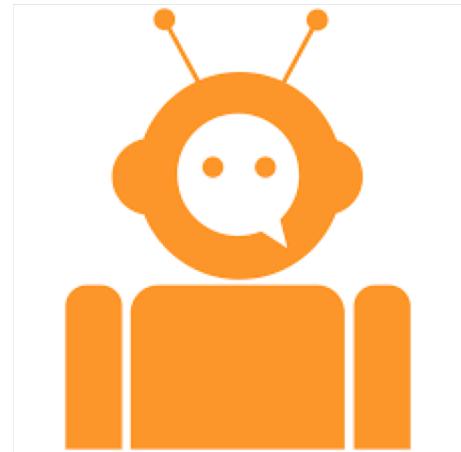


Syracuse University Chatbot

Team:

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CSE 682 – Software Engineering
Professor: Dr. Mehmet Kaya



Syracuse University

College of Engineering and Computer Science

Mar 25, 2019

Project

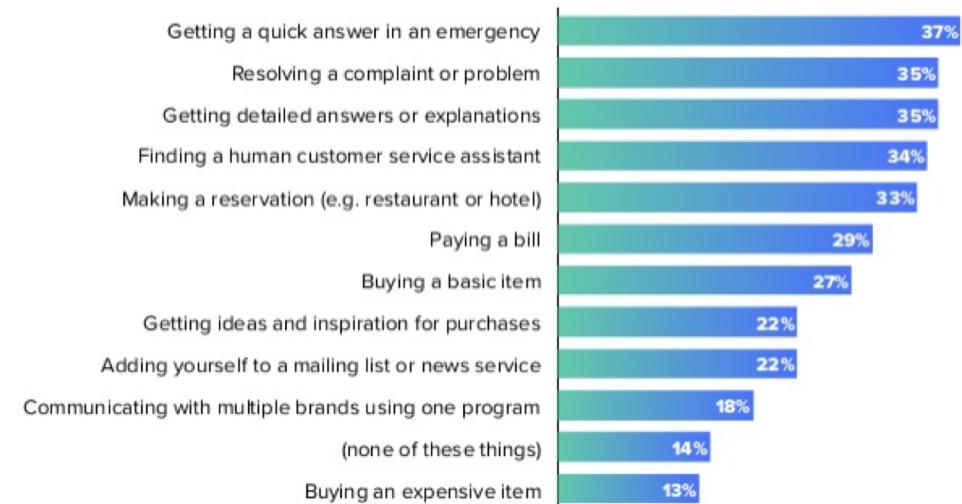
- Goal – To develop a Chatbot for the Syracuse University students to interact with the bot to get the desired information.
- Advantage – A student will be able to find the desired information immediately with ease and in one place.



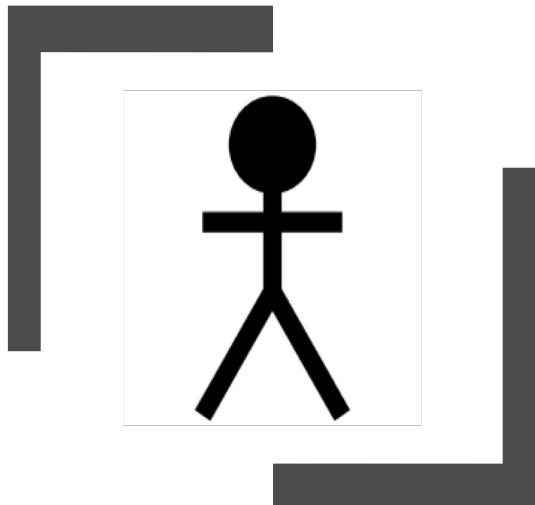
Different Use Case predictions for Chatbots

Predicted Use Cases for Chatbots

What do you predict you would use a chatbot for?



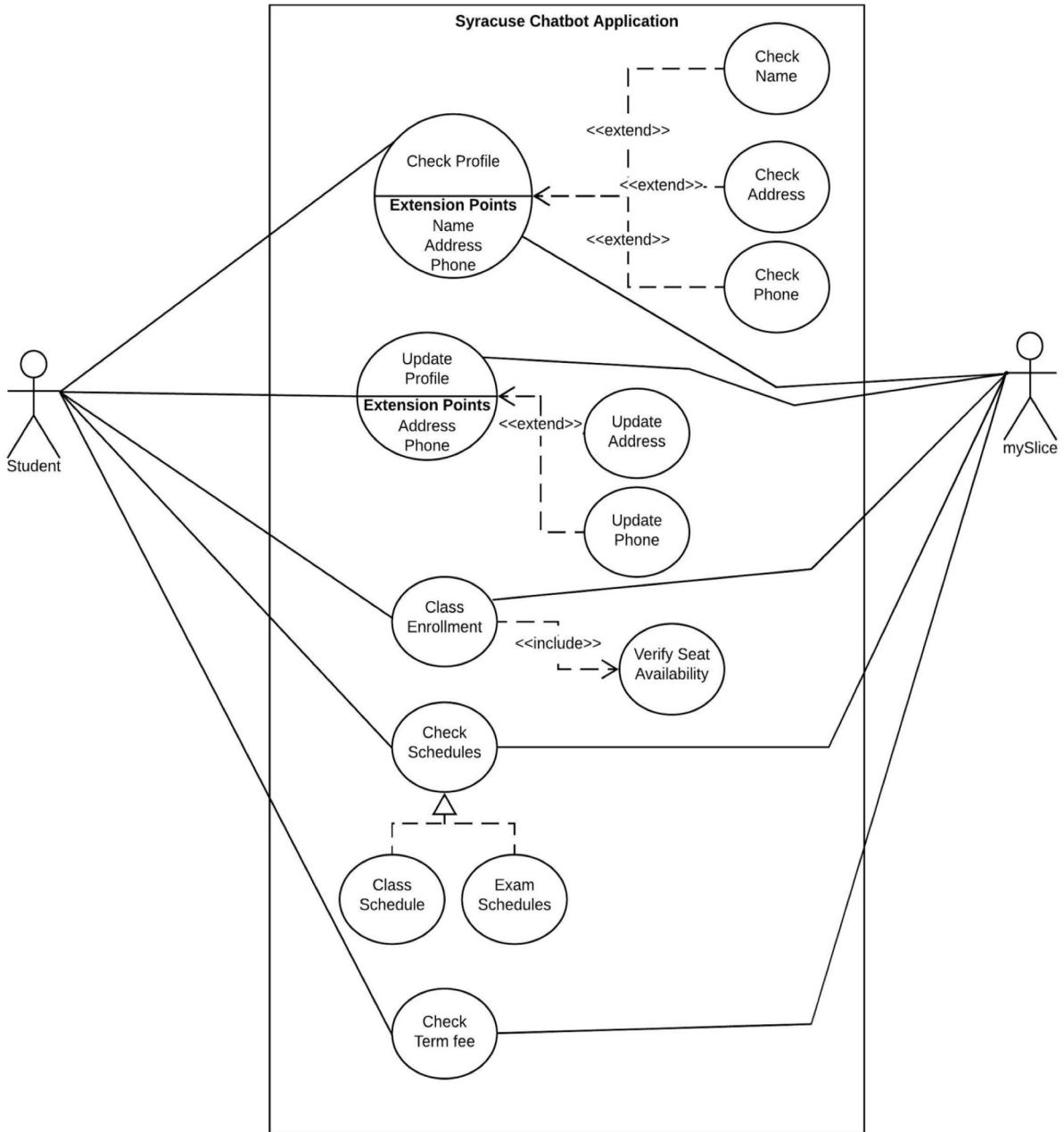
Use Cases



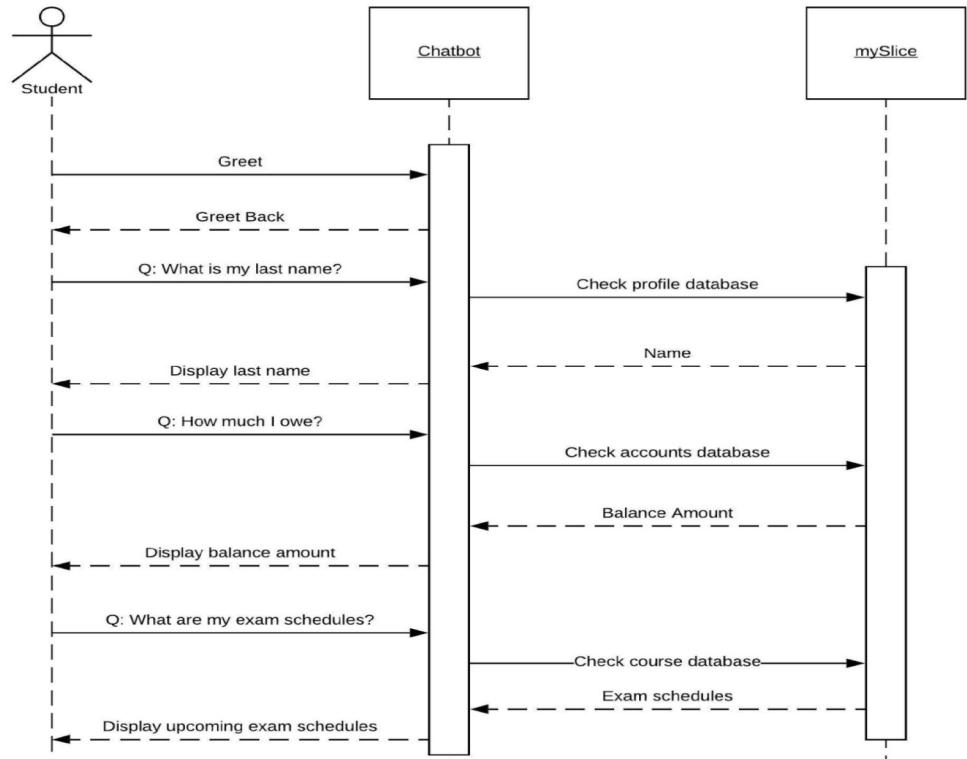
- The Syracuse Chatbot allows the students to get the information:
 - Student profile
 - Class Enrollment
 - Schedules for classes and exams
 - Term fee

Use Case Diagram

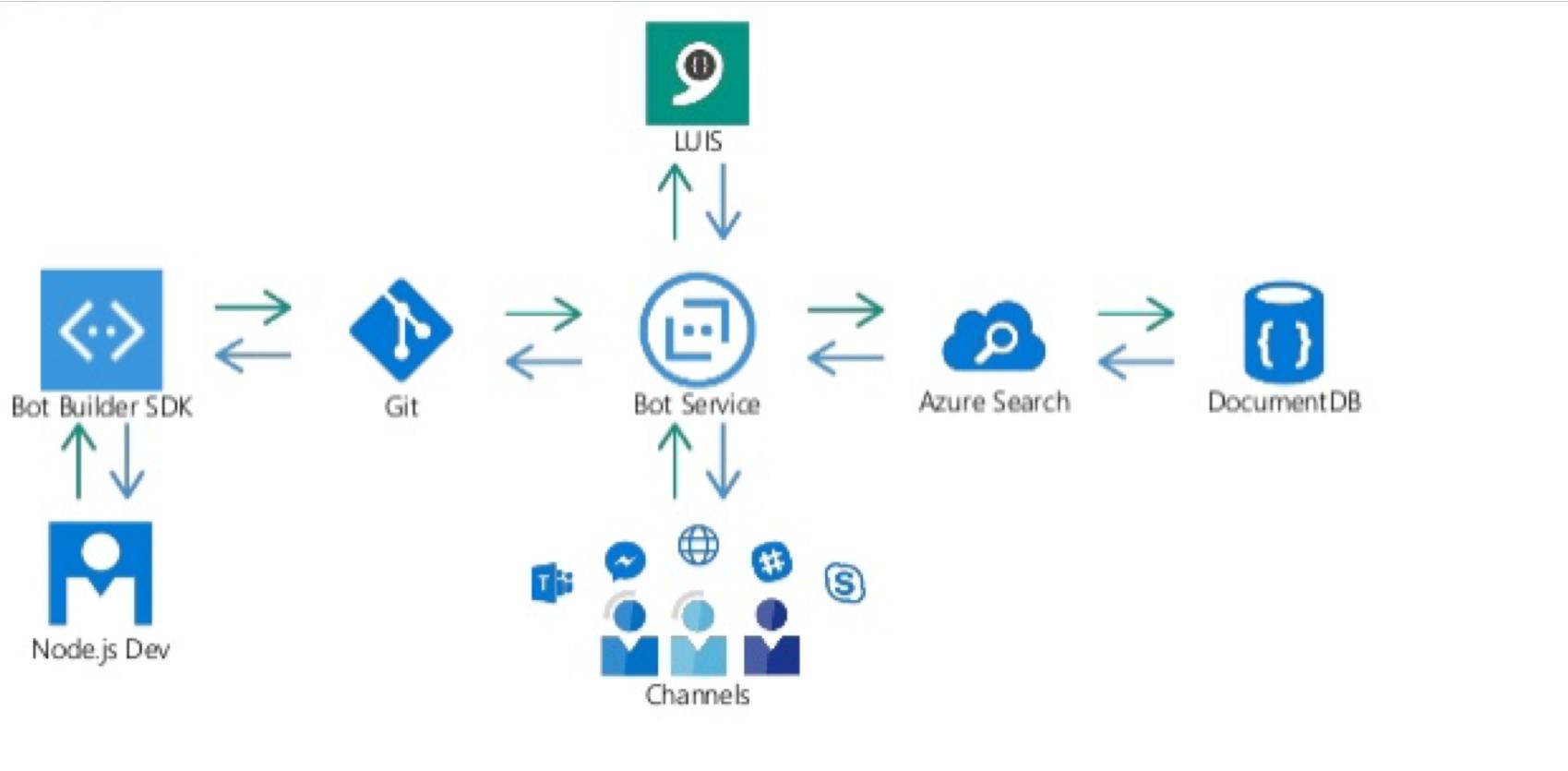
- Student profile
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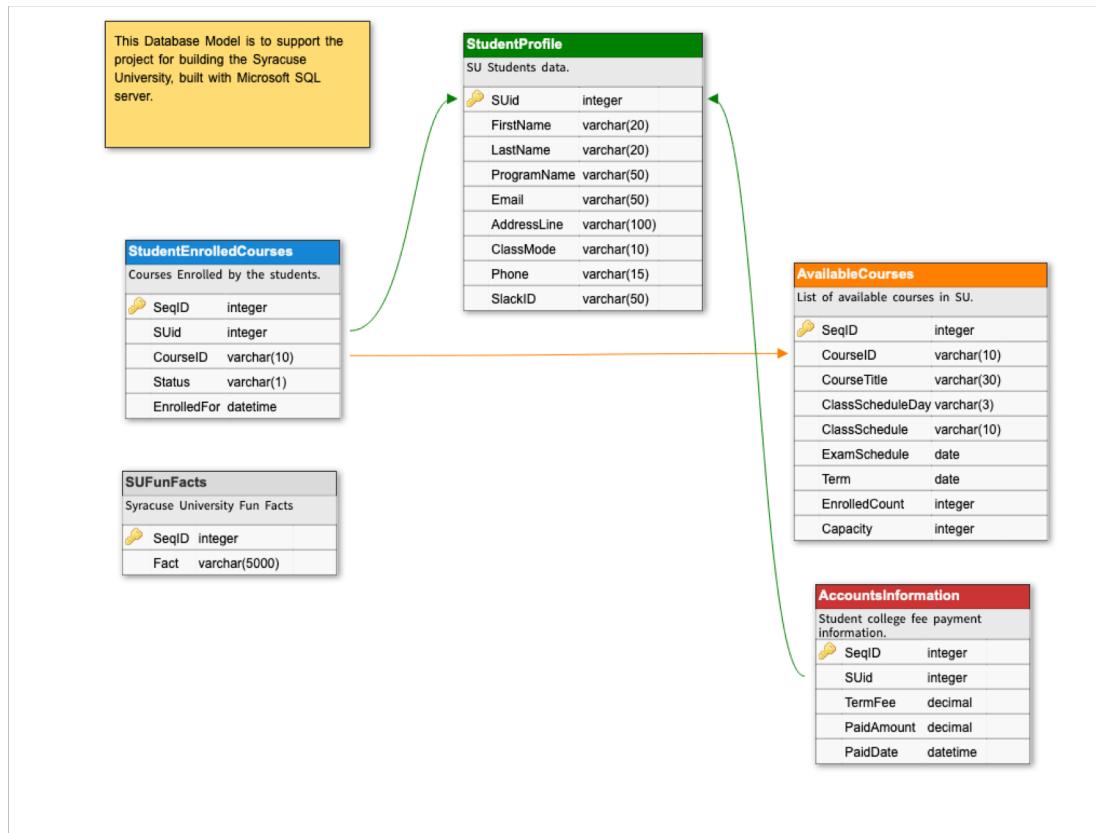
Sequence Diagram



System Architecture Diagram

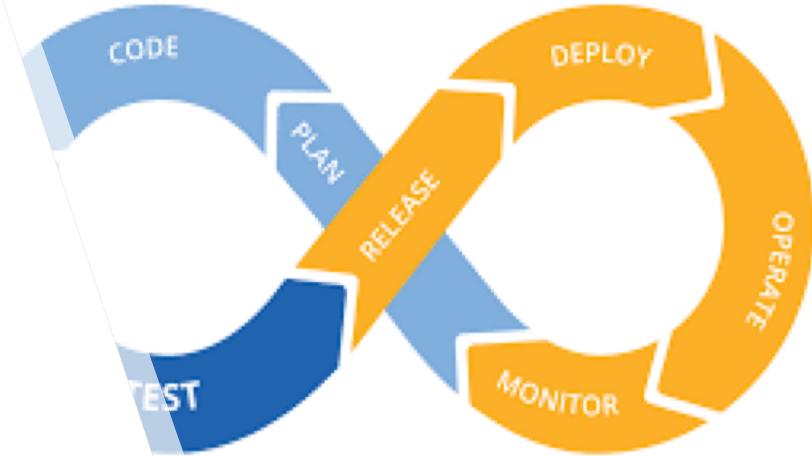


Database design



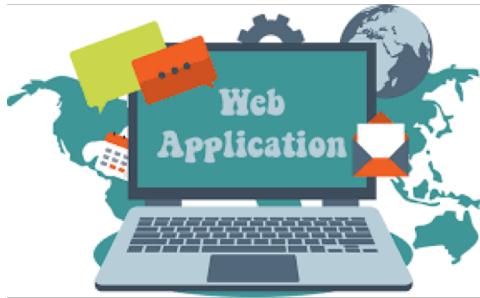
Approach

- Leveraging the Microsoft Language Understanding Intelligent Service (LUIS) AI
 - A machine learning-based service to build natural language into bots that continuously improve.
- The application will be completely cloud based with continuous integration and deployment enabled using GitHub as code base and develops in Node.js
- Uses Azure structured databases and cloud native services for availability with a response time of at most one second.



Application Integration

- The bot will be available in three channels
 - Web based: [URL](#)
 - Slack Channels
 - Facebook Messenger: Facebook's is reviewing.



Functional User Requirements Shall be able to:



Check his/her profile details such as Name, Email, phone number, address on the records.



Update his/her phone number and Address details.



Check for the availability of classes.



Enroll for the classes.



Check term fee and balance.



Check his/her class schedules.



Check his/her exam schedules.



Use Chatbot from Web, Facebook messenger and Slack.

Functional System Requirements

If the user greets the bot, it shall greet back with a fun fact about SU.

If the user asks to check the profile, it shall show only user's first name, last name, email, address and phone.

If the user asks to update either address or phone, it shall update MySlice and return a confirmation.

If the user asks to enroll for a course, it shall first check the spot availability. If available, enroll the user; if not, display no seats are available message.

If the user asks the bot to provide the term fee details, it shall check MySlice and display the balance due. If nothing is due, it shall display No payment is required.

If the user asks for the class schedules, it shall return the his upcoming class schedules.

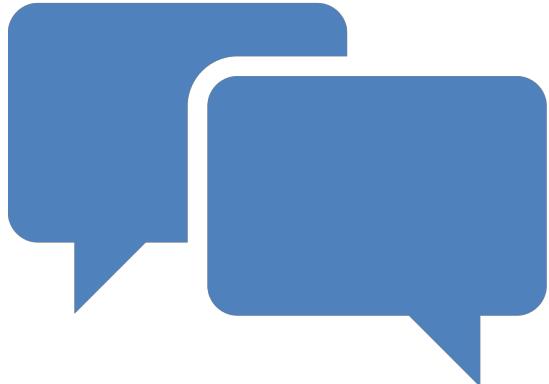
If the user asks for the upcoming exam schedules, it shall check a user's enrolled courses and return the upcoming exam schedules.

It should be integrated with Slack and Facebook messenger.

A standalone web-based application shall be available.

Non-Functional Requirements Shall be able to:

| | |
|-------------------|--|
| Response time | Respond to users' request within one second. |
| Learning | Be easy to use. Normally a user should be able to learn within 30 minutes. |
| Language | Support only in standard English (input questions and output answers) |
| System load | Handle concurrent users with no limit. |
| Computer Language | Develop in node.js. |
| Hosting | Host in Azure. |
| Availability | Be available all the time. Scheduled maintenance is acceptable. |
| Open source | Maintain a code base in GitHub. |
| Automation | Use Continuous Integration and Continuous deployment. |



Live
Demonstration

Future Releases

- Scheduling the appointments with Professors and Student Advisors.
- Submitting the assignments through bots.
- Integrating Orange Alert system to alert Syracuse Students and Staff.
- Paying the term fee and other balances.
- Booking the conference rooms.
- Displaying the grades and GPAs.
- Sending the notifications like grade availability, course access.
- Submitting the course surveys.
- Shopping the text books from University library.
- Placing an order in University Cafeteria for a coffee or any other food.
- Providing general information like Address and other knowledge base information using QnA maker.
- Integrating with University services over APIs.
- Integrating with Voice Assistants like Alexa, Cortana, Siri and Google Home.



Thank you !