

DATA 304/COMP312 - Group 2 Project

Group 2

28 April 2023

Contents

Report 2 - Submit Collected Data	1
Group Members	1
Second Meeting w/ Service Identification	1
Identifying Tools	1
Louis Cafe Data	2
Plots	3

Report 2 - Submit Collected Data

Group Members

Names	Emails	ORCID
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James Boyle	boylejame1@myvuw.ac.nz	0009-0002-1177-2922

Second Meeting w/ Service Identification

On the 19th of April we had 2 new members added to our group Jacob French and Alif Nurrokhman as their previous group had disbanded. We had a meeting with Jayden, Jacob and Alif. We further discussed the WCT idea, however we discovered that although we could access individual waiting and service times for the queue we had not been given access to the individual inter-arrival times. Jayden emailed his manager to inquire about this. Jacob and Alif also brought up that they had previously gained permission to observe the Louis Cafe queue in their previous group.

We had another group meeting on the 22nd of April with all members of our group. In this meeting Jayden confirmed that unfortunately his manager could not give us access to the inter-arrival times. As we could no longer gather the correct data from WCT we decided against this idea. Instead we decided to gather data from the louis cafe.

Identifying Tools

The tools we decided to use for our investigation were:

- Notebooks, pens, and laptops for recording and capturing data (one per group member)

- Jupyter notebook to model the queues in Python (specifically using the SimPy, NumPy, and Panda packages)
- Discord for communication purposes
- GitLab for creating a Git repository
- RMarkdown to write the report
- One person to track the queue, one to time the arrivals, and one to time the service
- Online stopwatch in order to time multiple people at once
- Google sheets document with data set, to be later converted into CSV as a machine-readable format

Louis Cafe Data

```
cafe = read.csv("cafe Louis Data.csv")
pander(head(cafe,10))
```

Observations	Inter.Arrival.Time	Waiting.Time	Service.Time
1	0	0	51.9
2	15.38	43.96	35.75
3	68.47	0	25.13
4	13.09	0	33.16
5	19.4	11.14	31.19
6	17.32	24.72	37.78
7	125	0	15.17
8	16.2	0	23.05
9	13.87	11.72	22.61
10	198.9	0	38.7

Plots

