## Project – Phase 2

Deliverables will include an updated **software design document**, revision 2, and the **code** (working) for handling the scheduling of processes (jobs) for each of the two algorithms, test cases with explanations and screenshots demonstrating your solution for each algorithm. All capabilities from Phase 1 are assumed to be working and should be used, where possible. This solution should provide some basic form of user interface for presenting the order that processes will run, when they will complete, and throughput measured; but not necessary the final user interface.

# Overview

In this phase – at a minimum your solution to needs to able to run two different algorithms for scheduling of processes: First Come First Server (FCFS) and Round-Robin (RR) for simulating the Scheduler aspects of an Operating System. **You will be asked as a Team to present and demonstrate your solution from Phase 2**.

# Problem – Phase 2

The development effort of phase 2 focuses on the basic scheduling of processes in your simulator with these two algorithms. RR, which is a preemptive algorithm (uses Time Slicing with a Quantum) and FCFS which is non-preemptive (once a process is assigned it runs until it completes); however both algorithms will switch to a different process when an I/O event happens. The only machine you will need to manage will be a single processor; all other resources can be assumed to be unlimited (memory and I/O). For the Round-Robin algorithm the time quantum value should be defined as part of the setup of the environment. Also, you should have the ability to set the Context Switch penalty (time penalty for the Dispatcher to switch the running process) as described. Lastly, your input file (the file of processes and their associated information) should be extended to include a fixed I/O event frequency – for example I/Ofreq of 2 means that an I/O event happens every time clock cycles that process is running.

**Coversheet (which is required along with all of your material):**

Name(s) of each member

1. Code
2. Test cases with screenshots, include an explanation of what is being verified and why it proves it works.
3. Updated Software Design Document
4. Project Status