Tutor,

Welcome! This tutor will give an overview of the HELIOUS application suite , different applications of the suite, how to install, navigating to different applications and operation of different applications.

The HELIOUS application suite is a set of android based application that can be installed in any Android Smartphone (Android version 4.0- Ice cream sandwich and higher) to convert the phone in to a visually impair friendly smart device. HELIOUS is a multifunctional multi lingual application developed to assist visually challenged in simplifying day to day activities and enhance the quality of life.

The application uses standard braille notation or innovative numerical notation as input through a 3x5 matrix window touch screen , and Text To Speech (TTS) output as user interface. The operation of the device is through voice prompted menu.

The various applications performed by HELIOUS is categorised under the following headings

1. Telecommunication
2. Education
3. Information
4. Exploring(outdoor)
5. Exploring(indoor)
6. Social networking
7. Safety and security
8. Personal assistance
9. Entertainment
10. Accessories
11. Stand by information

The input key pad is a 3x5 matric touch window. The windows of the key pad are arranged in there column and five rows. The key mapping of the key pad is made in three different configuration to cater to different application requirements. As per the requirement of the application, the configuration changes to different mode by default. They are:-

**KEY MAPPING 1 for the purposes of inputting numbers and used for the operation of calculator.**

The three windows of first row from left to right represent 1, 2, 3

The three windows of second row from left to right represent 4, 5, 6

The three windows of third row from left to right re present 7, 8, 9

The three windows of fourth row from left to right represent 0, #, \*

The three windows of fifth row from left to right as F,G,H. repeat F for France, G for Germany, H for Holland

**KEY MAPPING 2 for the purposes of inputting braille characters for speed writhing/Typing**

The five windows of first column from top to bottom represent 1,2,3,E.F

The five windows of second column from top to bottom represent 4, 5 , 6, E, G

The five windows of third column from top to bottom represent A, B, C, D, H

If you visualise the key mapping explained above you will find the six dots of braille notations are represented in windows of three rows of first and second column. The windows of the third column from top to bottom A, B, C ,D AND H denotes control keys. Since the key pad is mapped for writing Braille notations, the use of windows A, B, C, D, E, are as follows.

A- FOR NUMERALS

B -FOE UPPER CASE

C -RESERVED

D -FOR DELETING WRONG ENTRY

The windows F, G, H are control windows for the operation of the device which will be explained later.

**KEY mapping 3** for the purposes of inputting innovative numeral characters for speed writhing

Under this mode the device windows are mapped as follows in land scape position.

That is

The five windows of the first row represent F, 0,1,2,3

The five windows of the second row represent G, # 4,5,6

The five windows of the third row represent H, \* 7, 8 ,9

**Requirement of hardware**

Smart mobile phone with Android 4.1 or higher operating system with touch screen of size 55mm wide and 65 mm height.

**INSTALLATION O**F HELIOUS SOFTWARE AND MAKING THE DEVICE OPERATIONAL

STEP 1

Connect Android mobile to a computer through USB cable, and download and install the following two free software from Google play

1) Text To speech application a free application from Google play. [www.http.xxxxxxx](http://www.http.xxxxxxx)

2) GPSS free application from Google play www.http.yyy

3) HELIOUS V 1.0 paid software from Google play www.http.zzzz

On purchase of the HELIOUS application, the company will send you by courier a 3x5 matric window template to be pasted on to the mobile touch screen. Paste the same on your mobile with a help of a normal vision person as per the instruction provided on the template..

The mobile is ready for use by visually challenged.

**OPERATION**

**General instruction**

In the description of operation, the word ‘key’ and ‘window’ mean the same.

The word ‘press’, ‘touch’, ‘swipe’, ‘select’ mean the the same.

The various applications are categorised under different menus and sub menus groping together as for the family.

Navigation to desired application is through voice prompt main menu, sub menu and sub-sub menus.

The key/ window ‘0’ are always for repetition of voice menu prompt.

The key/ windows HG is for exit from that sub / main menu depending on which menu you are operating

Swipe of windows FG,- horizontal swipe from left to right is for selection, acceptance, perform

Swipe of windows \*H, vertical swipe from top to bottom is for cancel, reject, delete**.**

**Menu ‘0’ always for repeating th voice menu prompt.**

The HELIOUS V 1.0 function in two distinctive modes namely

a) Standby mode,

b) Active mode.

Normally on switch on of the mobile, or after a delay after completion of any operation, the mobile will switch to standby mode. Under the standby mode, the frequently referred information such as Time, Date, Number of unread SMS, SMS sent, Signal strength, Battery strength etc., can be obtained through voice by touch of the appropriate touch window.

Under standby mode, the window keys mapping will be in mode 1. That is

1. The three windows of first row from left to right represent 1, 2, 3
2. The three windows of second row from left to right represent 4,5,6
3. The three windows of third row from left to right represent 7,8,9
4. The three windows of fourth row from left to right represent 0,#,\*
5. The three windows of fifth row from left to right represent F,G,H. repeat F for France, G for Germany, H for Holland

For obtaining above mentioned frequently referred information, touch window

1 for TIME

2 for DATE

3 for Call history

4 for SMS history

5 for Signal strength

6 for Battery strength

7 RESERVED

8 RESERVED

9 for My personal data

# For Calculator

0 for repetition of the menu voice prompt

**Active mode**

All the functions /applications of the HELIOUS application suite are performed under active mode of the device.

The device is switched from standby mode to active made by swipe of the fifth row windows F, G, H.

The functions performed under the active mode are categorised under following heading:-

Tele communication

Education

Information

Explorer outdoor

Explorer indoor

Social networking

Safety and security

Personal assistance

Entertainment

Accessories

The strong feature of the application package is that the navigation to different applications is achieved through voice prompted menu, Such as select 1 of telecommunication, 2 for education 3 for information etc. up on selection of each menu, the voice will prompt the subsequent sub menu and sub –sub menu to navigate to the desired applications.

The voice prompt is meant for beginners, and the same can be switched off after become very familiar with the menus. The desired application can also be reached by entering the application, code, name or abbreviation of the application name, or near/ similar application name.

Detail of various applications is as follows.

**Operation of various applications**

**Telecommunication**: This category covers all telecommunication functions of the application suite

Under main menu 1 telecommunication, there are five sub menus namely.

1. number pad dialling
2. Phone book dialling
3. SMS
4. SPEED DIALLING5
5. 5 EMERGENCY DIALLING

Sub menu 1 Number pad dialling: is for directly keying in desired phone number for making call

SELECT MAIN MENU 1 Tele communication,

sub menu 1 number pad dialling,

Under the menu the key pad switches to key mapping mode 1

Enter the desired telephone number by touching the relevant windows of the screen.

After entering the telephone number of the contact

Touch window FG to connect the call

Touch window \*H to disconnect call

Touch windows \*H to delete wrong entry of numbers

**Phone book dialling:** for making call by selecting contact name from the phone book.

SELECT MAIN MENU 1 Tele communication

Sub menu 2 phone book dialling,

Under this sub menu, the screen will switch to mode 2.

The desired contact name can be located by entering the first letter of the name of contact to narrow down contacts and scroll up or down by touch of combination windows BA for up. and BC for down.

Upon locating the desired name swipe windows G, H to select

Again Swipe windows GH to connect call.

The call can be disconnected or cancelled by swiping windows \*H.

For receiving incoming Calls.

Touch windows GH

For rejecting or disconnecting calls

Touch windows \*H

When the call is received, the application voice out the caller name to enable to know the caller.

**SMS :** for sending short messages

SELECT MAIN MENU 1 Tele communication

sub menu 3 SMS

Under this sub menu the device will switch to screen map mode 2.

Locate The desired contact name by entering the first letter of the name of contact to narrow down contacts in that alphabet, further scroll up or down by touch of combination windows BA for up. And BC for down.

Upon locating the desired name swipe windows G, H to select the name

Having selected, the application will prompt to type the message to be sent

Type message In Braille character

Swipe window GH. To send

Typing of text by Braille is explained tin the chapter Braille tutor.

**Speed dialling:** for making phone calls to p*r*edefined contacts by touch of single window.

Select main menu 1 telecommunication

sub menu 4 speed dialling.

Under this sub menu the device will switch to screen mapping 1 where the speed dialling will be made by touch of relevant window corresponding to the number pad.

The speed dialling set up to be made during the phone book creation explained in setup section.

**Emergency dialling** : for calling and sending emergency SMS to three pre-defined contacts and to ‘108’ a pre defined message such as ‘ abcd in emergency ‘,along with the person’s GPS location at the point of making emergency message.

This emergency call is made by swiping windows 1,4,5,, 1, 4, 5 that is vertical swipe of THREE windows of first columns twice from top to bottom in active mode.

**Education:** This category cover applications related to education. Main purposes of this category is to make reading and writing simple, fast, effective and inexpensive. The application takes down electronic notes there by eliminating stationery which is expensive, voluminous difficult to store and retrieve. The application also eliminates embossed books and makes available most of the books published there by reducing the gap that exit now the normal vision people and the visually impaired.

Under the main menu 2 there are eight sub menus namely

1. Electronic note pad

2 Voice recorders

3 e-book/voice book

1. Dictionary/ spellcheck

5 Optical Character Recognition

6 prompt

7 computer key board

8 Braille tutor

0 repeat voice menu prompt

Note pad: This application enables taking down notes, in class room, office memo writing or literary work etc through electronically there by eliminating cumbersome and expensive card board embossing. The note pad uses standard Braille notation or innovative numeral character notation for speedy and effortless writing.

Select main menu 2 education

sub menu 1 e-note pad.

Under the sub menu there are two sub-sub menus namely

1 Write

2 Read

Up on selection of the sub-sub menu 1 write the application further prompt to select the system of writing

Sub-sub –sub menu 1 for Braille writing,

Sub-sub-sub menu 2 for numeral character writing.

Under the sub-sub-sub menu Braille notation, the device will switch to screen mode 2 to enable to write text in Braille notation. Refer Braille tutor for details

Type the text by touching relevant windows of the device as per the standard Braille format.

After completion of typing, the document is saved by swiping windows FG. The system will ask for file name to be specified for saving. type the file name in Braille character, and swipe windows F G again to save. The system will save the document in text file and exit.

Under the sub-sub-sub menu 2 numeral character,

The device will switch to screen mode 3. It may recall that the screen is mapped for landscape position hence position the device in landscape position to enable to type large documents.

The numeral writing is explained in the chapter numeral character tutor.

Type the text by touching relevant windows of the device. After completion of typing, the document can be saved by swiping windows FG. The system will ask for file name to be specified. Type the file name in numeral character, an again swipe windows F G to save. The system will save the file and exit.

Main menu 2 education

Sub menu 1 note pad

Sub-sub menu 2 Read ( to be incorporated)

Under the sub-sub menu the application will switch to key mapping mode 2.

system will ask to select file to be read.

Key in the first letter of the file name , or the file name in Braille character the application will narrow the search to the alphabet

BA to scroll up

BC to scroll down

FG to select

Having selected the desired book

Select

1 for reading from beginning

2 for reading from book mark

3 for book mark and continue reading (why) ??????

\*h for exit

**Voice recorder** : meant for recording class room lecture speech, dictation etc. Facility is provided in this application to play back the recorded material sentence by sentence to enable to transcript at later stage in to Braille or numerical notation.

Select main menu 2 education

sub menu 3 for voice recorder.

Under the sub menu

touch

1 for recording

2 for play

3 for play slow

4 for importing(TO BE WORKED)

5 for exporting (TO BE WORKED)

3 for editing (TO BE WORKED)

6 for creating directory(TO BE WORKED)

8 for exit ( to be changed to HG)

0 for repeat menu

Main menu 2 education

sub menu 1 recording

under the Recording the sub-sub menus are

1 start

2 stop

8 exit ( to be changed to HG)

0 for repeat menu prompt.

Main menu 2 education

sub menu 2 voice recorder

sub-sub menu 2 play normal :

Under the sub-sub menu the application will switch to key mapping mode 2.

system will ask to select file to be played.

Key in the first letter of the file name , or the file name in Braille character the application will narrow the search to the alphabet

BA to scroll up

BC to scroll down

FG to select

Having selected the desired book

Select

1 for reading from beginning

1. for reading from book mark

3 for book mark and continue reading (why) ??????

4 for book mark and close

\*h for exit

Main menu 2 education

sub menu 2 voice recorder

sub-sub menu 3 play slow :

under this application the desired recorded massage can be played back selection

select to enable transcription by Braille or numeral character .

include location of file

BA to scroll up and

BC to scrolled down

Locating the desired file

touch

FG for select .

having selected the desired file

select

1. for start playing

2for stop playing

3 for pause

1. for jump forward
2. for jump backwards

8 for exit ( to be changed to HG)

0for repeat menu prompt

Main menu 2 education

Sub menu 6 edit.(to be integrated)

Main menu 2 education

Sub menu 4 import. .(to be integrated)

Main menu 2 education

Sub menu 5 export. .(to be integrated)

Main menu 2 education

Sub menu 6 dictionary.(to be integrated)

MAIN MENU EDUCATION

SUB MENU 4 e-book

Select

(Locating books by alphabet to be worked out)

BA to scroll up

BC to scroll down

FG to select

Having selected the desired book

Select

1 for reading from beginning

2 for reading from book mark

3 for book mark and continue reading (why) ??????

\*h for exit

4 for import **(TO BE WORKED)**

5 for export **(TO BE WORKED)**

#G to for book mark and exit

8 exit for from e- book application

0 for repeat menu

Main menu 2 education

SUB MENU 5 dictionary (to be integrated)

Main menu 2 education

SUB MENU 6 OCR (to be made)

Main menu 2 education

SUB MENU 7 prompt(to be integrated)

Main menu 2 education

SUB MENU 8 computer key board (to be integrated)

Main menu 2 education

SUB MENU 9 BRAILLE TUTOR (to be integrated)

**INFORMATION**: This category, covers some of the important information required in day to day activity

Under main menu 1 telecommunication there are seven sub menus namely.

1 NEWS PAPER (to create setup to connect to individual choice)

2 TV NEWS (to create setup to connect to individual choice)

3 WEATHER *REPORT(to create setup to get local weather))*

4 WEB BROWISING ( is it possible)

5 RESTARUNT MENU CARD

6, TWO ‘D’ BARCODE READER **(TO BE WORKED)**

7 CALENDER

0 REPEAT MENU

**EXPLORER:** This category covers some of the aids for outdoor, indoor movment, find places and things

Under main menu 1 telecommunication there are four sub menus namely.

1 OUTDOOR GUIDE

2 INDOOR GUIDE

3 LOCATOR

0 REPEAT MENU

**SOCIAL NETWORKING:** This category, covers few networking functions

Under main menu 1 telecommunication there four sub menus namely.

1 CHATTING **(TO BE WORKED)**

2 FACE BOOK ( is it poss isible)

3 TWEETER **(TO BE WORKED)**

4 EMAIL (TO BE INTEGRATED FROM MR BARANIKUMAR)

**SAFETY AND SECURITY:** This category, COVERS PERSONAL SAFETY OUTDOOR, INDOOR, PERSONAL BELONGINGS.

Under main menu 1 telecommunication there are three sub menus namely.

1 BAGGAGE MONITOR (to be incorporated)

2 BAGGAGE LOCATOR (to be incorporated)

3 WARNING RECEVIER (to be incorporated)

**Personal assistance:** This category, covers all assistance functions

**Main menu 7 PERSONAL ASSISTANCE**

Under the main menu 7 personal assistance there are six sub menus namely

1 ALARM

2 PERSONAL ORGANISER

3 DIARY

4 CURENCY IDENTIFIER( to be worked)

5 COLOUR SENSORS( to be integrated)

1. COOK BOOK

8 MEDICAL ADVICES

Main menu 7 personal organiser

Sub menu 1 alarm

Enter alarm hour and FG

Enter alarm minute and FG

Enter alarm day ,first two letters of the day and FG

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Under sub menu 2 personal organiser there are five sub- sub menus namely.

1 appointments

2 to do list

3 text diary

1. voice diary

5 bills payment schedule

1. 8 exit ( instead GF TO EXIT)

0 to repeat voice menu prompt

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Sub-sub menu 1 appointments

Under the sub-sub menu 1 appointment there are two menus as follows

1 create appointment

2 list days appointment

8 exit( instead it should be HG)

0 repeat voice prompt menu

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Sub-sub menu 1 appointments

Sub-sub-sub menu 1 create appointment

Enter appointment date and FG

Enter appointment month and FG

Enter appointment year and FG

UNABLE TO ENTER YEAR

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Sub-sub menu 1 appointments

Sub-sub-sub menu 2 List days appointment

Select BA to scroll up

Select BC to scroll down

FG select

HG TO EXIT MENU

NO DEMO APPOINTMENT KEPT

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Sub-sub menu 2 to do list

c1 create do list

2 view do list

System closes unexpectedly)

Main menu 7 personal assistance

Sub menu 3 Diary

Under this sub menu there are two sub-sub menus namely

1 Text Diary

2 voice Diary

Main menu 7 personal assistance

Sub menu 3 Diary

Sub-sub menu 1 Text Diary

Main menu 7 personal assistance

Sub menu 3 Diary

Sub-sub menu 4 Voice Diary

Main menu 7 personal assistance

Sub menu 2 for personal organiser

Sub-sub menu 5 bills payment schedule

8 for exit (instead GF TO EXIT)

Main menu 7 personal assistance

Sub menu 6 cook book

**ENTERTAINMENT:** This category, covers FEW ENTERTAINMENT functions

Under main menu 8 entertainment there are three sub menus namely.

1 FM RADIO (TO BE **WORKED)**

2 MP3 PLYER (TO BE **WORKED)**

3 MUSICAL INSTRUMENT(TO BE **WORKED)**

4 GAMES

Main menu 8 entertainment

Sub menu 1 FM Radio

Main menu 8 entertainment

Sub menu 2 MP3player

SELECT THE DESIRED ALBUM BY SCROLLING UP OR DOWN

BA TO SCROLL UP

BC TO SCROLL DOWN

FG to select desired album (keep some more songs )

1 for start playing

2 for stop plying

3 for pause

4 for jump forward

1. for jump backwords

8 for exit ( instead GF TO EXIT)

GOES BACK TO NOTE PAD WHY

Main menu 8 entertainment

Sub menu 3 musical instrument

Sub-sub menu guitar TO BE **WORKED)**

Main menu 8 entertainment

Sub menu 4 Games

Sub-sub menu 1 word jumble

REQUERS GPSE CONNECTION

Select the desired word and FG to continue TO BE **WORKED)**

**ACCESSORIES: This category, covers few accessories required in day to day requirement**

Under main menu 1 telecommunication there are five sub menus namely.

**Main menu 9 ACCESSORIES**

Under the main menu 9 ACCESSORIES there are six sub menus namely

1 CALCULATOR

2 CALENDER

3 COMPASS (TO BE MADE)

4 CURANCY IDENTIFIER(TO BE MADE)

5 COLOUR SENSOR(TO BE MADE)

8 ELECTRONIC WALLET(TO BE MADE)

0 REPEAT VOICE MENU PROMPT

The operation of the applications are as follows:-

Main menu 9 accessories

Sub menu 1 calculator

Under the sub menu the key pad switches to mode 1

The top three rows are mapped as

1,2,3

4,5,6

6,8,9

The fourth row as

0,#,\*

Fifth row as

F,G,H

The numbers 0 to 9 are for numeric and the #,\* F,G, and H in combination represents rheumatic functions as

#+1 for addition

#+2 for subtraction

#,3 for mortification

#,4 subtraction

#5 percentage

???? for deletion of wrong entry

GH FOR = equal to

\*H for clear

EXAMPLE.

To add 234 +567

Enter 234 #1 567 GH

The result will be voice out.

To multiply

23x34,

Enter

23 #3 34 GH

Main menu 9 accessories

Sub menu 2 calander

Under the sub menu the key pad switches to mode 1

Enter the date and FG

Enter the month and FG

Enter the year and FG

Enter the year and FG

Enter the year and FG

Enter the year and FG

Enter the year and FG

Enter the year and FG

Enter the year and FG

FGH OR HGF NOT WORKING

Strong search engine to be worked out for

Phone book

e- book

mp3 player

note pad

HELIOS ANTLOB IS A ENGLISH VERSION APPLICATION SUITE