Investigating the

differences in CPU schedulers

Operating Systems coursework – 262924 – 19th March 2024

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# Running the experiments

A screenshot of a computer code

Description automatically generatedTo run the experiments, you will need to execute the provided bash script. This script, named run.sh, saves logs in run.log. Within this bash script, there are 15 different seeds, with 5 for each experiment. These seeds are used in the input generator to reproduce identical input files when all parameters remain the same. They are randomly generated using a Python script that produces 15 random numbers between 1 and 100,000. Additionally, the bash script defines both the simulator and input parameters for each experiment. These parameters are stored in the input\_parameters and simulator\_parameters folders within each experiment's folder, identified by its number. Also, these parameters are used to execute the two classes: InputGenerator and Simulator. The resulting output files are saved in input\_files and scheduler\_outputs, containing 5 schedulers and 5 outputs for each, totalling 25 outputs per experiment.

# Experiment 1: Investigating the scalability of the scheduling algorithms.

## Introduction

Blah blah

## Methodology

Blah blah

## Results

Blah

## Discussion

blah

## Threats to validity

blah

## Results

blah

# Experiment 2: Investigating the average wait time for each algorithm on varying processes.

## Introduction

Blah blah

## Methodology

Blah blah

## Results

Blah

## Discussion

blah

## Threats to validity

blah

## Results

blah

# Experiment 3: Investigating the impact of workload variability on the scheduler’s performance.

## Introduction

Blah blah

## Methodology

Blah blah

## Results

Blah

## Discussion

blah

## Threats to validity

blah

## Results

blah