



# SOFTWARE ENGINEERING MANAGEMENT AND DEVELOPMENT

BUS TRACKING AND  
ARRIVAL TIME  
PREDICTION SYSTEM

## MEETING NOTES

STUDENT NAME:

STUDENT NUMBER:

ROLE:

IMAAAN HAYFAA KUREEMBOKUS

M00952402

SCRUM MASTER

RAZEEN MODAYKHAN

M00952403

SECRETARY

CHIMARAOKE MBATA

M00909998

DEVELOPER 1

LISA GRACE EASTON

M00934573

TESTER

EDWIN ABDON SHAYO

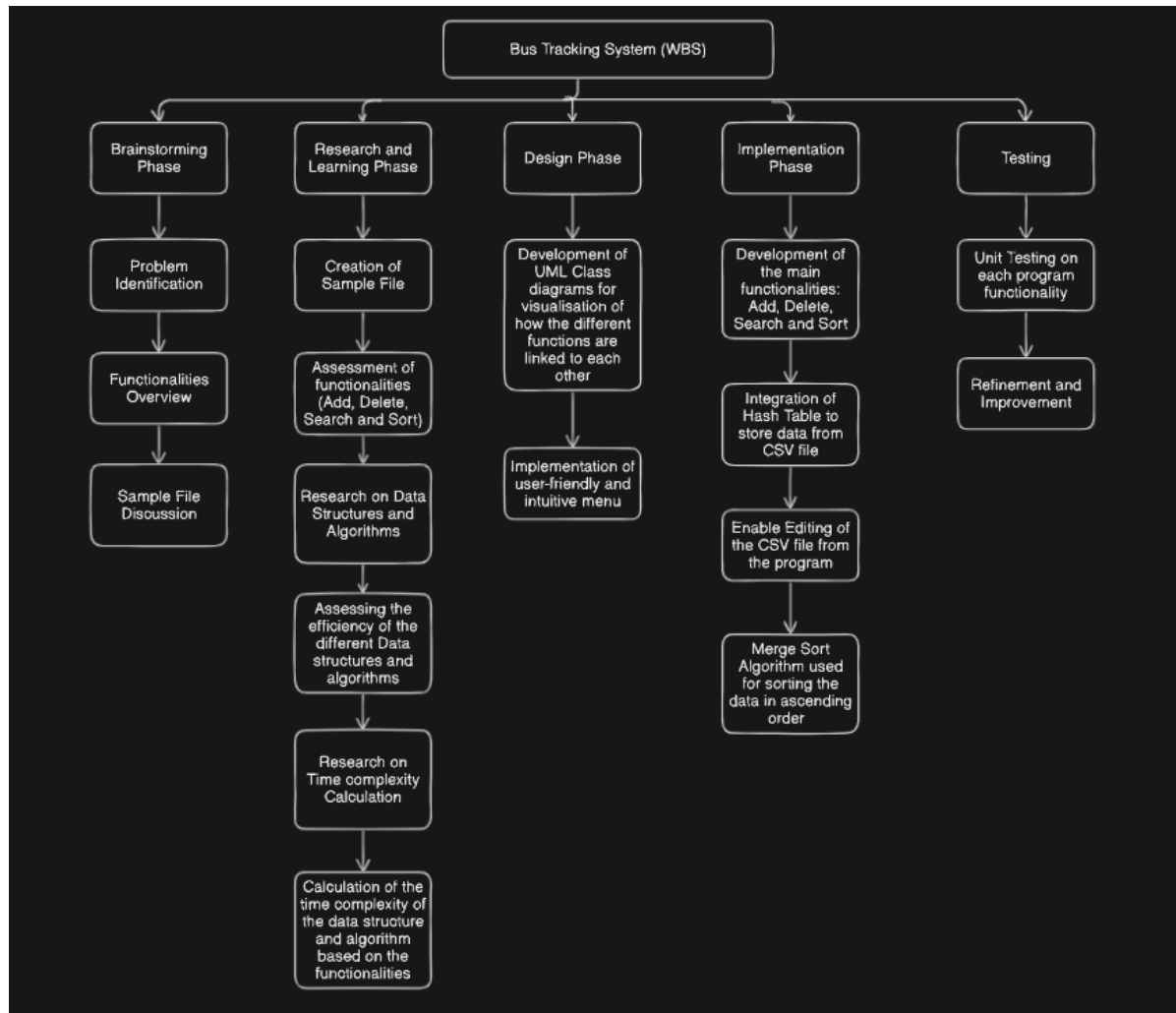
M00906834

DEVELOPER 2

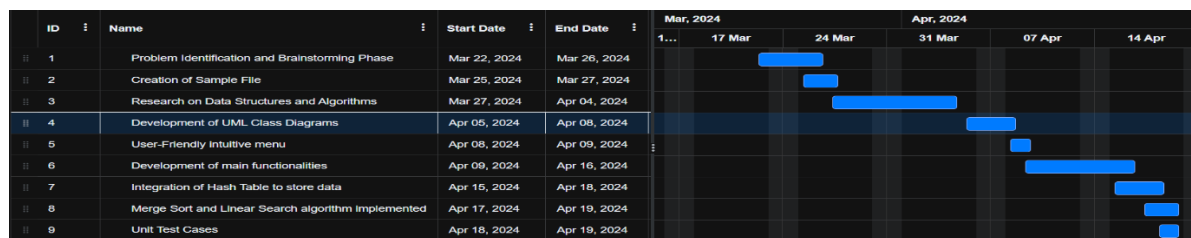
TUTOR: MR ADITYA SANTOKHEE

DATE: 21ST APRIL 2024

## Work Breakdown Structure:



## Gantt Chart:



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Meeting 1

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### Group Details:

<b>Project Name</b>	<b>Bus Tracking System</b>
<b>Group Name</b>	Gloria foramiss
<b>Sprint Number</b>	1
<b>Date</b>	21/03/2024
<b>Time</b>	13:30 – 13:45

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Understand how to use Azure Devops	None
<b>Razeen</b>	None	Create a working repository	None
<b>Chima</b>	None	Research on C++ algorithms and time complexities	None
<b>Edwin</b>	None	Analyse project requirements, UML and, functionalities	None
<b>Lisa</b>	None	Research on catch tests to implement	None

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## Meeting 2

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### Group Details:

<b>Sprint Number</b>	<b>2</b>
<b>Date</b>	22/03/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Azure Devops Project was created	Understand how to use Devops and use its project management tools	Inviting team members to Devops and assigning roles
<b>Razeen</b>	Azure Repository was created successfully, and first commit was made	Acquire experience and understand how Devops version control works	Linking Visual Studio Code and Devops
<b>Chima</b>	Examples of similar codes was brought forth and discussed	Research on suitable algorithms to use for a bus tracking system	None
<b>Edwin</b>	Concise explanation on the project requirements and UML	Research on sample data to use in the program	Confusion on sample data size
<b>Lisa</b>	Found materials to use for testing	Research on conventional testing methods	Git pull issues on terminal

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### Meeting 3

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#### Group Details:

<b>Sprint Number</b>	<b>3</b>
<b>Date</b>	23/03/2024
<b>Time</b>	13:30 – 13:45

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Team ecosystem functional in Devops	Create a Work Breakdown Structure	Devops sprint meeting option not functional yet
<b>Razeen</b>	Repository was made functional	Create a Gantt Chart	Not finding proper Gantt Chart maker tools
<b>Chima</b>	Found potential issues with strategy	Develop the skeleton of the program and implement simple features by next meeting	Confusion on what libraries can be used
<b>Edwin</b>	Found examples of sample data		Sample data implementation
<b>Lisa</b>	Set of rules for testing was made aware to developers		None

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### Meeting 4

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#### Group Details:

<b>Sprint Number</b>	<b>4</b>
<b>Date</b>	24/03/2024
<b>Time</b>	13:40 – 13:55

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	WBS was presented and shared	Refine Devops to hold sprint meetings	Issues with using Devops for collaborative works
<b>Razeen</b>	Gantt Chart was presented and shared	Plan the report structure	None
<b>Chima</b>	Skeleton of program with simple functionalities was presented	Research on coding conventions for C++	Committing issues on Devops
<b>Edwin</b>		Create Header file	Sample data source has not been found yet
<b>Lisa</b>		Simple tests on the skeleton program	None

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Meeting 5

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### Group Details:

<b>Sprint Number</b>	<b>5</b>
<b>Date</b>	25/03/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Changed WBS to fit strategy	Create new Devops Project due to issues with settings	None
<b>Razeen</b>	Report structure was submitted to leader	Help team leader with Devops Project	Report structure lacked key elements
<b>Chima</b>	Coding rules were explained to developers	Adjust all codes to abide with code conventions	None
<b>Edwin</b>	Header file was presented and explained	Added documentation to parts of the program	None
<b>Lisa</b>	Test programs ran successfully	Help Edwin document	Testing conventions were not met

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Meeting 6

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### Group Details:

<b>Sprint Number</b>	<b>6</b>
<b>Date</b>	26/03/2024
<b>Time</b>	13:25 – 13:40

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	New Devops Project created, and team members were invited	Plan the implementations needed for the bus tracking system	Devops Repository push requests denied
<b>Razeen</b>	Submitted corrected report structure		None
<b>Chima</b>	Program was adjusted to convention and explained to Edwin and Lisa		Cannot move forward with program without sample data
<b>Edwin</b>	Program was fully documented and explained to Imaan and Razeen	Find sample data suitable for Mauritius	None
<b>Lisa</b>			None



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### Meeting 7

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#### Group Details:

<b>Sprint Number</b>	<b>7</b>
<b>Date</b>	27/03/2024
<b>Time</b>	13:30 – 13:45

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Implementation plans presented and explained to Lisa and Edwin	Ask lecturer for clarifications on sample data	Devops not working as intended
<b>Razeen</b>		Set up a Discord server as communication platform	None
<b>Chima</b>		Implement sample data in program	Limited time to implement sample data
<b>Edwin</b>	Excel Spreadsheet bus data sample data found	Research on makefiles	Sample data is too small
<b>Lisa</b>		Test sample data	None

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### Meeting 8

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#### Group Details:

<b>Sprint Number</b>	<b>8</b>
<b>Date</b>	28/03/2024
<b>Time</b>	17:30 – 17:45

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Create templates for meeting notes and structure	Clarifications on sample data was not yet given by lecturer
<b>Razeen</b>	Discord server successfully functioning as communication platform	Provide assistance to Imaan	Git issues with Devops and Visual Studio Code
<b>Chima</b>	None	Implement sample data in program	Errors in reading sample data with program
<b>Edwin</b>	Makefile was explained to team	Create a makefile and commit to Devops	Git push issues with Devops
<b>Lisa</b>	Sample data format was tested to work correctly	None	None

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### Meeting 9

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#### Group Details:

<b>Sprint Number</b>	<b>9</b>
<b>Date</b>	29/03/2024
<b>Time</b>	13:30 – 13:50

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Reviewed program and templates	Write a report draft	None
<b>Razeen</b>	Corrected templates	Start compiling meeting notes (deadline next meeting)	Limited time to finish compiling meeting notes
<b>Chima</b>	None	Implement sample data (deadline next meeting)	Errors sorting data and abide by UML design
<b>Edwin</b>	Makefile successfully compiles the header and program file		
<b>Lisa</b>	None		

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### Meeting 10

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#### Group Details:

<b>Sprint Number</b>	<b>10</b>
<b>Date</b>	30/03/2024
<b>Time</b>	13:35 – 13:55

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

Team Member	Accomplishments	To-Do	Issues
Imaan	Report draft submitted and presented to team	Review the requirements of the project	Complaints from team concerning Devops, issues in using the Boards and Pipeline
Razeen	Unfinished compiled meeting notes was presented and reviewed	Find material for algorithms to use	
Chima	Implementation of sample data in program successfully displays data	Implement function to manipulate data (search, delete, sort)	
Edwin			
Lisa		Create a main test file	

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### Meeting 11

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#### Group Details:

<b>Sprint Number</b>	<b>11</b>
<b>Date</b>	31/03/2024
<b>Time</b>	13:30 – 13:40

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Review of the requirements explained	Ask lecturer if BitBucket can be an alternative for Devops	Some project requirements lack details
<b>Razeen</b>	Examples of algorithms to use and their advantages/disadvantages were presented	Compile remaining meeting notes	None
<b>Chima</b>	None	Implement functions to manipulate data	None
<b>Edwin</b>	Error handling implemented		None
<b>Lisa</b>	Test file in progress	Finish test file	Limited time

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## Meeting 12

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### Group Details:

<b>Sprint Number</b>	<b>12</b>
<b>Date</b>	01/04/2024
<b>Time</b>	17:25 – 17:40

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Received confirmations for both sample data size	Find material on the example algorithms	Version Control issues
<b>Razeen</b>	None		None
<b>Chima</b>	None	Implement functions to manipulate data	Sample data size changes structure of program
<b>Edwin</b>	None	Find sample data with millions of data	
<b>Lisa</b>	Test file presented and reviewed by Chima and Edwin	Work with Chima to implement data manipulation	None

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Meeting 13

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### Group Details:

<b>Sprint Number</b>	<b>13</b>
<b>Date</b>	02/04/2024
<b>Time</b>	13:30 – 13:45

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Short report on research on time complexities	Test and review program	None
<b>Razeen</b>		Review code conventions	None
<b>Chima</b>	Code review and presentation to team	Develop functions to handle big data	None
<b>Edwin</b>			Generation of sample data
<b>Lisa</b>	None		None

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Meeting 14

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### Group Details:

<b>Sprint Number</b>	<b>14</b>
<b>Date</b>	03/04/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Adjustments made to the program to fit UML design	None	None
<b>Razeen</b>	Adjustments made to the program to fit code conventions	Create a BitBucket repository and test it	None
<b>Chima</b>	Updated program to handle big data	Implement user validation	Hash table implementations
<b>Edwin</b>			None
<b>Lisa</b>		Understand the use of REQUIRE and CHECK	None



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### Meeting 15

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#### Group Details:

<b>Sprint Number</b>	<b>15</b>
<b>Date</b>	04/04/2024
<b>Time</b>	13:40 – 13:55

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Clarified to team the UML design and requirements for data structures to be used in program	Refer to lecturer about algorithms and libraries allowed to use	None
<b>Razeen</b>	BitBucket repository successfully created, and team members invited to the project	Write a draft report on time complexities for the report	None
<b>Chima</b>	User input validation implemented with proper messages and warning	Implement more functionalities such as compare arrival times	None
<b>Edwin</b>			None
<b>Lisa</b>	Simple implementation of CHECK in test.cpp	Add more tests	None

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### Meeting 16

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#### Group Details:

<b>Sprint Number</b>	<b>16</b>
<b>Date</b>	05/04/2024
<b>Time</b>	13:25 – 13:45

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Continue with report, finish Introduction and Design	Cannot move forward with report until developers have confirmed the algorithms
<b>Razeen</b>	Meeting notes properly compiled	Document code	None
<b>Chima</b>	None	Develop compare arrival time and write data to excel sheet	Implementing classes into program
<b>Edwin</b>	Added user validation into functions	Improve functions	None
<b>Lisa</b>	Adjusted test.cpp to work with the bus.cpp	Work with Edwin to keep test.cpp consistent with bus.cpp	None

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### Meeting 17

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#### Group Details:

<b>Sprint Number</b>	<b>17</b>
<b>Date</b>	06/04/2024
<b>Time</b>	13:30 – 13:45

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Introduction and Design part of the report discussed and presented	Continue with report	None
<b>Razeen</b>	None	Adjust Gantt Chart with the changes	None
<b>Chima</b>	Added buses to csv function	Add delete bus function	None
<b>Edwin</b>	Suggestions made to Chima to improve loops	Add search bus function	None
<b>Lisa</b>	Confirmed variable names to be used from thereon	Add more tests for the added functions from developers	Changes from developers restrict development of tests

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Meeting 18

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### Group Details:

<b>Sprint Number</b>	<b>18</b>
<b>Date</b>	07/04/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Progressed with report	Continue with report	None
<b>Razeen</b>	New Gantt Chart presented	Adjust WBS to fit new strategy	Limited time to complete tasks
<b>Chima</b>	Explained new functions added	Develop hash table	
<b>Edwin</b>		Implement error handling	None
<b>Lisa</b>	Explained test cases	None	Developers are not done with some functions

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Meeting 19

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### Group Details:

<b>Sprint Number</b>	<b>19</b>
<b>Date</b>	08/04/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

Team Member	Accomplishments	To-Do	Issues
Imaan	Progress was made on report and presented to team	Check the program and write suggestions	None
Razeen	New WBS explained		
Chima	None	Implement hash table to store sample data	
Edwin	None	Adjust makefile with	
Lisa	None	new changes	

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Meeting 20

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### Group Details:

<b>Sprint Number</b>	<b>20</b>
<b>Date</b>	09/04/2024
<b>Time</b>	17:30 – 17:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Give feedback to team about the program, functions, and tests	Time restrictions due to multiple projects
<b>Razeen</b>	None	Compile meeting notes and submit to scrum master	
<b>Chima</b>	Adjusted Header file	Fixed errors in show available bus function	
<b>Edwin</b>	Updated bus.csv	Fixed CXXFLAGS	
<b>Lisa</b>	Added catch2	None	

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Meeting 21

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### Group Details:

<b>Sprint Number</b>	<b>21</b>
<b>Date</b>	10/04/2024
<b>Time</b>	13:30 – 13:45

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Feedback given on project and suggestions were made to abide to UML design and project requirements	Calculate time complexities for the basic functions	None
<b>Razeen</b>		Cross-check report with requirements of project	None
<b>Chima</b>	None	Update main.cpp with more appropriate user inputs	None
<b>Edwin</b>	Fixed the sorting of the buses shown in terminal	Update bus.cpp with minor changes to variable names and data definitions	Time restrictions to complete tasks
<b>Lisa</b>	Added a test case for add bus function	Add test cases for new functions	None

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Meeting 22

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### Group Details:

<b>Sprint Number</b>	<b>22</b>
<b>Date</b>	11/04/2024
<b>Time</b>	13:30 – 13:45

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Complete report	Time restrictions due to multiple deadlines and makefile giving errors
<b>Razeen</b>		Complete meeting notes	
<b>Chima</b>		Implement hash table	
<b>Edwin</b>		Implement the use of classes	
<b>Lisa</b>		Add more test cases	



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### Meeting 23

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#### Group Details:

<b>Sprint Number</b>	<b>23</b>
<b>Date</b>	12/04/2024
<b>Time</b>	17:25 – 17:40

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Updated team on tasks left and requirements to meet	Allocate team with deadlines for their tasks	None
<b>Razeen</b>		Compile meeting notes	Meeting notes missing from team members
<b>Chima</b>		Research on a algorithm with the best time complexity to use in the program	None
<b>Edwin</b>		Fix makefile	Developer and tester depend on the makefile
<b>Lisa</b>		Help Chima in research	None

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Meeting 24

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### Group Details:

<b>Sprint Number</b>	<b>24</b>
<b>Date</b>	13/04/2024
<b>Time</b>	13:20 – 13:35

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Team was debriefed on the upcoming deadlines set by scrum master	Continue with report	None
<b>Razeen</b>	None	Compile meeting notes and submit to scrum master today	
<b>Chima</b>	Explanation on which algorithm to use	Submit a report explaining the functions to secretary	
<b>Edwin</b>	Fixed makefile and adjusted header file	Document changes made on makefile and header file	
<b>Lisa</b>	Adjusted test.cpp with Edwin's help	Improve test cases	

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Meeting 25

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### Group Details:

<b>Sprint Number</b>	<b>25</b>
<b>Date</b>	14/03/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Notes were written on Linear Search algorithm and Merge Sort algorithm	Calculate time complexities for each algorithm	Issues with conventions of calculating time complexities
<b>Razeen</b>	Reported to scrum master with the notes sent by Chima on time complexities	Help scrum master with report	None
<b>Chima</b>	Proper implementation of Linear Search algorithm	Convert the use structure to classes	Compilation issues
<b>Edwin</b>	Moved data into hash table	Change the structure of the hash table	Could not find an algorithm to use for the add and delete functionalities
<b>Lisa</b>	Adjusted test cases to match program	Help Edwin	None

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Meeting 26

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### Group Details:

<b>Sprint Number</b>	<b>26</b>
<b>Date</b>	15/04/2024
<b>Time</b>	13:35 – 13:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Approved of the program to be committed onto bitbucket	Commit changes of the report on the repository with meaningful messages	None
<b>Razeen</b>	Successfully implemented team members in the bus tracking bitbucket repository	Commit meeting notes to repository	
<b>Chima</b>	Main.cpp and bus.cpp were running successfully with small sample data (without hash table)	Commit all the files	
<b>Edwin</b>		Test the repository	
<b>Lisa</b>			

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### Meeting 27

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#### Group Details:

<b>Sprint Number</b>	<b>27</b>
<b>Date</b>	16/04/2024
<b>Time</b>	13:35 – 13:55

#### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

#### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	None	Finish draft of report and send for review	Issues understanding if algorithms abide by the requirements
<b>Razeen</b>	None	Finish compilation of meeting notes and send scrum master for feedback	None
<b>Chima</b>	Implementation of hash table and Merge Sort algorithm	Send scrum master updated report on the program functionalities and issues	CSV issues
<b>Edwin</b>			Git push issues
<b>Lisa</b>	None	Send scrum master updated report on the test cases	Variable name changes causing bugs in testing

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Meeting 28

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### Group Details:

<b>Sprint Number</b>	<b>28</b>
<b>Date</b>	17/04/2024
<b>Time</b>	13:30 – 13:50

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Sent instructions to developers concerning the implementation of algorithms in add and delete functions	Review meeting notes and report	Time restrictions
<b>Razeen</b>	Reviewed program and committed files to bitbucket		None
<b>Chima</b>	Fixed bug where buses were not being displayed in the terminal	Major changes in algorithms used	Changes may not abide with the UML design
<b>Edwin</b>	Fixed search bus function		
<b>Lisa</b>	Fixed test cases	Update test cases with developers	

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Meeting 29

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### Group Details:

<b>Sprint Number</b>	<b>29</b>
<b>Date</b>	18/04/2024
<b>Time</b>	13:30 – 13:45

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

<b>Team Member</b>	<b>Accomplishments</b>	<b>To-Do</b>	<b>Issues</b>
<b>Imaan</b>	Clarified final instructions and requirements for the program	Help with finishing code and finalise program then commit all changes to bitbucket	Time restrictions
<b>Razeen</b>	Tested and reviewed program with developers		
<b>Chima</b>	Fixed most functionalities		
<b>Edwin</b>			
<b>Lisa</b>	Program passes most tests		

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Meeting 30

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### Group Details:

<b>Sprint Number</b>	<b>30</b>
<b>Date</b>	19/04/2024
<b>Time</b>	17:35 – 17:55

### Attendance:

<b>Name</b>	<b>Attendance</b>
<b>Imaan Hayfaa Kureembokus (Scrum Master)</b>	Present
<b>Abdool Rahim Razeen Modaykhan (Secretary)</b>	Present
<b>Chimaraoke Mbata (Developer 1)</b>	Present
<b>Edwin Abdon Shayo (Developer 2)</b>	Present
<b>Lisa Grace Easton (Tester)</b>	Present

### Progress:

Team Member	Accomplishments	To-Do	Issues
Imaan	Finished report	Review and test every element pushed to repository	None
Razeen	Finished compiling meeting notes		
Chima	Finished final part of the development phase		
Edwin			
Lisa	All test cases pass		