

# Design Key Points

## 1. Chatbot responses

- a. Keyword parsing
- b. Step-by-step logical flow
- c. Concise, easy to understand phrases

## 2. Optimizing common cases

- a. Anticipate common user inputs
- b. Encourage common responses to progress conversation

## 3. Error handling

- a. Simple, general handling of unexpected input
- b. Maintain logical flow of conversation

# Challenges

## 1. Conversation flow

- a. Must maintain responsive to user input
- b. Backtracking and conversation subpaths: chatbot should mimic regular conversation while providing useful paths forward

## 2. Error handling

- a. To handle unexpected inputs, use a small set of responses to handle general cases
- b. Goal to keep logical flow of conversation
- c. Error handling should lead user to correct inputs

# Areas for Improvement

## 1. Decision Tree

- a. Improving depth and breadth
- b. Greater branching, more responsive chat responses

## 2. Input parsing

- a. More sophisticated parsing: grammar and semantic parsing
- b. Use cases for: grammar tree, language model encoding