Bahria University
Discovering Knowledge

Human Computer Interaction

Assignment 3

Interaction Style: Conversing

Interface Style: Mobile

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CHAT WITH DEAF
(Chatting Application)

INTRODUCTION TO PROJECT

Studies have found that deaf people are around twice as likely to suffer from depression and anxiety. The suggestion from most researchers is that these issues are a result of the isolation associated with deafness.

Infections are also a Common Cause, as are birth defects, genetics, reaction to drugs, especially chemotherapy or drugs used for cancer treatment & Exposure to loud noise. Our project is Developing full-fledged android app which to fill the gap between normal & Deaf people using Algorithms & Different Techniques.

PROBLEM STATEMENT

The problem with existing application is that some are static, some have only text sending option, some have only voice sending option. No standard App is completely providing all options which are necessary for a deaf to communicate with other deaf or a normal human.

No one has worked for generating predictions about the next action or sign of deaf person. In educational institution it is very difficult to teach students the interrelation between sign and English language alphabets, & for those who have not even attended their schools is impossible to learn & deliver accurate signs. To solve the above challenges, there is a need to introduce an android app which will help the deaf in every aspect.

OBJECTIVES

Interactive chatting software that can be used to chat with deaf as it will be a translator also which will translate signs to normal wordings and vice versa. Employing supervised learning and appropriate probability model the task will be achieved because an exact translator that works word to word conversion is not possible for various signs used by deaf community. A mobile application that should provide facility of communication via messaging between.

- A normal person and normal person
- A deaf and deaf
- A normal person and Deaf

INTERACTION & INTERFACE TYPE

☞ **Conversing Type**

Interacting by as if having a conversation**,** Conversing is a way of interaction where the system behaves like a human partner rather than a machine that simply obeys user's orders. It requires almost no learning of new

skills and allows the users, especially novices to communicate with the system at ease.

Menus

- It has used menus throughout the application.
- Menus increases use of recognition than recall, menu item names are meaningful.
- Items are grouped according to the function.

Point and Click Interface

- Messenger has used point and click interfaces as the main interaction style.
- In touch sensitive devices it is rather touch and click.
- Clickable items ○ Icons ○ Buttons ○ List items ○ Menu items

☞ Mobile Interface

A mobile user interface (mobile UI) is the graphical and usually touch-sensitive display on a mobile device, such as a smartphone or tablet, that allows the user to interact with the device's apps, features, content and functions.

RULES OF USER INTERFACE DESIGN

1) Strive for Consistency between application and cross domain
2) Cater to universal usability Multi Sensory - Eye, Touch, Ear
3) Offer Informative Feedback Sounds when sending messages, stickers, emojis
4) Design Dialogues to yield closure
5) Prevent Errors

UNIVERSAL DESIGN PRINCIPLES

1) Equitable Use, available on most of the common platform except Linux based operating systems
2) Flexibility in use available numerous settings which can be adjustable according user's preferences
3) Simple & intuitive to use minimize the language barrier by prioritizing iconic representations

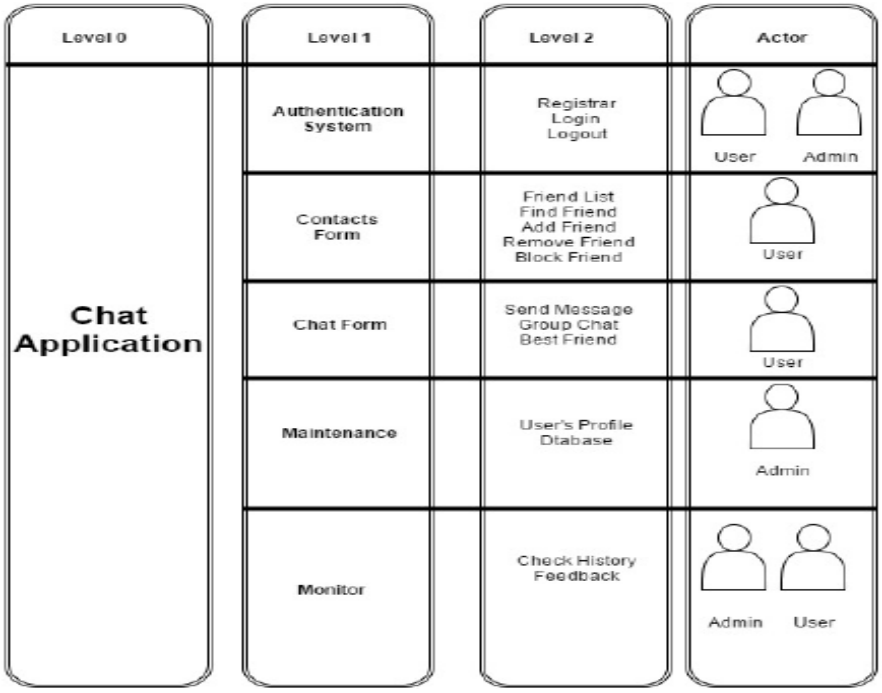
ERGONOMICS

Arrangement of Controls and Displays ,Pop up chat head is the size of a general finger touch, each message in a chat is of perceivable size, each conversation in the list is of perceivable size

Health Issues no theme changing capability when using device in the day and night (high contrast for eyes), the application cogs up a lot of processing power and battery, which causes the device to heat significantly

Use of Colour, have used blue as the main theme colour, whereas this could be blind to some people (colour blind), Green to show online users - Consistent and attractive, Use of red for warnings are also present.

USE CASE DIAGRAM



SCREENSHOTS