PLTL - RECURSION.

The objective if this PLTL session is to help the students understand the concept of recursion and reinforce it by simulating the process themselves.

*Tentative Schedule:*  

<table>
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<th>Time(minutes)</th>
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| 1. Call roll and explain instructions to the students | 5  
| 2. Recursion exercise | 20  
| • If the number of people attending the lab is five or less we will let all the students work in the same group. In case the lab has a bigger number of students, we will split them into several groups as needed. In the activity, each student will be given a cardboard with the code of a recursive function. They will be asked to figure out the output of the recursive method. In order to get the answer, each student will simulate he/she is the current call to the method. He/she will calculate the output of that specific call in his/her own cardboard, and pass the new parameters to a new recursive call (another student). Information about the calls and their output will be passed from one student to another one. They will continue this process until they finish all the recursive calls and get the final output of the method. The output if each recursive called should be recorded in another cardboard that will be shared by all the students to represent the screen. Details about the cardboard and the recursive method are given in the next page. |  
| 3. Group discussion about whether the obtained output is correct or not and why. | 10  
| 4. The students will reflect on the steps they used to get the output of the recursive method. Based on that, they will determine a general procedure to solve any recursive problem. | 10  
| 5. Discuss the different methods the students come up with to solve recursive problems. | 5  
|  
| Total Time: 50 minutes. |  

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METHOD

```java
public void print(int n)
{
    if ( n > 0 )
    {
        System.out.println (n);
        print(n - 1);
        System.out.println (n);
    }
}
```