



**TEB1113/TFB2023: Algorithm and Data Structure  
September 2024**

**REPORT:  
TIMING TEST**

**Lecturer: Dr M Nordin B Zakaria**

<b>No.</b>	<b>Name</b>	<b>ID</b>	<b>Program</b>
<b>1.</b>	Danish Safin bin Zulkarnain	24000149	CS
<b>2.</b>	Abdullah Shahir bin Zulmajdi	24000112	CS
<b>3.</b>	Dzuriyat Ilhan bin Mohd Ridzuan	24000061	CS
<b>4.</b>	Muhammad Faiq Hakeem bin Farid	24000054	CS
<b>5.</b>	Ahmad Aqil Fahmi bin Ahmad Nor	24000235	CS

# Performance Comparison of Code Execution Across Three Devices

## 1.Introduction

This report aims to compare the performance of code execution across three devices. The primary focus is on understanding how the different hardware specifications impact the performance of a common program executed on each device. The key devices tested include processors with different generations and RAM capacities. This analysis provides insight into the influence of these specifications on code performance.

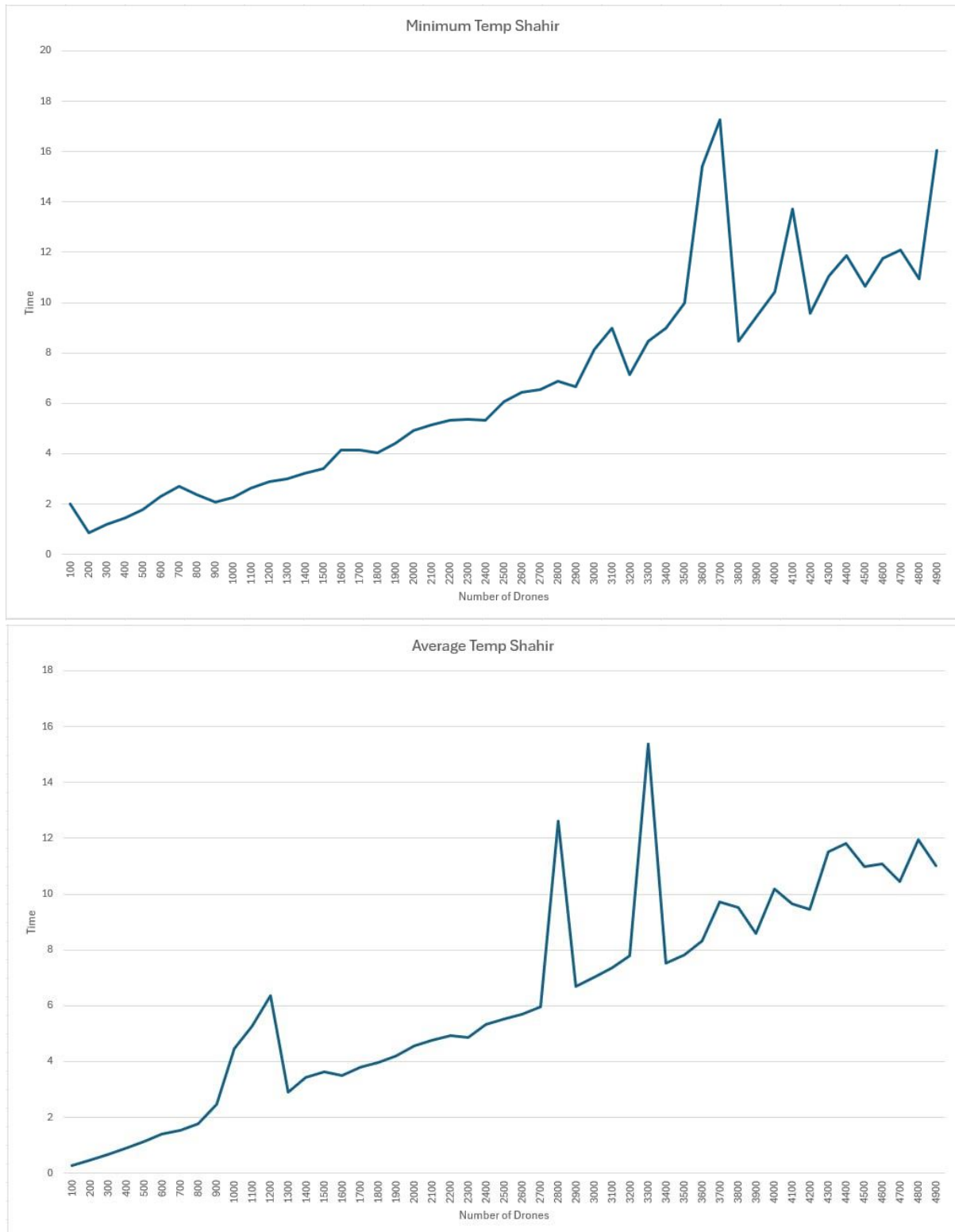
## 2.Device Specifications

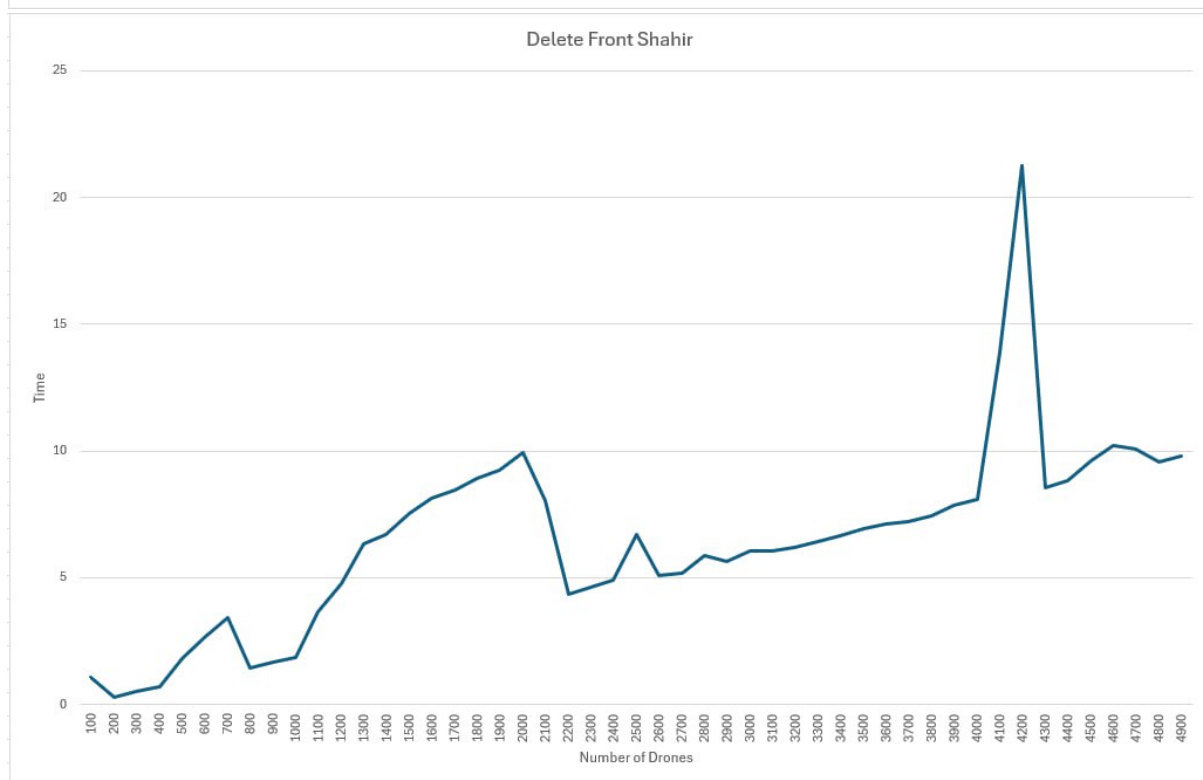
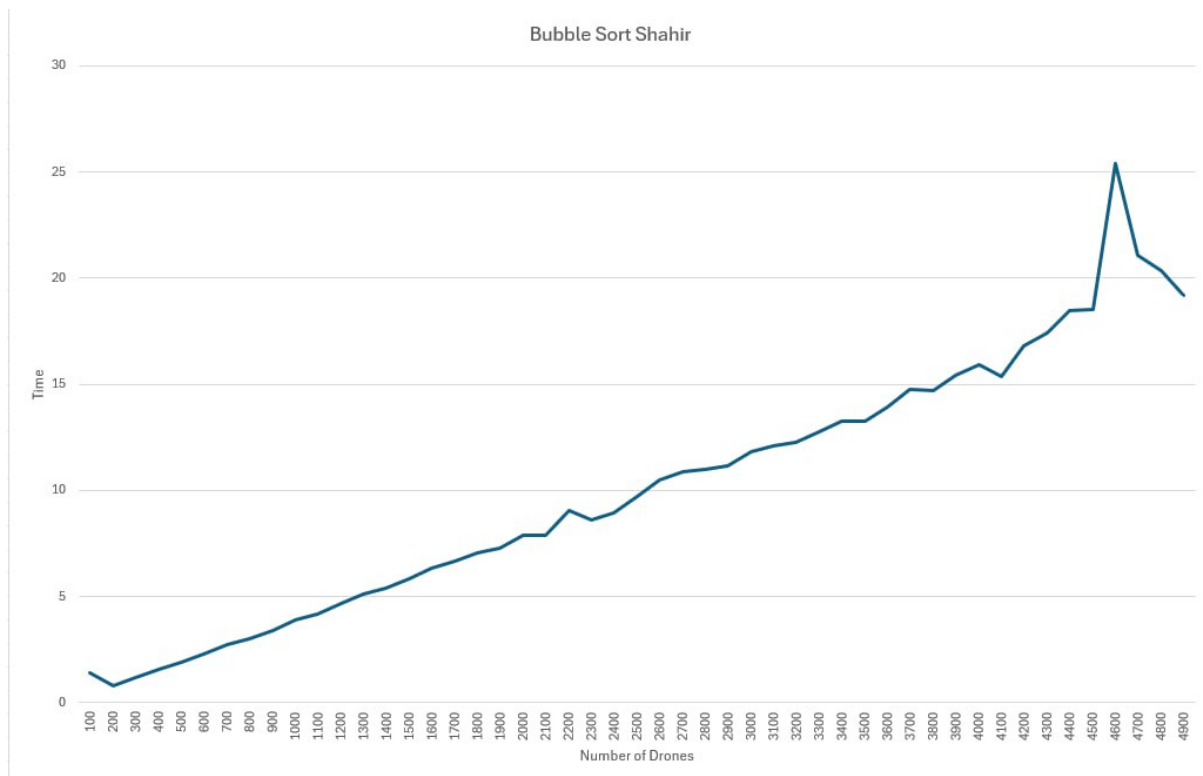
The following devices were used for testing the program execution:

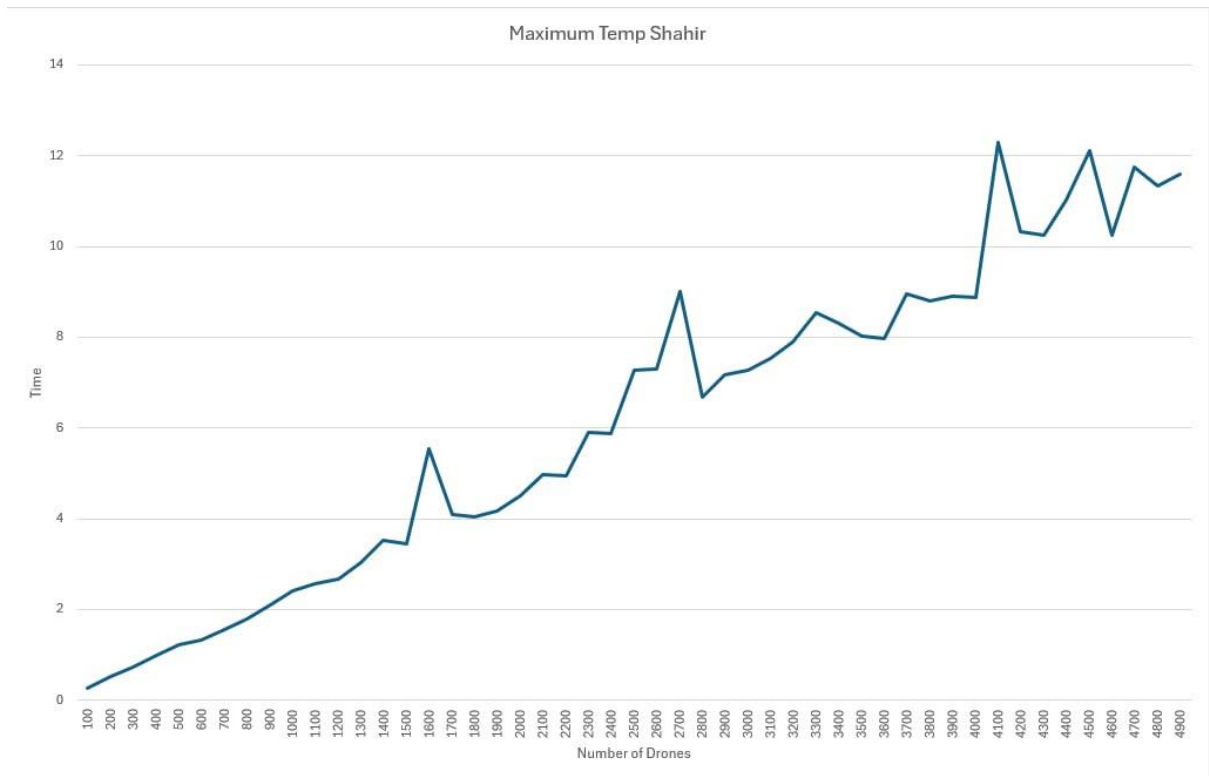
Device Name	Processor	RAM	System Type
Shahir	12th Gen Intel(R) Core(TM) i5-12500H	16	64-bit operating system, x64-based processor
Safin	11th Gen Intel(R) Core(TM) i3-1115G4	8	64-bit operating system, x64-based processor
Yat	11th Gen Intel(R) Core(TM) i5-11400H	16	64-bit operating system, x64-based processor

### 3.Data Comparison: Five Different Sorting Functions

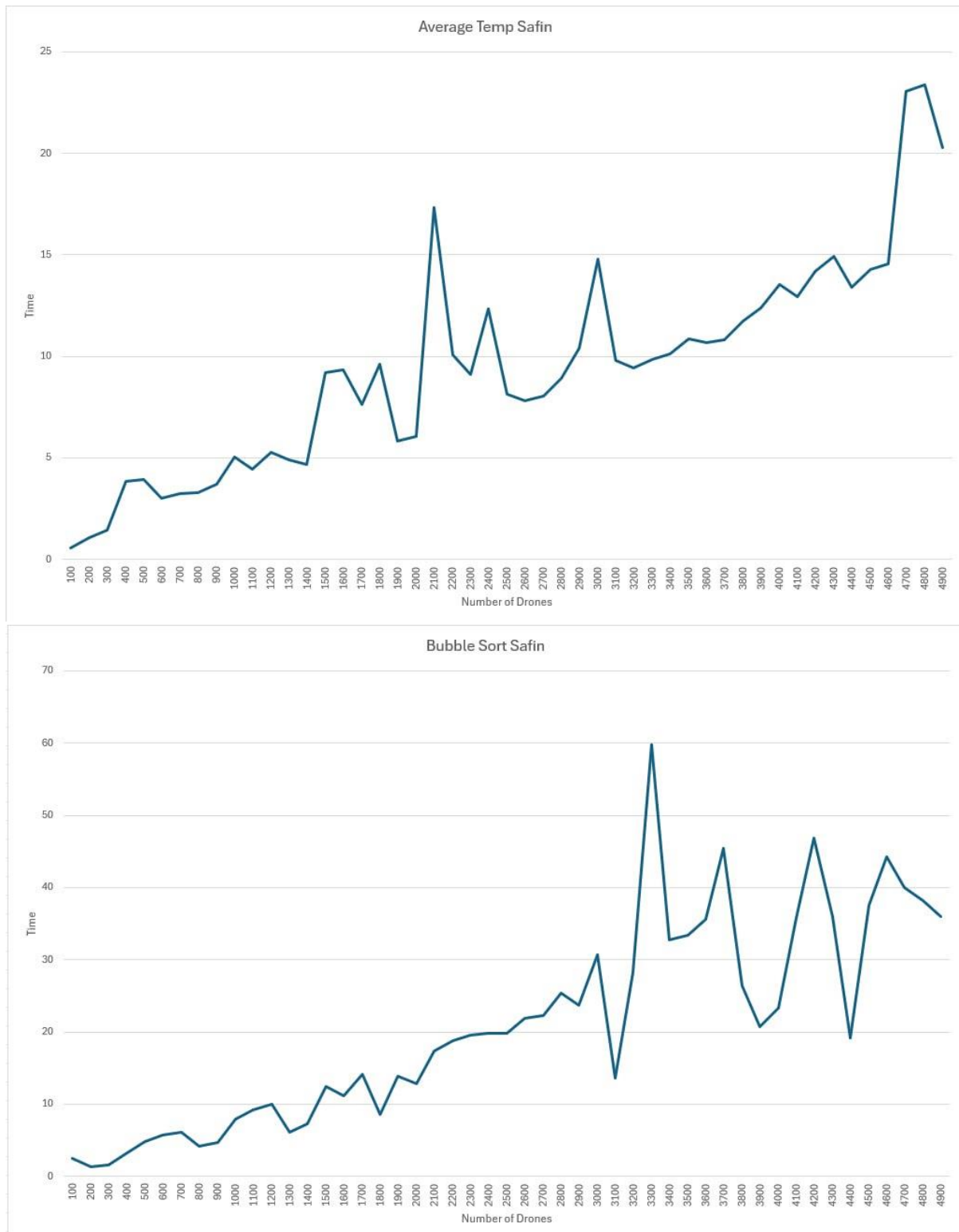
#### 3.1 Device 1 – Shahir

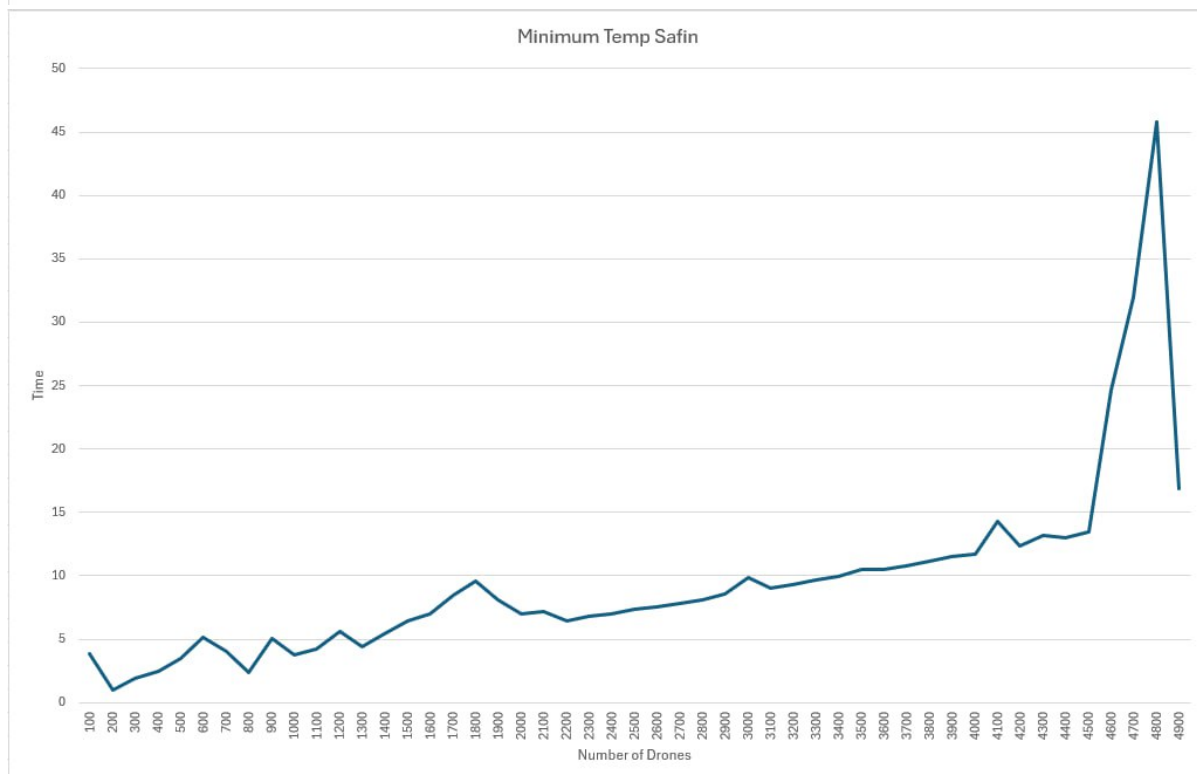
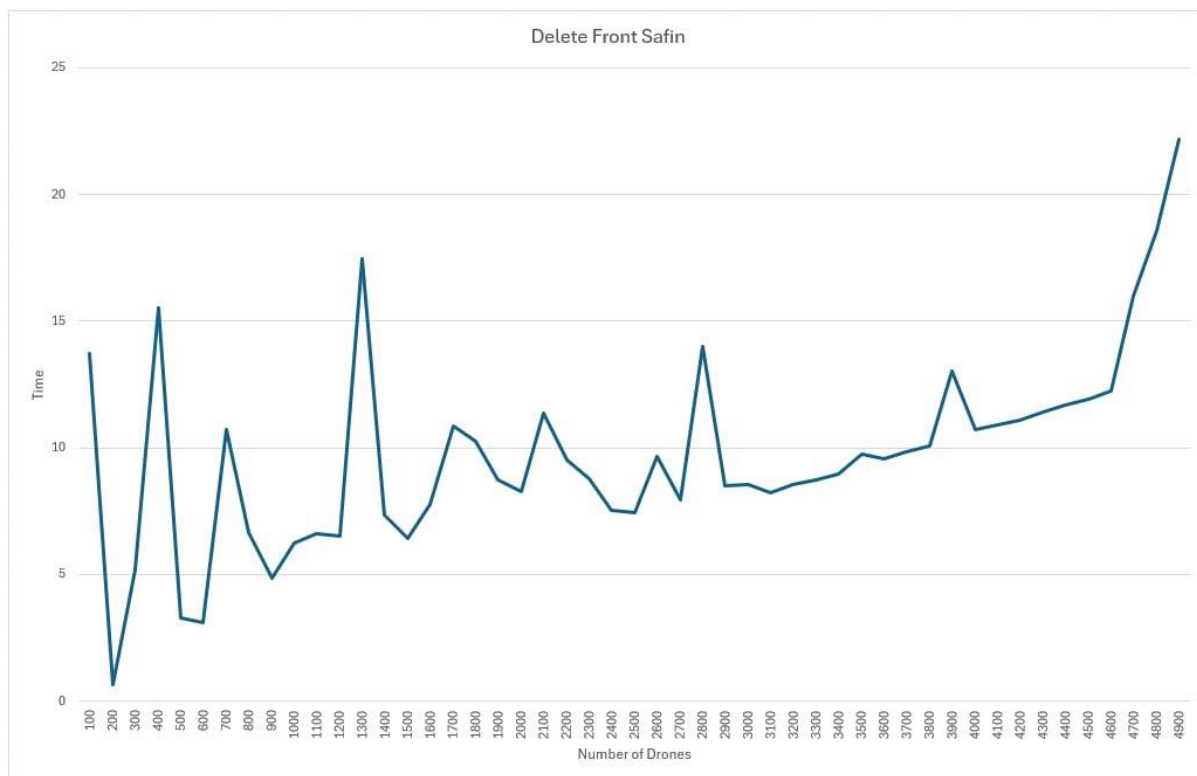


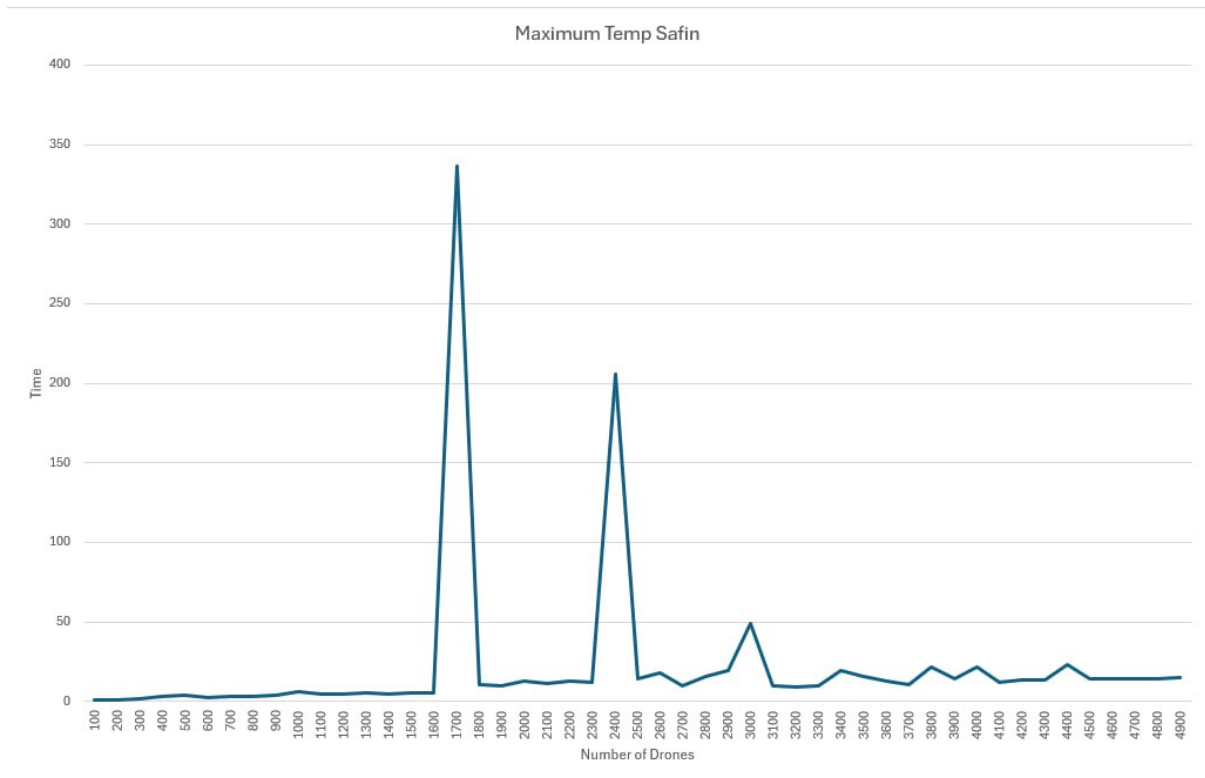




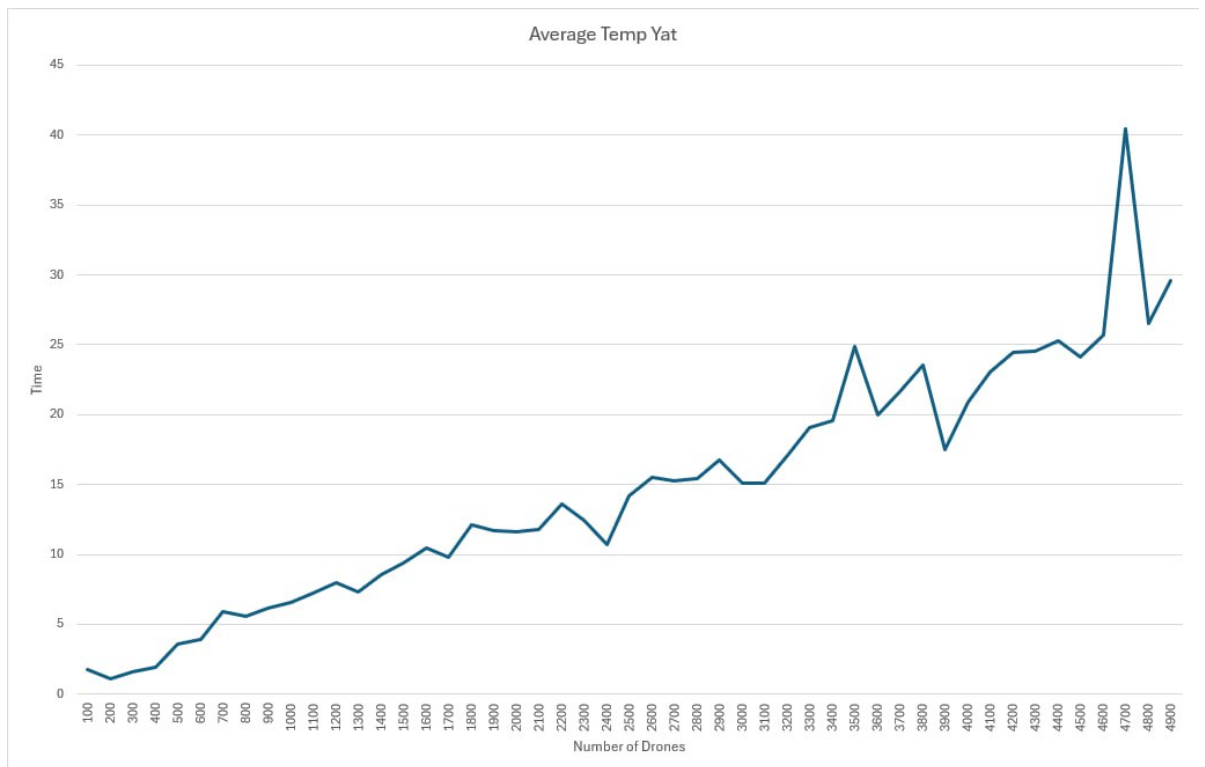
### 3.2 Device 2 – Safin



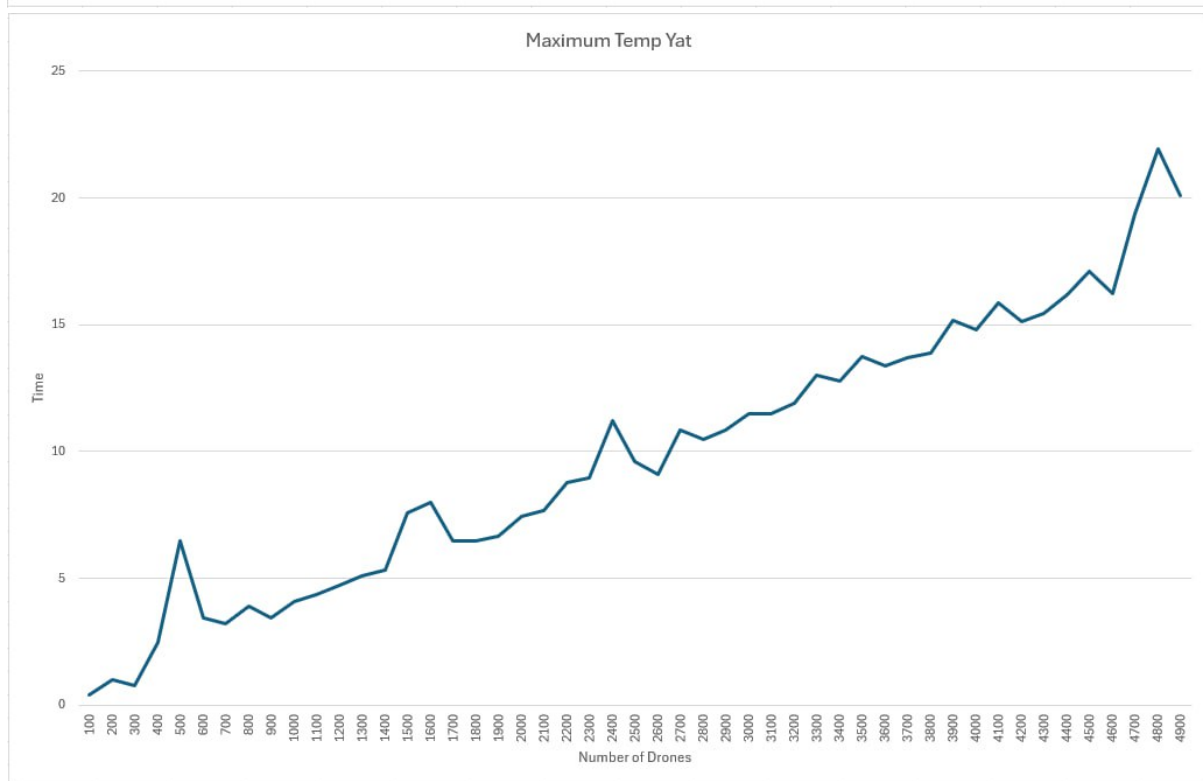
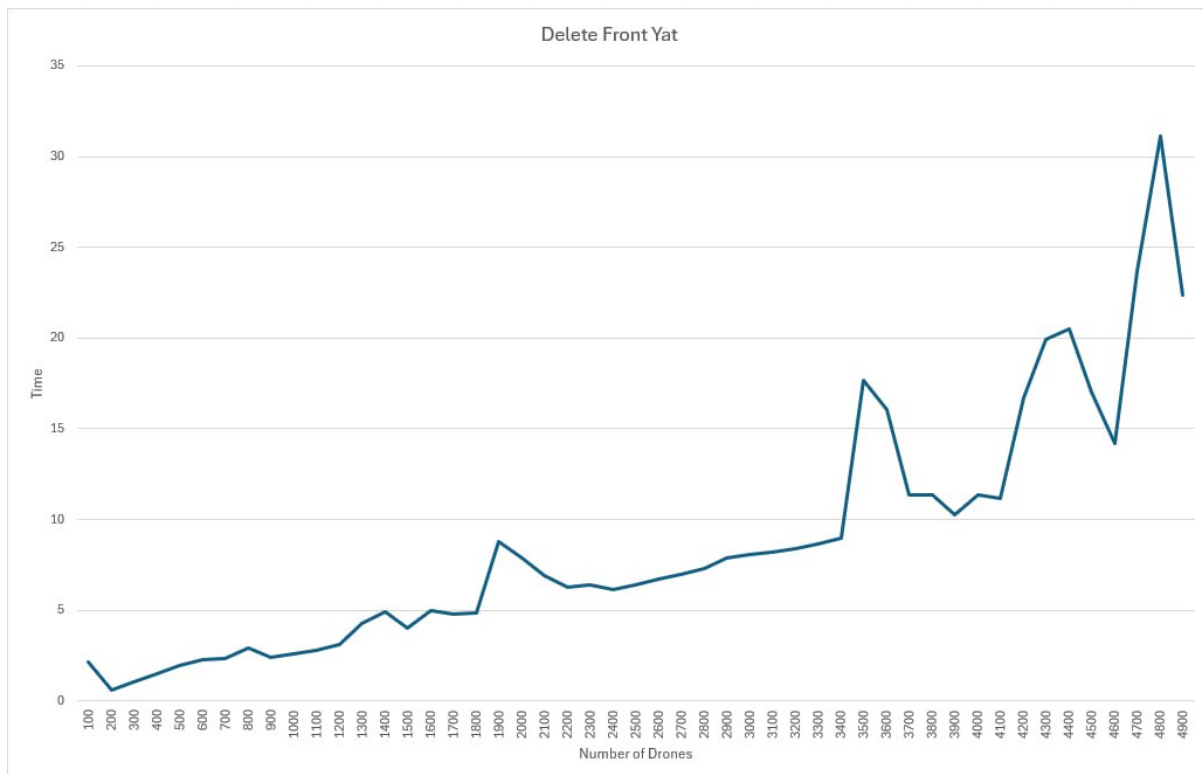


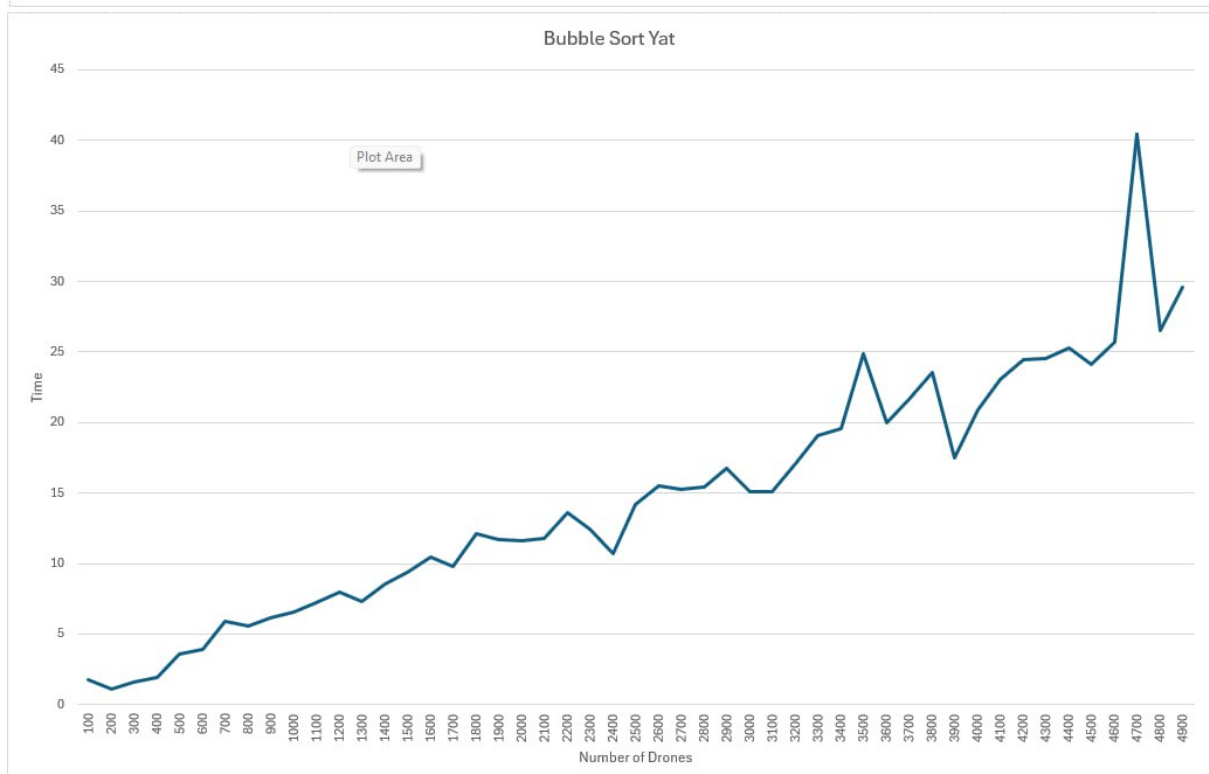


### 3.3 Device 3 – yat









## 4. Discussion and Analysis

The analysis of the performance across these devices reveals that while CPU generation plays a critical role, the amount of available RAM also has a notable impact on execution time, particularly for larger data sets. Shahir's device, with its newer generation CPU and larger RAM, performs more efficiently. Pros of Shahir:- Newer CPU with higher efficiency- Larger RAM for better multitasking Page 7 Performance Comparison of Code Execution Across Three Devices Cons of Safin:- Older generation CPU- Lower RAM which results in slower performance for memory-intensive tasks. Pros of Yat:- Balanced performance due to sufficient RAM and a mid-range CPU Overall, a balance between CPU power and memory resources is essential for achieving the best execution speed.

## 5. Conclusion

In conclusion, the performance differences between the three devices demonstrate the importance of both processor generation and RAM in code execution efficiency. Shahir's device consistently outperformed Safin and Yat, primarily due to its newer CPU and higher RAM. For future performance improvements, opting for devices with more modern processors and larger memory capacities is recommended.