In this lab the aim is to simulate various scheduling algorithms you have learned in theory. It will be implemented with skeleton processes with only their running times specified, possibly with bursts.

1. Decide on a reasonable number of processes (five to ten).

2. Generate a set of run times for this set of processes, without I/O. Generate also a set of arrival times. You can program these into arrays, and also provide for dynamic inputs by filling the array entries using random numbers in a suitable range.

3. Implement the following scheduling algorithms:
   - First-come, first-served.
   - Round-Robin with a suitable time-slice.
   - Shortest-remaining-time first.

4. Implement some skeletal context-switch work for each process.

5. Evaluate the performance by recording the performance of the algorithms on average waiting time, average turnaround time and on CPU utilisation (only in the preemptive cases, since there is no I/O or other procedure calls).