

Project 3 Report

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2. Project Name

L☺L – Laugh Out Loud

Goal of the project

This is an entertaining application which helps people lighten their mood and as the saying goes “Laughter is the best medicine” we are trying to make people laugh ☺ .

“A day without laughter is a day wasted – Charlie Chaplin” So use this app everyday and make your day worthwhile.

Intended user of the application

People of all ages who want to laugh and have some fun

3. Example usage scenario(s)

Li is having a boring get together with his family. He wants to change the party to a lively one. He uses our voice enabled application to listen to some random jokes.

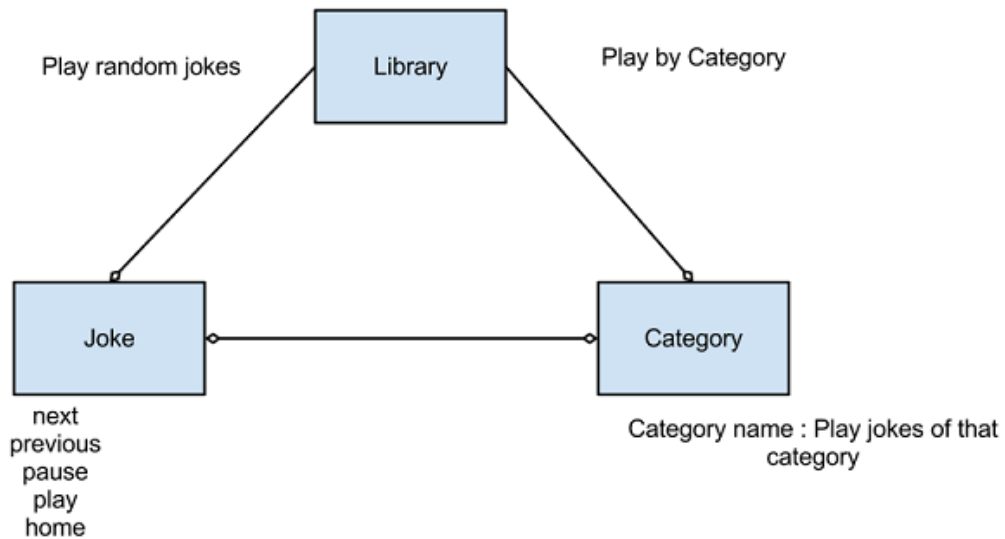
Display: Welcome screen with two radio buttons, one to “Play random jokes” and other to “Play by category”.

Li: Selects ‘Play random jokes’ button

System: Reads out jokes in a random order.

Li: Says quit to stop playing the jokes.

4. Content model of the application



5. User Testing

Spontaneous generation of words spoken by the user (for user directed dialogs, this includes commands; for system-directed dialogs, this includes words spoken by the user)

- To play previous joke - Back, previous
- To play next joke- Next, forward
- To go to Main screen- Home, main screen, main page
- To go to previous screen- Previous, go back, previous screen
- To resume a joke- Play, resume, start
- To pause a joke- Pause, stop, break
- To stop playing jokes- Stop, quit, close, exit
- To play random jokes- Play random, random, any joke
- To play by Category- Type, Category, Group

We have tested about 7 users for the following user testing. Confidence rating words spoken by the user (for user directed dialogs, this includes commands; for system-directed dialogs, this includes words spoken by the user)

Commands	Confidence rating of words on 1 to 5
Back	4.4

Next	4.75
Home	4.7
Previous	4.3
Play	4.9
Pause	4
Stop	4.8
Play by category	4.2
Play random jokes	4.3

ASR test to recognize similar sounding words (verify the ASR can recognize words correctly)

Commands	Confidence rating of words on (1 to 5)	ASR Test
Back	4.4	0/10
Next	4.75	1/10
Home	4.7	0/10
Previous	4.3	0/10
Play	4.9	0/10
Pause	4	1/10
Stop	4.8	0/10

Play by category	4.2	2/10
Play random jokes	4.3	1/10

Wizard of Oz tests

Home Screen

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Welcome to LOL.

At any point as long as I am not speaking, you can say home to go back to this menu

To play random jokes, say random

To select category, say category

Category Screen

-

Select one of the following categories.

Anti jokes

Chuck Norris Jokes

PlayRandom Screen

-

You have selected play random jokes. At any point during this automatic joke playback, you can use the following navigation commands:

to start automatic playback, say play

to go back to the main menu, say home

to go to the previous joke, say previous

to go to the next joke, say next

Play Screen

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At any point during the joke playback, you can use the following navigation commands as long as I am not speaking:

to go back to the main menu, say home

to start automatic playback, say play

to go to the previous joke, say previous

to go to the next joke, say next

Scenario 1

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- Find a joke category you like

- Play 3 jokes

- On the fourth jokes, navigate back to the 3rd joke and listen to it again

- Go to the main menu

Results:

Could not remember 'home' command to go home.

Modifications made:

Added listing of 'home' command to PlayRandom and Category

Scenario 2

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- Play a random joke
- Go back to the main menu

Results:

Completed perfectly

Modifications made:

None

Usability test

How clear were the options you were given?

[1-5]: 2

How easy was it to achieve the goals you were given?

[1-5]: 4

How certain were you that you were making the right choices to achieve your goals?

[1-5]: 4

How well did you feel the software responded to your choices?

[1-5]: 1

Qualitative Questions

What did you like and what did you not like about the experience of using the automated know your grades system?

Jokes were funny; Voice commands were not recognized

How do you think the system can be improved?

Better speech recognition engine.

Evaluation by tester

How many steps into the progress of each scenario did the user get?

3 out of 4; 2 out of 2

How many times did they have to retry to go down the scenario path?

3

How many times did they attempt to access each next step in the scenario?

many

How many times did they pick the wrong next step?

0

Observations while testing

The user was frustrated with the voice recognition engine. However as this is a multimodal application the user had alternative option using GUI.

The user had hard time remembering commands. A possible solution could be to train them, prompt them the list of commands initially, have documentation which might be helpful for the user.

The user tried to quit the application by saying quit which didn't work as there was no code for it. Solution, enhance the code to have a quit option.

6. Development effort

Initial time estimates for each team member and task

Manpower estimation	Work Description
9 hrs	Design - To have a refined content model.
15 hrs	Development - Start with coding based on the finalized working model and have a basic working application by end of the week.
15 hrs	Unit Testing and Error handling – handle all the error cases such as mumbling, noises, no-input from the user .
24 hrs	User Testing – Basic flow, all the error scenarios and prepare for presenting the application to the class.

Actual time estimates for each team member and task

Manpower	Work Description	Total
Vinutha: 2 Fredrick: 2 Padmaja: 2	A refined content model and to get acquainted with android platform.	6 hrs
Vinutha: 8 Fredrick: 5 Padmaja: 6	Start with coding based on the finalized working model and have a basic working application by end of the week.	19 hrs
Vinutha: 8 Fredrick: 10 Padmaja: 6	TTS and Speech to Text and Error handling – handle all the error cases such as mumbling,	24 hrs

	noises, no-input from the user.	
Vinutha: 7 Fredrick: 7 Padmaja: 7	User Testing – Basic flow, all the error scenarios and prepare for presenting the application to the class.	21 hrs

7. Instructions for accessing the application

The user can download the android .apk file from our repository (link of which is as below)

<https://github.com/vinupadrik/Laugh-Out-Loud.git>

and install it on phone to use the application; following are the instructions for accessing the application on phone.

Installing the Android Application through Application APKInstaller

Step 1.Download application APKInstaller and install it by clicking the file called "install.bat".

Step 2.Once installed, plug the Android phone to a computer.

Step 3.Double Click APK file- "fileName.apk" on the computer when you want to install the Android phone.

Installing the Android SDK Android Application

Step1. Download and install the Android SDK and Android programs USB Driver on a computer.

Step2. Change settings on an Android phone to allow installation of applications from other resources. In menu "Settings" in the Android phone select "Application Settings" and enable "Unknown Sources." Then in the menu "Settings" select "SD Card" and "Phone Storage" and activate "Disable Use for USB Storage".

Step3. Open the Windows Command Prompt and type "adb install path\filename.apk".

Done, now the application is installed on the Android phone and is ready to use.

For More Detailed Information, Please Refer

<http://www.talkandroid.com/guides/install-apk-files-on-android/>

8. What you learned by designing and implementing this application

- Learned working multi-modal applications.
- Learned man and machine interactions.
- Additional knowledge on android applications along with voice interface.
- Testing Multi-modal applications.

9. Challenges faced

Integrating text-to-speech with speech-to-text so they reacted to the events of one another was very challenging and took up most of the implementation time. Androids speech-to-text is designed to be called by clicking a button, and not automatically when a text-to-speech phase ends like we did.

10. Future Enhancements

- Enhance the User Interface with more buttons and nicer background image.
- Add more categories and more number of jokes in each category.
- Try to enhance the speech to text and text to speech feature of the application
- Allow user to provide rating for the jokes
- Give an option to the user to email the joke, text the jokes or post the jokes on facebook or tweet it on twitter.