questions.)

Important Notes -
   1. Points may be deducted for incorrect formatting. (For example. Not commented as requested above / screenshots not included in the pdf.)
   2. Make sure your code is runnable from Terminal! (Points maybe deducted if it cannot run. **Hint**: Make sure the "packages" line is removed / commented out.)
   3. **DONOT** submit anything else (like separate screenshot attachments) They will not be considered for grading.