SLIIT
Discover Your Future

BSc (Hons) in Information Technology
Year 3

Lab Exercise – Weighted Composite Complexity Measure

SE3010 – SEPQM **Semester 1**

The objective of this lab is to learn how to calculate the complexity of an object-oriented program using the Weighted Composite Complexity (WCC) measure.

Question 1

Consider the following code segment and answer the questions given below:

```
public class DeamonThread extends Thread {
 public static void main(String[] args) {
   System.out.println("Entering main Method");
   DeamonThread t = new DeamonThread();
   int number =10;
   t.setDaemon(true);
   t.start();
   try{
    if(number == 10)
        Thread.sleep(3000);
   }catch(InterruptedException x){}
   System.out.println("Leaving main method");
 }
 public void run(){
   System.out.println("Entering run method");
   try{
    System.out.println("CurrentThread()is" + Thread.currentThread().getName());
    while(true){
      try{
         Thread.sleep(500);
         System.out.println("In run method: woke up again");
      }catch(InterruptedException x) {
         x.printStackTrace();
      }
    }
   }
 }
}
```

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a) List down the tokens that could be identified under the size factor of the WCC measure. Separate the tokens using a comma.

Program Statements	Tokens
public class DeamonThread extends Thread {	
public static void main(String[ ] args) {	
System.out.println("Entering main Method");	
DeamonThread t = new DeamonThread( );	
int number =10;	
t.setDaemon(true);	
t.start();	
try {	
if(number == 10)	
Thread.sleep(3000);	
}catch (InterruptedException x) {}	
System.out.println("Leaving main method");	
}	
public void run() {	
System.out.println("Entering run method");	
try {	
System.out.println("CurrentThread() is" + Thread.currentThread().getName());	
while(true){	
try{	
Thread.sleep(500);	
System.out.println("In run method: woke up again");	
} catch (InterruptedException x) {	
x.printStackTrace();	
}	
}	
}	
}	

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b) Complete the following table by identifying the values of S, Wn, Wi, Wc, Wt ,WC, and WCC.

Line No	Program Statements	S	Wn	Wi	Wc	Wt	WC
1	public class DeamonThread extends Thread {						
2	public static void main(String[ ] args) {						
3	System.out.println("Entering main Method");						
4	DeamonThread t = new DeamonThread( );						
5	int number =10;						
6	t.setDaemon(true);						
7	t.start();						
8	try {						
9	if(number == 10)						
10	Thread.sleep(3000);						
11	}catch (InterruptedException x) {}						
12	System.out.println("Leaving main method");						
13	}						
14	public void run() {						
15	System.out.println("Entering run method");						
16	try {						
17	System.out.println("CurrentThread() is" + Thread.currentThread().getName());						
18	while(true){						
19	try{						
20	Thread.sleep(500);						
21	System.out.println("In run method: woke up again");						
22	} catch (InterruptedException x) {						
23	x.printStackTrace();						
24	}						
25	}						
26	}						
27	}						
28	}						
WCC Value							