**Lab Assignment 3**

Q1. Write a program in C to get the largest, minimum, and the average of elements in an array. The program should contain multiple functions for each of the specified functionality.

Q2. Using the criterion of switch and case, create a context switching program. It should have the following options:

1. If a user enters “+”, the system should print- “Process in new state”
2. If a user enters “-”, the system should print- “Process in ready state”
3. If a user enters “\*”, the system should print- “Process in running state”
4. If a user enters “/”, the system should print- “Process moved to waiting state”
5. If a user enters “$”, the system should print- “Process waiting for CPU”
6. If a user enters “#”, the system should print- “Process completed”

Q3. Write a program to add and subtract two complex numbers using structures.

Q4. Repeat question number three via unions.

Q5. Create a C program to store the information of 10 running processes. The program should implement the idea of structures. The information of a process should be:

1. Process\_ID (integer).
2. CPU\_ID (integer).
3. State (string)
4. Parent\_id (Integer)
5. Total\_wait\_time (integer).