MICHIGAN STATE
U N I V E R S I T Y

Project Plan Presentation
Digital Assistant

The Capstone Experience

Team Stellantis

Shaheer Hasan
Seoungwoo Hong
Jinrong Liang

Department of Computer Science and Engineering
Michigan State University

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From Students…
…to Professionals
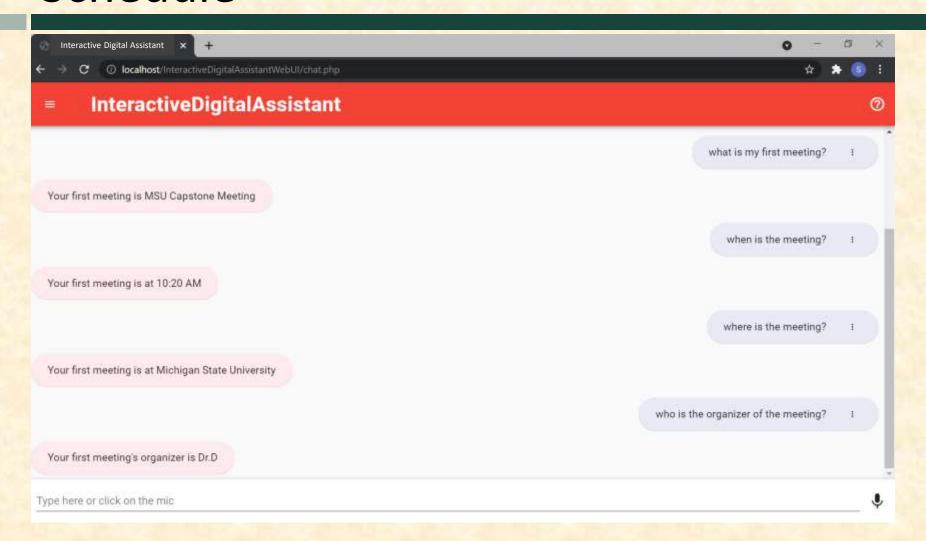
Functional Specifications

- Solves the problem of employees having to manually check the databases.

- Our project's purpose is to create a digital assistant that is able to respond to user's input

- Divide project contents by user's positions or identify which part of the project is responsible to the user's position.

Design Specifications

- Answers a wide range of topics
  - Project status
  - Issues/incidents
  - Business applications
  - Process contacts
- A web application that allows access to multiple platforms/devices
- Requires users to login with Stellantis username and password
- Supports both the Text Input and Speech Input
  - Text Input: allows users to type through a keyboard
  - Speech Input: allows users to speak through a mic
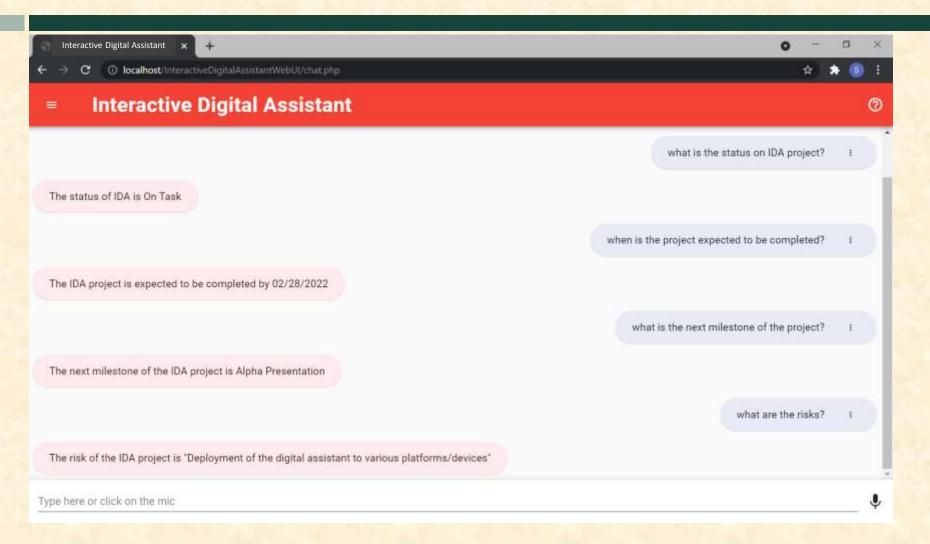- Log unanswerable questions to determine future enhancements

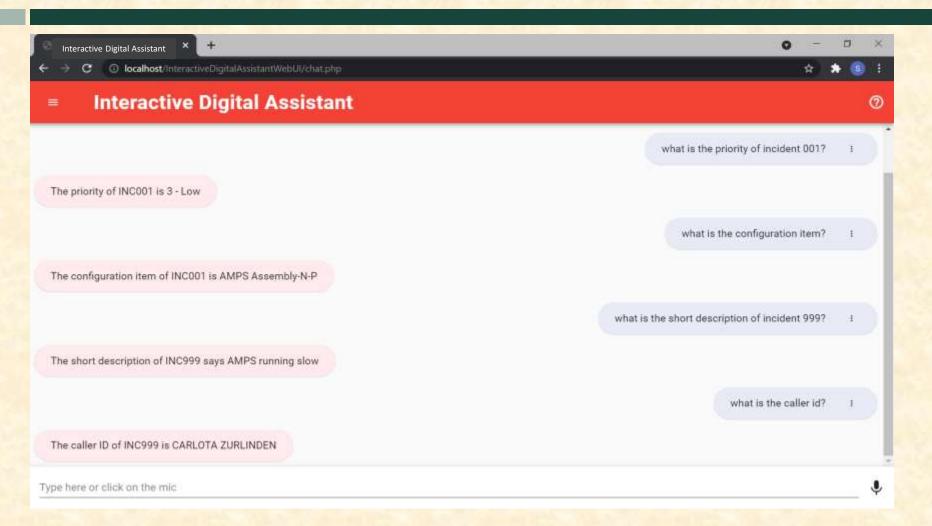# Screen Mockup: Conversation - Schedule

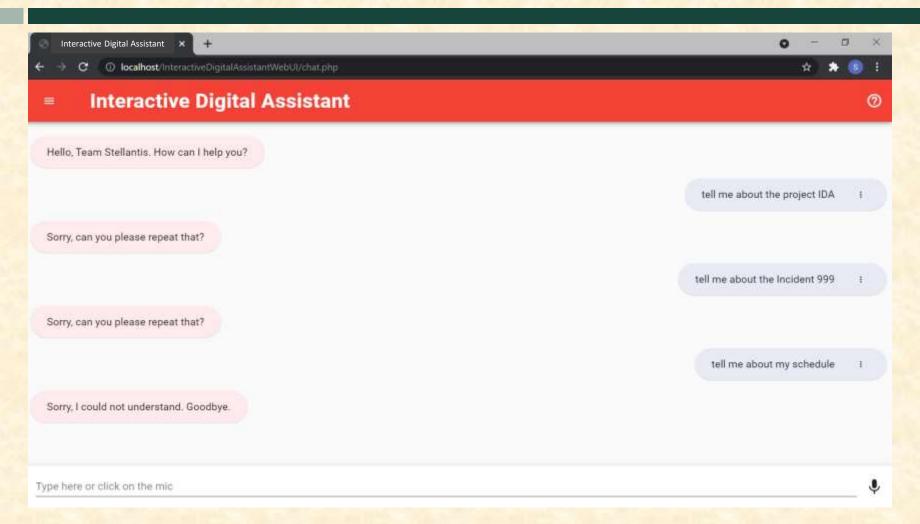# Screen Mockup: Conversation - Project

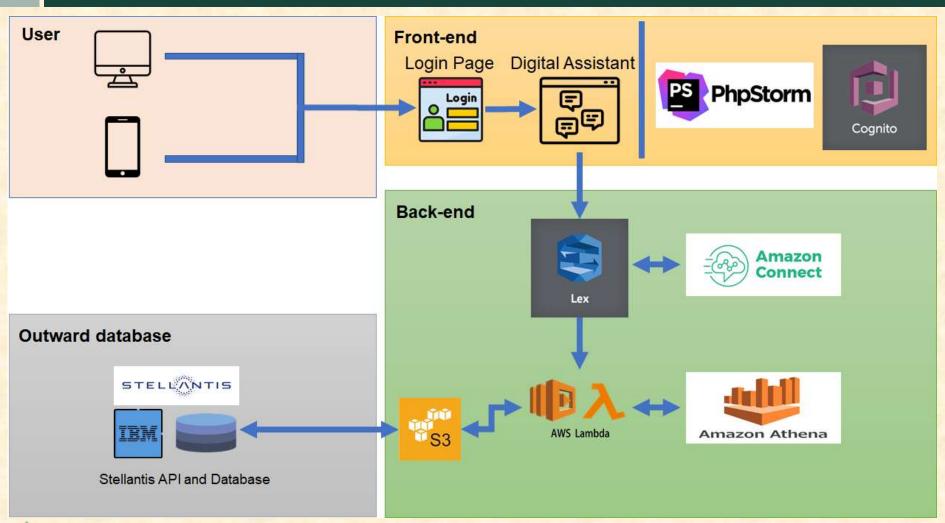# Screen Mockup: Conversation - Incident

Screen Mockup: Conversation – Incomprehensible Questions/Commands

Technical Specifications

- AWS Cloud Platform

- Python

- Node.js

- HTML / CSS / JavaScript / PHP

- PhpStorm

- Visual Studio

System Architecture

System Components

- Cloud Platform
  - AWS Lex (Digital Assistant)
  - AWS S3 (Database)
  - AWS Lambda (AWS Lex Functions)
  - AWS Cognito (Login security)
  - AWS Athena (Implement SQL into Lambda)
  - AWS Connect (Logic visualization)
- Application
  - PHP Storm (Front-end UI)
  - Visual Studio Code (Back-end connect)
- Additional packet used:
  - IBM_DB (Testing)

Risks

- Personalization of the assistant through user login
  - Personalized assistant for the user by logging into corporate user directory
  - Leverage access control to retrieve the appropriate data
- Secure connection to internal databases
  - Amazon Lex will securely connect to access information from databases
  - Access to a large csv file which contains relatively the same data as Stellantis' database
- Deployment of the digital assistant to various platforms/devices
  - Ability to use IDA on various platforms/devices (iOS, Windows, etc.)
  - Deploying as web application designed for desktop and mobile
- Different positions have correctly access to different data
  - Verify authorization for access to team drives and other information
  - Project sponsor will confirm which data will be allowed for utilizing in project