



## Florida Polytechnic University – Computer Science Department Programming Assignment 1 Spring 2020 - Process API for UNIX

**Submission deadline:** Jan 23<sup>rd</sup> 11:59 pm

### **Deliveries:**

- **Code:** a .c program following the format described below.
- **Report:** Brief report explaining how you address the problem, and screenshots of the output.  
**Include this paragraph in your report, and sign (failing in include the paragraph and signing will result and total grade of zero in this homework).**

**Requirements:** The program should use the POSIX api from unix/linux, and should run in the university UNIX system (ember).

**Note:** Use your student ID number as your program name.

I certify that I coded this program by myself and this code doesn't correspond to the intellectual work of someone else.

Signature: \_\_\_\_\_

Rubric

Item	Value
Program	75
Report	25
<b>Total</b>	<b>100</b>

### **Description (Part A)**

This program should use the fork() instruction to create 1 or 2 children. If the parent creates just a child, the parent will send the array to the child. The child will receive the array and it will add its elements. Then the child will send the summation to the parent who will print that summation. Now if the parent creates two children, it will send the first half of the array to one child and the second half to the another one. Each child will receive the corresponding half of the array, and it will compute it sum. Each child will send the partial sums to the parent who will collect and will add them. Finally, the parent will print the final sum. (Note: Use arrays of even length).