Peer to Peer Messaging App Documentation

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# Journal

This section documents the decisions and challenges faced along the development of the project.

# Week 1

15 April 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Find need or opportunity |

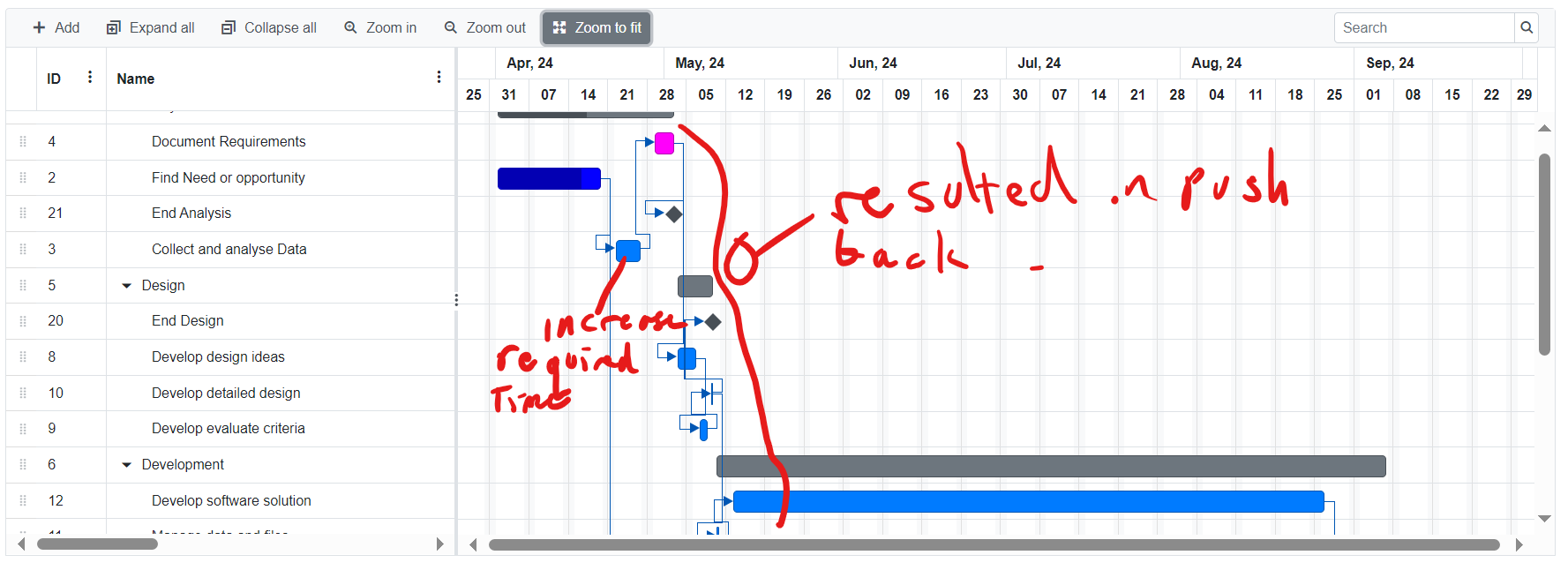
## Key Decisions

1. Found a need or opportunity
2. Decided on project

## Challenges

None

## Gant



# Week 2

22 April 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Create Gannt Chart |

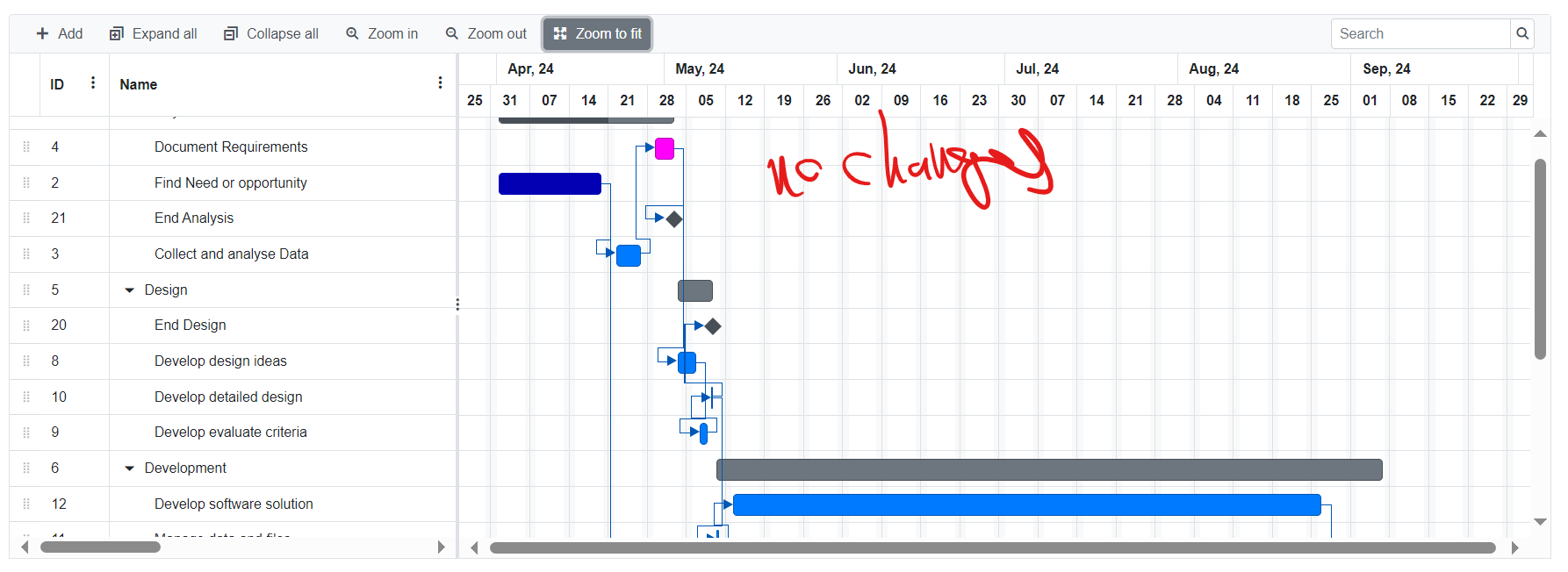
## Key Decisions

1. Found a need or opportunity
2. Decided on project

## Challenges

1. Gannt chart software being bad. (online gannt, ????)

## Gant



# Week 3

29 April 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Choose Development model |

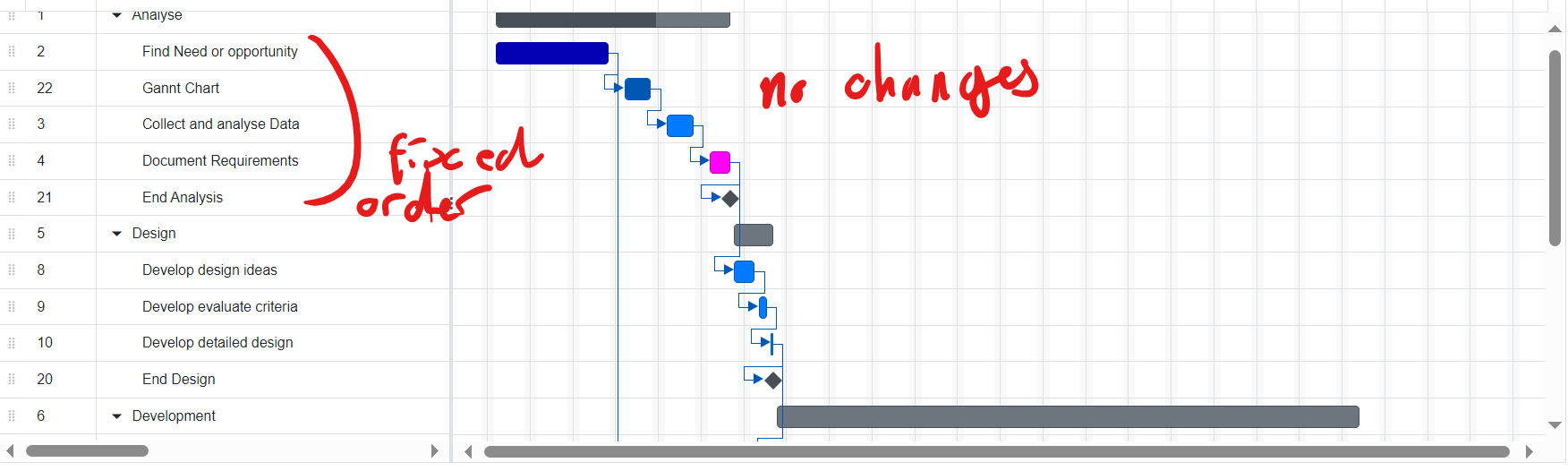
## Key Decisions

1. Decided on a development model for the project – waterfall
2. Wrote a document outlining the reason for the decision.

## Challenges

1. None

## Gant



# Week 4

6-May 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Draft Use case diagram 2. Distribute survey 3. Collect survey responses 4. Complete observation 5. Complete interview 6. Complete Report |

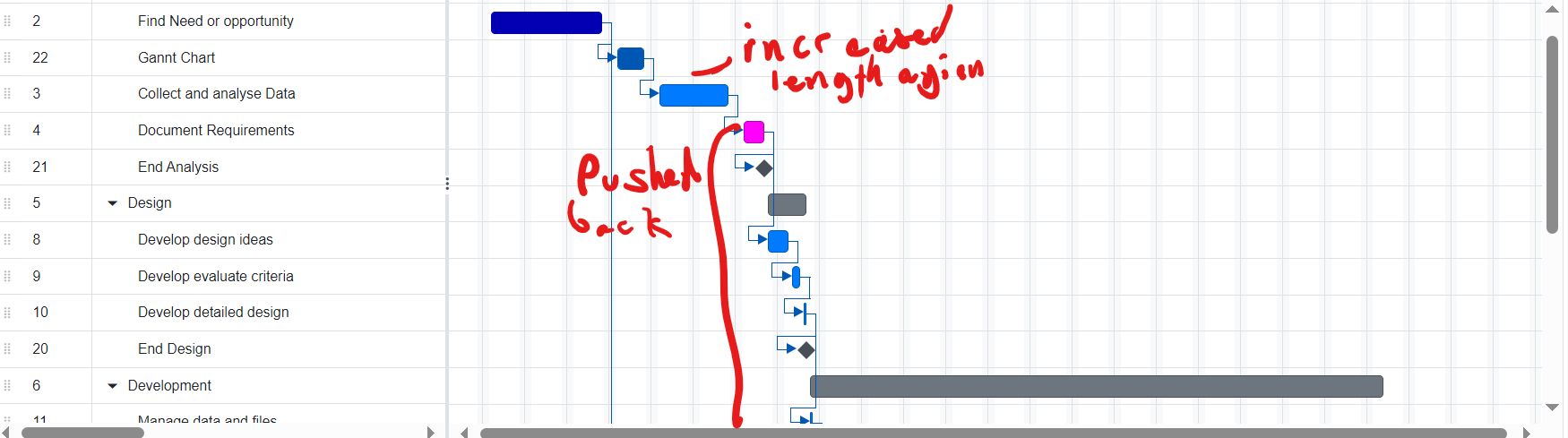
## Key Decisions

1. Report target
2. Interview group
3. Observation target
4. Survey distribution methods

## Challenges

1. Distributing survey to a large audience
2. Validating the authenticity of survey responses

## Gant



# Week 5

13-May 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Survey Analysis 2. Interview Analysis 3. Observation Analysis |

## Key Decisions

1. Users major requirements

## Challenges

1. None

## Gant



# Week 6

20-May 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Survey Analysis 2. Software requirements documents |

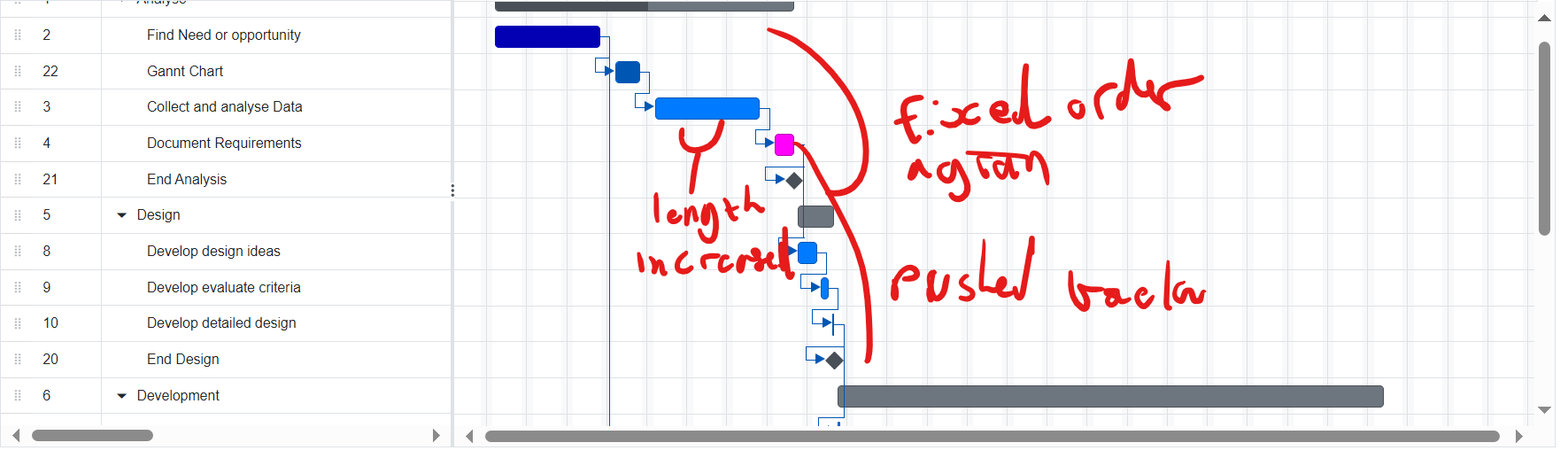
## Key Decisions

1. Technical requirements

## Challenges

1. OneDrive deleting work

## Gant



# Week 7

27-May 2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Finish software requirements |

## Key Decisions

Use cases

## Challenges

None

## Gant



# Week 8

3-June-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Mockup 1 2. Start of evaluation criteria 3. Data flow diagram |

## Key Decisions

* Mockup 1 design

## Challenges

None

## Gant



# Week 9

10-June-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Finish evaluation criteria 2. Finish user interface mockup |

## Key Decisions

1. User interface mockup design 2
2. User interface mockup design 3
3. Mockup evaluation
4. Evaluation criteria

## Challenge

Failing to install git properly

## Gant



# Week 10

17-June-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | Initialize coding environment’s |

## Key Decisions

* Version of python – 3.11.4
* GUI application – toga
* Compiler – Beeware

## Challenges

* Git failing to install to path

## Gant



# Week 11

24-June-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Outline of GUI classes |

## Key Decisions

1. Format for GUI code
2. Design of GUI

## Challenges

1. Stuck on \_\_var not being inherited from super for way to long

## Gant



# Week 12

1-July-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. RSA encryption 2. User Class |

## Key Decisions

1. Encryption type – choose RSA

## Challenges

1. Optimizing prime number generation – incomplete

## Gant



# Week 13

8-July-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Message data structure |

## Key Decisions

1. How to store message in memory
2. Long term storage of messages

## Challenges

1. Mock being weird – having to reference message.RSA.decrypt\_padded instead of RSA\_cryptosystem.decrypt\_padded

## Gant



# Week 14

15-July-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | Run code when app exits  Save user data on close app |

## Key Decisions

When to save user data

## Challenges

Cant relog with saved data (found out was due to encryption errors)

## Gant



# Week 15

22-July-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Unittests for encryption |

## Key Decisions

How to test encryption

## Challenges

Encryption not working only when saving data to file.

## Gantt



# Week 16

29-July-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | 1. Unittests for user data read in and storage |

## Key Decisions

How to test successfully storage and read in of data

## Challenges

Encryption not working only for saving data to file.

## Gant



# Week 17

5-August-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | Temporally fix encryption algorithm |

## Key Decisions

How to fix Encryption algorithm

## Challenges

Encryption algorithm not working

Data saving not working

## Gant



# Week 18

12-August-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Fix Encryption | Fix Encryption Crashes  Fix Encryption errors |

## Key Decisions

None was just fixing errors in the code

## Challenges

Finding the cause of the errors.

Error was a result of mixing private keys order.

## Gant



# Week 19

19-August-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Add the ability to host chat server | Create Example network  Add checking for existing chat server to network manager  Add the ability to establish a server |

## Key Decisions

The basic format for network message

The network structure

## Challenges

Learning how to use multithreading

Learning how to do networking

## Gant



# Week 20

26-August-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Sending messages | Fix crash when displaying messages having duplicate ids  Add ability to host server  Add dynamic ip |

## Key Decisions

Major format for network message

## Challenges

## Gant



# Week 21

2-September-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Sending messages from queue | Add the ability to send messages to other clients  Connected the network to the rest of the code  Add saving address book  Add updating address book from chat server |

## Key Decisions

When to boot the network manager

Format for client to client messages

## Challenges

None

## Gant



# Week 22

9-September-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Closing and restating the network | Sending message from queue  Add the ability to set the ip for name server  Test message receive time.  Unit tests for message encryption |

## Key Decisions

None

## Challenges

None

## Gant



# Week 23

16-September-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
| Restarting network | Closing the network  Detecting downed chat servers  Reporting downed chat servers |

## Key Decisions

How to report downed servers

## Challenges

None

## Gant



# Week 24

23-September-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  | Test screen load times  Analyze project for security flaws  Test high network traffic resilience |

## Key Decisions

## Challenges

## Gant



# Week 25 – Final Week

30-September-2024

|  |  |
| --- | --- |
| To Do List | Completed Tasks |
|  |  |

## Key Decisions

## Challenges

## Gant



# References

online gannt. (????, ?? ??). *gantt*. Retrieved from onlinegantt: https://www.onlinegantt.com/#/gantt