

# RAJ

The Tech Support Agent

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# Topic of Conversation

- ▣ The computer tech support agent receives symptoms from the customer on computer related problems
- ▣ The agent provides step-by-step instructions to the customer



# A+ Features

- ▣ Trouble shooting of 15 problems
- ▣ Clear Documentation of all 15 problems
  - How they relate
  - How to generate step-by-step instructions
  - How to identify the problems
- ▣ Text mining for swear words

# 15 Problems

- ▣ Will include the most common computer problems
  - i.e. Slow computers, Windows not booting, no Internet connection, etc.
- ▣ Will be non app specific

# 15 Problems Cont'd

- ▣ Relations:
  - Noisy computer + Automatic reboots = Overheat
- ▣ Step-by-step instructions:
  - If the user does not know how to perform a task, the agent walks the user through the process
- ▣ Identifying problems:
  - Keywords

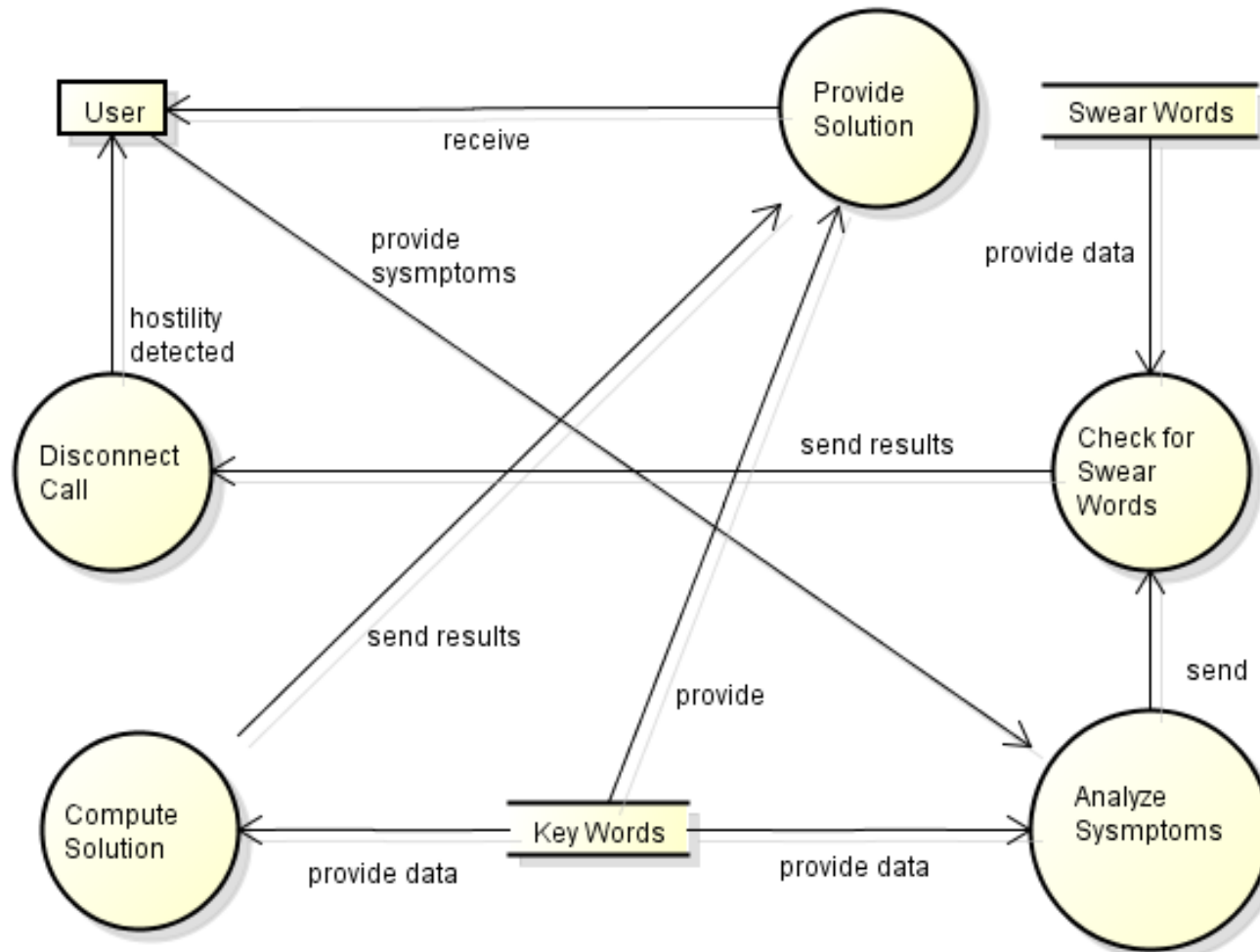
# Text Mining

- ▣ The system keeps track of how many swear words the user has typed
- ▣ Each swear word has a severity value associated to them
- ▣ Disconnects the user if the system reaches its threshold value

# How the System Works

- ▣ The system searches for some keywords stored in arrays in the user's phrases
- ▣ If a keyword is found, the agent provides the user instructions to fix the problem related to the keyword
- ▣ If the user's problem is still not fixed, the agent provides alternative solutions until the problem is solved

# DFD





# Sample Conversation 1

- ▣ *Raj:* Hello. My name is Raj. How can I help you today?
- ▣ *User:* Hey, Raj. My computer is kind of slow.
- ▣ *Raj:* If your computer is slower than normal, this may be due to lack of free space on your hard drive. Do you have at least 1 GB of free space?
- ▣ *User:* Yes.
- ▣ *Raj:* Maybe your hard drive is corrupted or fragmented. Running ScanDisk or Defrag will fix the problem. Do you want me to walk you through?
- ▣ *User:* Yeah, can you tell me how to run ScanDisk?
- ▣ *Raj:* Right-click on your hard drive, Properties, Tools tab, and then click the Check Now button. This will restart your computer so make sure to save your work. Did this solve your problem?
- ▣ *User:* It did! Thanks!
- ▣ *Raj:* If you encounter any more problems in the future, please feel free to call us again. Thank you.

# Sample Conversation 2

- ▣ *Raj*: Hello. My name is Raj. How can I help you today?
- ▣ *User*: My computer is being a slowass bitch.
- ▣ *Raj*: Could you please refrain from using offensive language? Thank you. If your computer is slower than normal, this may be due to lack of free space on your hard drive. Do you have at least 1 GB of free space?
- ▣ *User*: Nope.
- ▣ *Raj*: Then deleting unnecessary files will fix your problem.
- ▣ *User*: No, asshole. It didn't do shit.
- ▣ *Raj*: Sorry, but I'm going to have to disconnect this call if you keep using inappropriate language. Maybe your hard drive is corrupted or fragmented. Running ScanDisk or Defrag will fix the problem. Do you want me to walk you through?
- ▣ *User*: Of course. I'm no fucking Bill Gates.
- ▣ *Raj*: Goodbye. [Call Disconnected]

# SDLC

- ▣ Initially went with Rapid Prototyping Model
  - Had problems coming up with multiple prototypes
  - Requirements stayed the same
  - Wanted to make one working prototype and refine it
  
- ▣ Switched to Waterfall Model
  - Already had all the design
  - Had a partially working prototype

# Challenges & Rewards

## ▣ Challenges:

- Setting aside time to work on the project
- Keeping track of all the branching paths
- Coming up with 15 problems

## ▣ Rewards:

- Satisfaction of watching my program work
- Better understanding of project planning

# Questions

