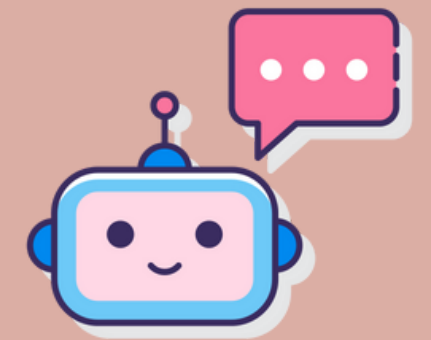
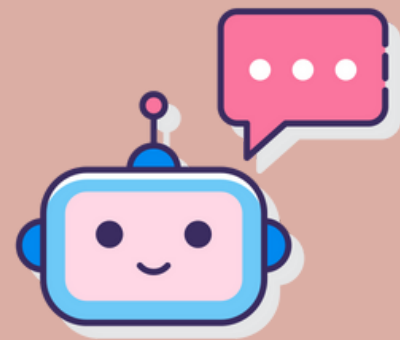


A QUESTION-ANSWERING SYSTEM ABOUT COVID

FIT3161 Computer Science Project

Presented by: MCS15

Group Members: Chan Wai Han, Nawwaf Ali, Ooi Yi Sen, Yeonsoo Kim



CONTENTS

- **INTRODUCTION**
- **REVIEW OF THE SOFTWARE DEVELOPMENT
METHODOLOGY**
- **OUR TASKS**
- **OUR PROGRESS**
- **FRONT-END**
- **BACK-END**
- **ISSUES THAT WE ENCOUNTERED**
- **OUR NEXT STEP**
- **ISSUES THAT WE ANTICIPATE**
- **TEAM MANAGEMENT**
- **CONCLUSION**

INTRODUCTION

Project Objectives

- An infectious disease caused by the SARS-CoV-2 virus
- Do not have the appropriate knowledge, acceptance, and perception
- Business objective: provide useful information relating to covid
- Social objective: to improve everyone's knowledge, acceptance, and perception of covid.
- Provide an automatic COVID-19 answering website system and a repository for self browsing

REVIEW OF THE SOFTWARE DEVELOPMENT METHODOLOGY

- Mixed Approach
 - Waterfall Methodology Based Development
 - Stages, Deadlines
 - Agile Approach
 - Quick meetings, Adjust problematic stages

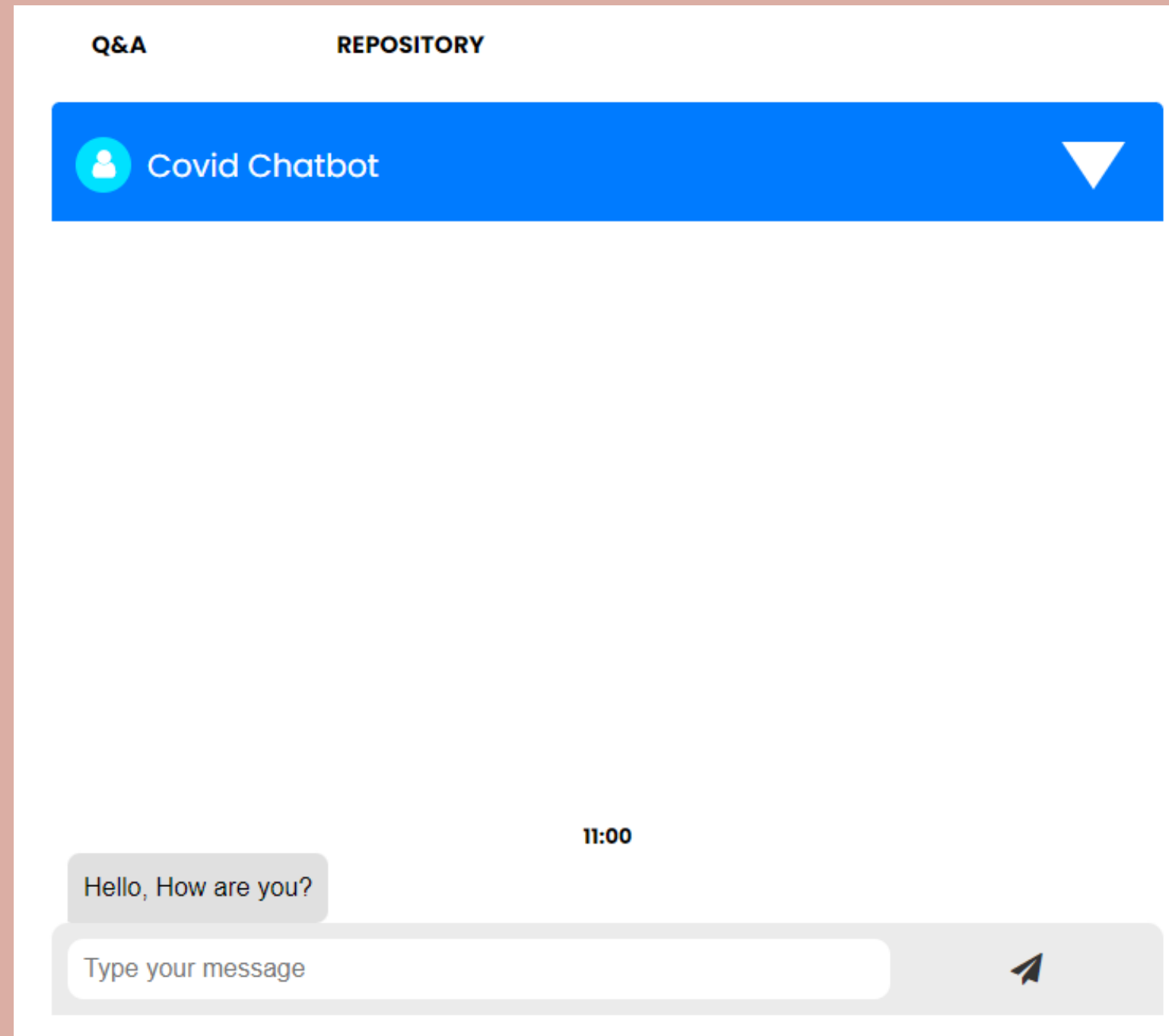
OUR TASKS

1. Pre-process the dataset into Database Management System (DBMS)
2. To connect to the DBMS and extract the nuggets for UI
3. UI Design - incorporate (1) document search/browsing and (2) Q&A sections
4. To find similar questions given freely entered question by the user through the Q&A page

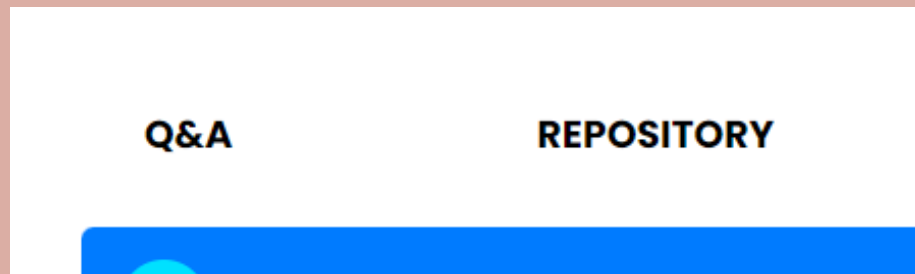
OUR PROGRESS

- Completed the base UI Design - incorporate (1) document search/browsing and (2) Q&A page
- Created a Database server
- Inserted collected Datasets into Database

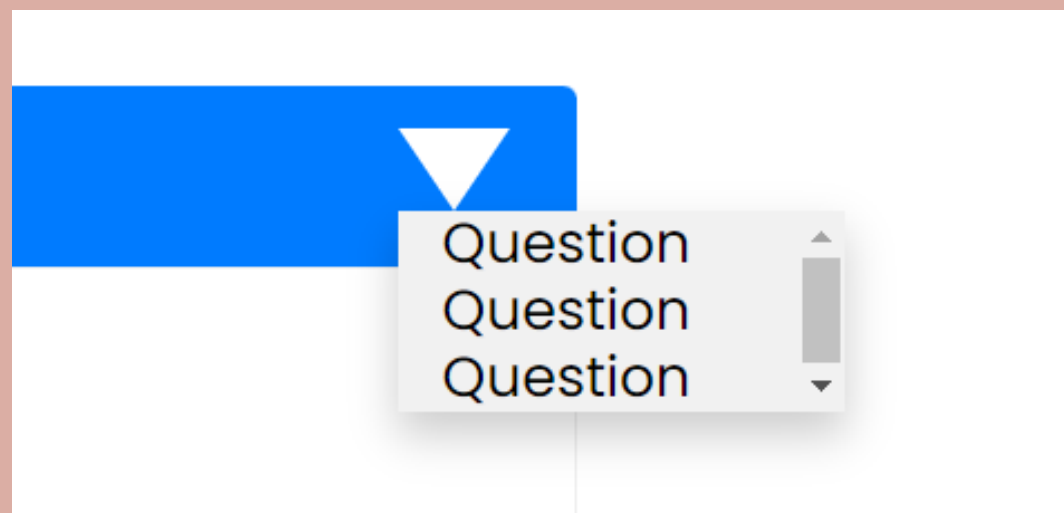
QUESTION & ANSWERING PAGE



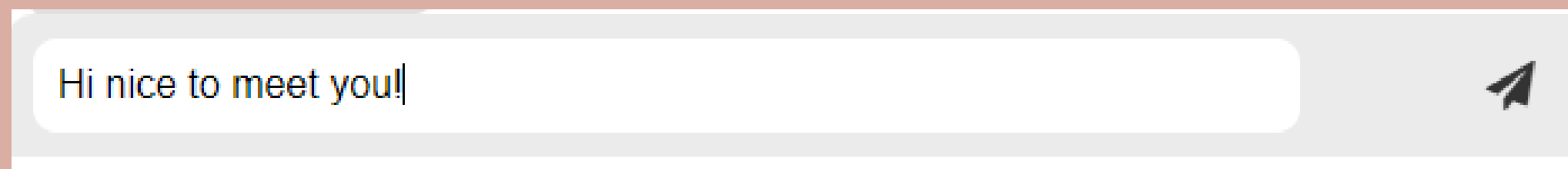
FEATURES



- **NAVIGATION BAR**



- **DROP DOWN LIST**



- **MESSAGING**

PROBLEMS ENCOUNTERED

1.	Not being able to make the drop-down list prompt the drop-down whenever the user clicks on the triangle button
2.	The navigation bar cannot go between the two pages
3.	Not being able to make the chatbot title align with the chatbot avatar
4.	The send message function could not work as intended

SOLUTIONS?

FRONT-END

Q&A

REPOSITORY

Repository

Search..

Q

Hello everyone, How are you?

PROBLEMS ENCOUNTERED

1.	Unable to align with the chatbot's theme and design
2.	Unable to connect to the back-end
3.	Unable to test query

SOLUTIONS?

BACK-END

Object Explorer

Connect

mysqlserver300.database.windows.net (SQL Server 12.0.200)

Databases

System Databases

mySampleDatabase2

Database Diagrams

Tables

System Tables

External Tables

Graph Tables

dbo.CONTEXT

dbo.DOCUMENT

dbo.NUGGET

dbo.NUGGET_SENTENCE

dbo.QUERY

dbo.QUESTION

dbo.SENTENCE

Views

External Resources

Synonyms

Programmability

Query Store

Extended Events

Storage

Security

Security

Integration Services Catalogs

SQLQuery1.sql - mys...(52)) Executing...

```
/****** Script for SelectTopNRows command from SSMS *****/  
SELECT TOP (1000) [cont_id]  
    , [cont_section]  
    , [cont_text]  
    , [doc_id]  
FROM [dbo].[CONTEXT]
```

100 %

Results Messages

	cont_id	cont_section	cont_text	doc_id
97	002c94dd-357a-4c68-9c6a-0fa074d02cea-C004		Avril Lavigne is videobombed by her oblivious pal in...	002c94dd-357a-4c68-9c6a-0fa074d02cea
98	002czx8v-C000	Abstract	BACKGROUND Synthesis of psychometric propertie...	002czx8v
99	002d213d-529f-492a-9385-2e01bd037e43-C001		"We have to put together very, very tough measures ...	002d213d-529f-492a-9385-2e01bd037e43
100	002d5201-a6aa-4cfe-a024-1f89cd169774-C005		Cancer-stricken Olivia Newton-John makes a desp...	002d5201-a6aa-4cfe-a024-1f89cd169774
101	002d64ca-edad-407c-8119-0bf62fa3390a-C001		Share this: Facebook Twitter Flipboard WhatsApp E...	002d64ca-edad-407c-8119-0bf62fa3390a
102	002ea197-2289-43ed-87a5-cdedb556b9e0-C000		REUTERS/Thomas Peter SHANGHAI (Reuters) - Chi...	002ea197-2289-43ed-87a5-cdedb556b9e0
103	002ed770-a164-4bba-af1f-f61807ccea03-C000		WANA (West Asia News Agency)/Ali Khara via REU...	002ed770-a164-4bba-af1f-f61807ccea03
104	002f8a3d-6ac2-4249-948f-f1a58c97ba54-C000		The economy is on the brink of recession as Russi...	002f8a3d-6ac2-4249-948f-f1a58c97ba54
105	002g9dpl-C000	Abstract	Microelectronic devices with reconfigurable three-di...	002g9dpl
106	002hvl0z-C000	Abstract	OBJECTIVE Celecoxib (CEL) is a nonsteroidal anti-i...	002hvl0z
107	002n13ov-C000	Abstract	Peer supporters are proving to be invaluable, providi...	002n13ov
108	00306dfe-2891-4104-952d-1f7cd6820f07-C004		Kylie Jenner posts cute snap of her and Stormi ...an...	00306dfe-2891-4104-952d-1f7cd6820f07
109	003080a4-a1cd-4a02-9216-87cf1450d4c2-C000		Print California This is the latest list of L.A. County c...	003080a4-a1cd-4a02-9216-87cf1450d4c2
110	00311859-26b6-4274-a8f1-7a0beaee6193-C001		The virus is believed to have originated among wild ...	00311859-26b6-4274-a8f1-7a0beaee6193
111	0031ac70-e8ce-43fe-804b-54fd9a087177-C006		It will go away. ' Donald Trump tries to reassure Am...	0031ac70-e8ce-43fe-804b-54fd9a087177
112	0033819f-c5c5-4f35-85f2-a929dbba0e85-C002		0 Comments Home Share 0 Today's Headlines Free...	0033819f-c5c5-4f35-85f2-a929dbba0e85
113	00344dc6-950b-4246-99b0-f0e8b694f8f4-C001		0 : 0 narrow-browser-and-phone medium-browser-	00344dc6-950b-4246-99b0-f0e8b694f8f4

ISSUES THAT WE ENCOUNTERED

- Failed to setup the database using Microsoft SQL Developer
 - IP address problem & Firewall problem
- Failed to insert rows due to too large datasets size
- Slow Query speed due to US-located SQL server

Failing to set up a proper database server

- Even though there were many databases available, many were limited by the fact that they were more subscription based to get the required storage space.
- Connection problems to the database as no one but the owner could connect.
- Solution
 1. Using Microsoft Azure SQL database
 2. Adding every team members Ip address ranges.

Changing the type software we used.



Too Large Datasets & Slow Query Speed

- Total Number of Documents = 350,000
 - Total Number of Contexts = 400,000
 - **Total Number of Sentences = 50,000,000 ↑**
- Solution
 1. Inserted only Important Sentences
 2. Pre-processed datasets into CSV file
 3. Used bulk insert Python libraries
 4. Reduced Number of Queries

OUR NEXT STEP

- Create a classification algorithm for User queries
- Insert full data inside the Database
- Making an algorithm that connects the HTML to the database

ISSUES THAT WE ANTICIPATE

- Slow processing speed due to slow SQL query speed

COMMUNICATION



DISCORD

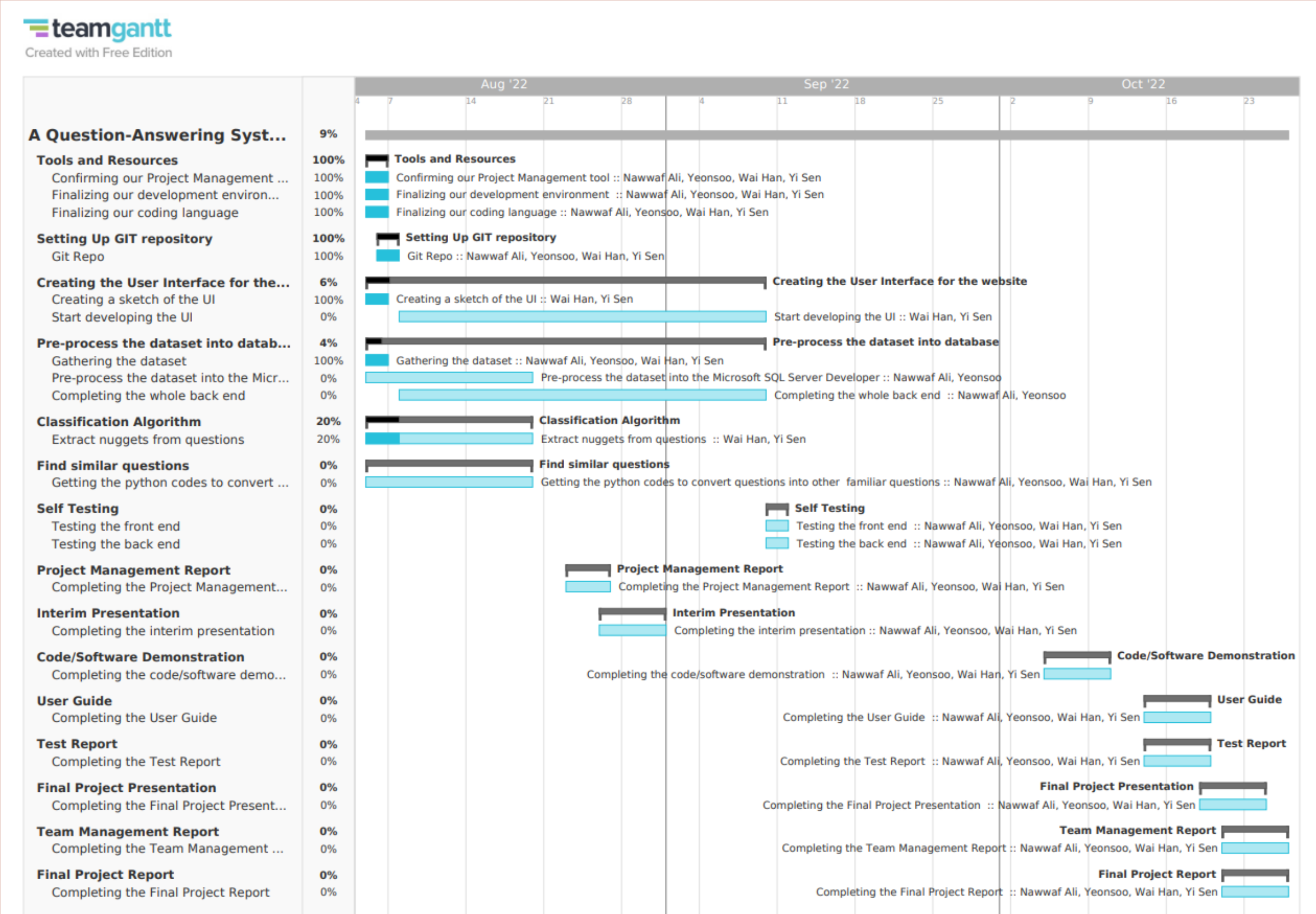


WHATSAPP



SLACK

TASK ALLOCATION



HOW DO WE DEAL WITH ISSUES?

- **ALERTING THE TEAM THAT AN ISSUE HAS OCCURED**
- **ASK THE WHOLE TEAM FOR IDEAS**
- **COMING UP WITH A CONTINGENCY PLAN**
- **FOLLOW UP ON THE PROBLEMS**
- **SEARCH FOR ALTERNATIVE METHODS**

THANK YOU

