

# Programming Assignment 4

## Report/Analysis

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### 1. Introduction

- a. This assignment is designed to help us understand how we can use patient and worker threads that communicate with each other through the BoundedBuffer. We can use this method to obtain data points and copy files.

### 2. Analysis

#### a. Data Points:

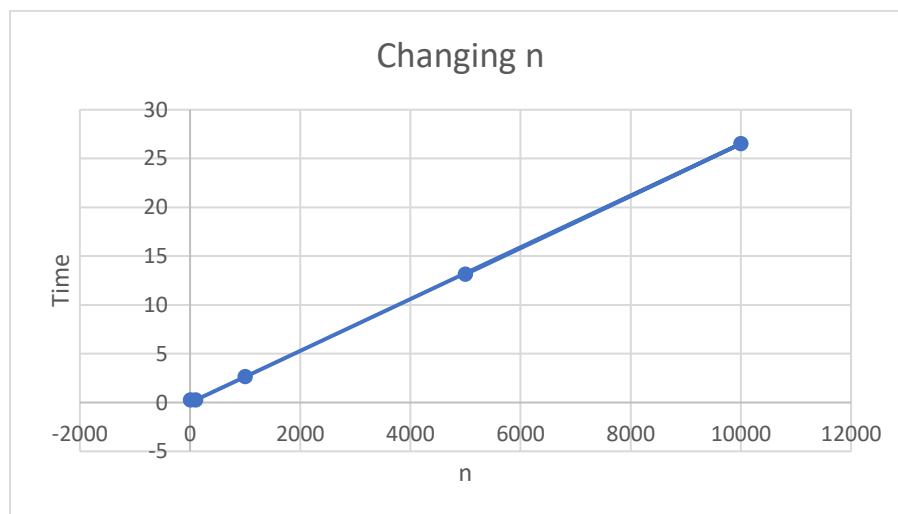
- i. Data points can be obtained through the FIFO channel and using the Histogram class we can create a histogram for each of the patients' ECG values. The histogram gives us an idea of the average ECG value of each patient. The increase in the number of worker threads showed a decrease in the running time. The increase in the number of data points showed an increase in the running time.

#### b. File Request:

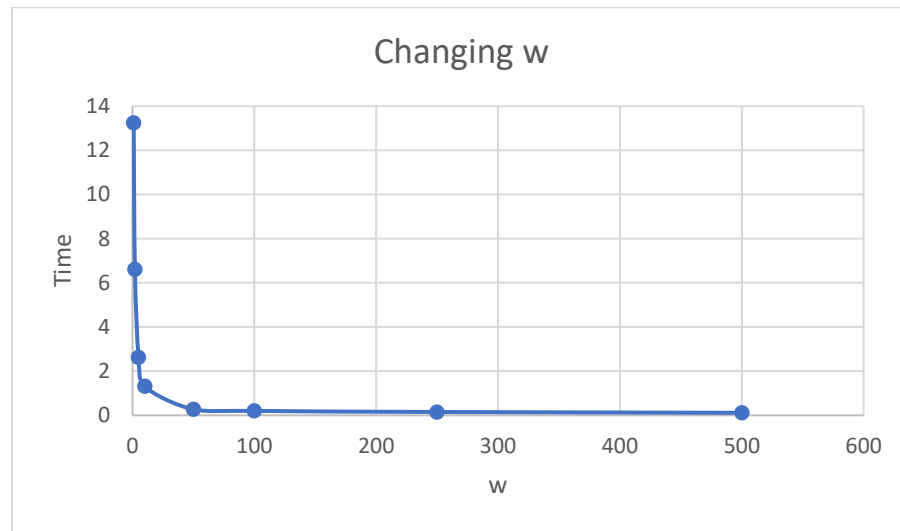
- i. File request was used in a similar way as was for in PA2 but the difference the files are sent in to the bounded buffer already divided so that when the worker receives it, all it has to do is run it through the channel and write it to the new file.

### 3. Graphs

#### a.



b.



#### 4. Conclusion

- a. In conclusion, the assignment gave us a better understanding of how tasks can be distributed and data can be transferred through buffers and channels.