**Algorithms**

The program offers the following scheduling algorithms:

1. First Come, First Served (FCFS)
2. Priority Scheduling (PS)
3. Shortest Job First (SJF)
4. Random Job Selection

**Additional Options**

* You can choose to generate additional random processes for the simulation to stress test the program. Specify the number and maximum burst time for these processes.
  + When specifying a burst time, it will generate processes with random burst times between 0 – maximum burst time.
* You can change the number of threads used for the simulation, which represents the number of processes that can run concurrently.
  + This is set to 3 by default.
* Advanced result information is available for more detailed simulation output, but it may be less readable with a large number of processes.

**Code Overview**

The program consists of two main classes:

* **Process**: Represents a process with attributes Process ID, Burst Time, and Priority.
* **Scheduler**: Manages the scheduling of processes using various algorithms and calculates metrics. Additionally runs the simulation.

**Results**

Upon completion of the simulation, the program displays the following metrics:

* Average Process Wait Time
* Average Process Turnaround Time
* Average CPU Memory Usage
* Total Cumulative Burst Time
* Actual Run Time

**Advanced Information**

* The program calculates and displays additional information if the "Advanced Result Information" option is selected.

Example of simulation results:

A screenshot of a computer program

Description automatically generatedA screenshot of a computer program

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Description automatically generated