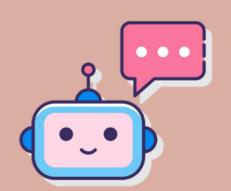
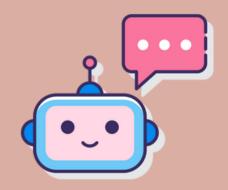
# A QUESTION-ANSWERING SYSTEM ABOUT COVID

# FIT3162 Computer Science Final Presentation



Presented by: MCS15
Group Members: Chan Wai Han, Nawwaf Ali, Ooi Yi Sen, Yeonsoo Kim





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# Project Outcome: what was achieved

- Automated retrieval and formulation of answers for questions related to COVID19
- Access to a repository
  - perform self-browsing
- Access to reliable databases
  - oprovide accurate information to our users
- Access to technical tools, languages, and software for our project.

# Methodology Used

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

# Software Deliverables: Main input and output (QnA)

Input:

temperature



Here are the information that we have related to "temperature".

Please type in the Question ID that you are interested in into the chat to view the full answer to the question.

Question ID: EQ002

Question Text: how does the coronavirus respond to changes in the

weather

Question ID: EQ005

Question Text: what drugs have been active against SARS-CoV or SARS-

CoV-2 in animal studies?

Question ID: CQ002

Question Text: how does the coronavirus respond to changes in the

weather

Question ID: EQ002

Question Text: how does the coronavirus respond to changes in the

eq002

weather

temperature

Answer Text: Temperature and relative humidity are major factors determining virus inactivation in the environment. Temperature and relative humidity have been shown to impact the kinetics of inactivation of coronaviruses. Increased temperatures have been shown to increase the rate of the inactivation, and decreased relative humidity have been associated with a reduction of coronaviruses inactivation rate on surfaces. Inactivation rates were lower in suspensions compared to surfaces in studies that tested both suspensions and surfaces at similar temperatures. Hence, the prediction of the persistence of SARS-CoV-2 on fomites is essential to investigate the importance of contact transmission.

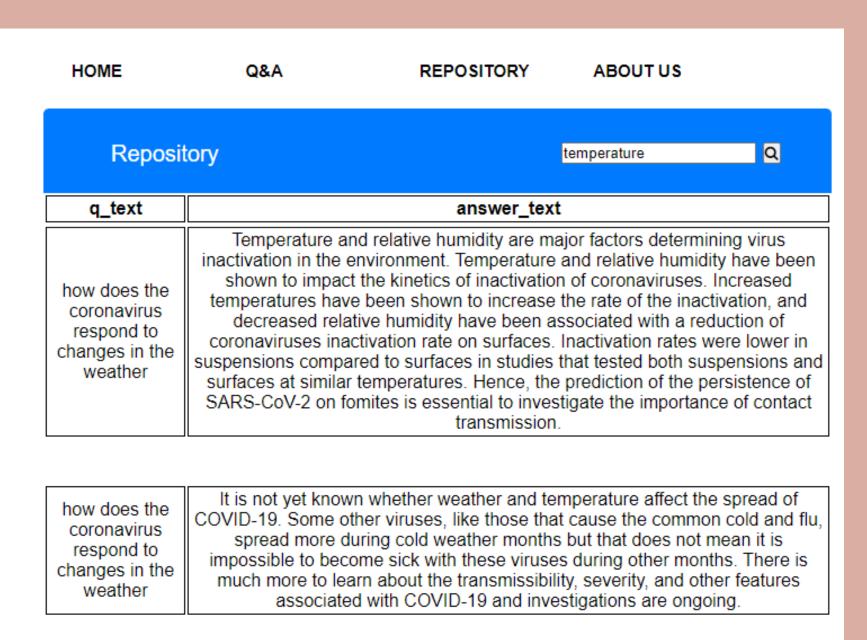
Output:

# Software Deliverables: Main input and output (Repository)

Input:



Output:



## Software Deliverables: Library Used

#### Front-end

• Import CSS library from google fonts

#### Back-end

- 'JSON' to read JSON files
- 'os' to read system files
- 'pyodbc' to connect to the database
- 'CSV' to convert .json files to .csv file
- 'BeautifulSoup' format HTML codes into data
- 'selenium' to run virtual chrome taps
- 'UUID' to generate a random ID for new documents found

# Project Management and methodology used

#### Initiating

- Identifying and understanding product needs
- extensively research the subject of our project and the specifications for the final result
- explore the project's scope and requirement
- oprovide the first proposal of the project scope statement

#### Planning

- Creation of an early prototype and project design
- Further investigated what the design, hardware and software requirements,
   and project management tools are

# Project Management and methodology used

- Implementation
  - Created the QnA chatbot and the repository website
  - Load the dataset into the database and run the query method.
- Testing
  - o confirm the accuracy of our work by producing the appropriate test scripts
- Closing
  - Finish up documentation
  - Present our final project presentation
  - Generate a final report

# Project Management and methodology used

- Predictive Life Cycle Model
  - Project requirements would be given beforehand
  - o no changes or emergent requirements
  - Traditional SDLC is for projects on a larger scale (Stoica, M., Mircea, M., & Ghilic-Micu, B. 2013)
  - Weekly meetings would be held

### Discussion

- Changed our coding language from Python to Javascript
- Changed our Database software from Microsoft SQL Server to Microsoft Azure SQ
- Changed the database structure

# Possible Improvements and Future Work

#### Possible Improvements

- querying with more than just keywords
- ability to generate answers for detailed and non-popular questions
- ability to fetch answers from Google

#### Future Work

- periodic, incremental updates of Q&A database
- escalation path interact with human advisor

#### References

1. Stoica, M., Mircea, M., & Ghilic-Micu, B. (2013). Software Development: Agile vs. Traditional. Informatica Economica, 17(4), 64-76. https://www.proquest.com/scholarly-journals/software-development-agile-vs-traditional/docview/1492882301/se-2

# THANK YOU

