Assignment #1 - Programming Rubric

Question #1: 15 pts

- Can the work be reproduced? (Does the program compile?) (10%)
- Does the program produce the intended result? (“I am Process A”, “I am Process B”, “I am Process C" & “Goodbye”) (10%)
- Program code uses shared memory (All A, B and C processes)? (15%)
- Program uses shared memory detach and remove calls appropriately? (‘shmdt’ and ‘shmctl’ function calls) (15%)
- Programs adhere to the programming specification? (Separate processes w/ shared memory) (50%)
    - Process A waits for B & C to complete before detaching/removing shared memory.
    - Process B waits for Process A signal before printing to shared memory.
    - Process C waits for Process B signal before printing to shared memory.
    - See assignment programming specifications sheet. (Provided by Dr. Ghosh)

Question #2: 6 pts

- Can the work be reproduced? (Does the program compile?) (20%)
- Programs produce the intended result? (“I am Process A”, “I am Process B”, “I am Process C" & “Goodbye”) (20%)
- Program code uses shared memory for both implementations? (20%)
- Programs use shared memory detach and remove calls appropriately? (20%)
- Programs adhere to the programming specification? (Two implementations: 1) child processes forked from parent and nested fork processes) (20%)
    - See assignment programming specifications sheet. (Provided by Dr. Ghosh)

Question #3: 9 pts

- Question 3a answered correctly? (33.3%)
- Question 3b answered correctly? (33.3%)
- Question 3c answered correctly? (33.3%)

Question #4: 10 pts

- Can the work be reproduced? (Does the program compile?) (10%)
- Does the program produce the intended result? (median value) (20%)
- Program code incorporates a sorting and median selection algorithm? (20%)
    - Sorting Algorithm : 10%
    - Median Selection Algorithm : 10%
- Program adheres to the programming specification? (Uses RPC protocol) (50%)
    - See assignment programming specifications sheet. (Provided by Dr. Ghosh)

Question #5: 10 pts

- Can the work be reproduced? (Does the program compile?) (10%)

- Does the program produce the intended result? (Ascending/Descending sorted array) (20%)
    - Ascending Output : 10%
    - Descending Output : 10%
- Program code sorts in ascending/descending order within the server? (20%)
    - Parsing ascend/descend command in the client : 6.66%
    - Include server modification to determine which direction to sort : 6.66%
    - Ascending/Descending sorting algorithms (server) : 6.66%
- Program adhere to the programming specification? (Uses RPC protocol) (50%)
    - See assignment programming specifications sheet. (Provided by Dr. Ghosh)

Grading Procedure

- Each question starts off with a score of 100%. For each of the questions within the assignment, the criterion failed is deducted from the question's total percentage.

    - e.g., Question #1:
        - Can the work be reproduced? (Does the program compile?) (10%)
            - Yes
        - Does the program produce the intended result? ("I am Process A", "I am Process B", "I am Process C" & "Goodbye") (10%)
            - No
        - Program code uses shared memory (All A, B and C processes)? (15%)
            - Yes
        - Program uses shared memory detach and remove calls appropriately? ('shmdt' and 'shmctl' function calls) (15%)
            - No
        - Programs adhere to the programming specification? (Separate processes w/ shared memory) (50%)
            - Yes

        Total Question Percentage : 100%
        Unmet Criterion Percentage : 10% + 15% = 30%
        Question Total Percentage Gained : 100% - 30% = 70%
        Points Received : 15pts * 70% = 10.5pts out of 15 total

- The remaining questions continue in this fashion.

- If the assignment has been submitted late, a penalty is deducted from the total score per Dr. Ghosh's programming specifications sheet.

- Discretion will be utilized when calculating scores so that you have the maximum number of points possible.