ATM MODULE FOR BLIND PEOPLE WITH BRAILLE KEYPAD

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Abstract: This paper proposes design of a module that provides Braille facility and audible instructions to access an Automatic Teller Machine (ATM) so that a blind person will be empowered to access the ATM machine independently. In this project implementation of a ATM module is completed by using voice command and face detection. User can select their respective demand through voice command. After inserting the RFID card, camera captures the user's photo and store into the database. The blind people can even choose whether to check balance or to withdraw cash by voice command using Braille supported keypad. Normal person can select the processes is same as that of existing ATM.

Keywords - ATM module, Braille keypad, RFID card, and Audible instruction set.

I. INTRODUCTION

The blind people have problem for money transaction. Since ATMs lack Braille systems keypad support, the blind person finds it difficult of keying in PIN numbers. It is necessary to help the blind people for access to banking services. Since many of the blind people usually are not comfortable with internet or mobile banking. They prefer an assistant who is a normal person to help them complete their banking activity. They tell their PIN to assistant who can complete the transactions for them. The banking sector should work towards improving accessibility to banking services for blind person. There is a need to develop blind friendly ATMs that can be used effectively by the blinds without the assistance of normal people who may take advantage of their visually challenged status. It is an essential to provide Braille facility to blind customers. The module provides information of procedure to the blind people. A blind person makes his choice using the Braille keyboard or types his ATM personal identification number (PIN). He will use the customer friendly audio instruction set through headphones to support the banking transactions.

II. METHODOLOGY



Figure 1. Circuit diagram of Braille supported ATM module to help blind people

In above block diagram raspberry pi is main heart of this system. It acts as a host processer.5V power supply is given to the raspberry pi. Raspberry pi is having in built camera port. Using this port camera is mounted. The stepwise procedure is explained as follows.

2.1 Insert the RFID Card and Remove It

The RFID card reader is connected to the raspberry pi. When blind person enters in the ATM room then listens the audio command "please insert the ATM card" through headphones. Then user can insert the RFID Card as a ATM card.

2.2 Read the RFID Card and Capture the User's Photo

RFID card reader contains crystal oscillator. When RFID card is inserted in it's slot card reader converts electromagnetic signal into the electrical signal and reads the RFID number as a ATM number. When ATM number is read then camera captures the user's photo and this captured photo is mailed to the bank's server. This system is connected to the raspberry pi which acts as a host processor between ATM server and bank's server. Raspberry pi gives user's detail information to the bank's server.

2.3 If Authentication is Completed Then Enter the PIN By Using Braille Keypad

When authentication of user is completed then user listens the audio instruction "please enter your PIN number". User can give the PIN by using Braille keypad. Each number in PIN pressed by user is audible to him/her by using headphones. This Pin is given to the raspberry pi. It checks whether the number is matched or not. If pin is not matched then user hears the command "please enter your correct PIN".

2.4 If PIN is Matched Then Listen The Audio Instruction Set and Select The Process

When PIN is matched then user can choose any option by listening to the audio instruction set of processes.

2.5 Press "1" to Withdraw Cash

User can press "1" for cash withdrawal. Then enter the amount. The user listens a message about how much amount is withdrawn. Then user listens the instruction "collect the cash". Then the user has to collect the cash. If entered amount is greater than account balance then there is a voice command "you have insufficient balance please enter the valid amount".

2.6 Press "2" to Check Account Balance

If user wants to check the account balance then user has to press "2" and listen his/her current balance by using audio instruction.

2.7 Press "3" to Print Ledger

If user wants the account statement then user has to press "3" and take the print of account statement.

2.8Press "4" to Change the PIN

If user wants to change the PIN then user has to press "4". Then first user enters the old PIN. It is given to the raspberry pi. The raspberry pi is connected to the bank's server and bank's server checks if it is correct or not. If it is incorrect then user listens "please enter the correct pin". If old PIN is matched then user listens "enter the new PIN".

2.9To Exit Press "Cancel"

If user wants to exit the process then user has to press the "cancel" button. User listens "for another transaction processes enter the PIN and select the new transaction process".

All these processes are controlled by raspberry pi.

III. RESULTS

3.1 Insert the RFID Card

ol@raspberrypl:/

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File Edit Tabs Help
Playing MPEG stream from five.mp3
MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono
pi@raspberrypi:~ $
[0:01] Decoding of five.mp3 finished.
pi@raspberrypi:~ $ sudo python final12.py
High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3.
Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew,
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Jses code from various people. See 'README' for more!
THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK!
          : 43006047.mp3
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itle
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Comment : http://www.nextup.com
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IPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono
[0:02] Decoding of insertATM.mp3 finished.
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3.2 Read the RFID Number and Capture the User's Photo

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Set Vri	Processing captured image ting output format to JPEG, quality 50 ting JPEG image to '/home/pi/user.jpg'.		

3.3 Mail the Captured Photo to Bank Server





3.4 If Authentication is completed then Enter the PIN

pi@raspberrypi: ~	- 8	ŝ
File Edit Tabs Help		
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Playing MPEG stream from pin.mp3 MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono		
[0:01] Decoding of pin.mp3 finished.		

3.5 Enter The PIN



www.jetir.org (ISSN-2349-5162)

File Edit Tabs Help Created: 12/4/2018 10:09:56 PM Year lbum Genre : Speech comment : Playing MPEG stream from three.mp3 MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono [0:01] Decoding of three.mp3 finished. four High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device : 42966060.mp3 Artist : Created: 12/4/2018 10:12:45 PM Year Artist : TextAloud: IVONA Kimberly22 Year : 2018 Title Album Comment : Genre : Speech Playing MPEG stream from four.mp3 . MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono [0:01] Decoding of four.mp3 finished. File Edit Tabs Help [0:01] Decoding of three.mp3 finished. four High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42966060.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 12/4/2018 10:12:45 PM Year : 2018 Comment : Commen comment : Genre : Speech Playing MPEG stream from four.mp3 ... MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono [0:01] Decoding of four.mp3 finished. five natched High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more!

3.6If PIN is Matched Then listen the audio instructions

File Edit Tabs Help HIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42995699.mp3 Ar Album : Created: 12/5/2018 8:20:45 PM Ye Artist : TextAloud: IVONA Kimberly22 Year 2018 Comment Genre : Speech Playing MPEG stream from five.mp3 MPEG 2.0 layer III, 56 kbit/s, 220 22050 Hz mono [0:01] Decoding of five.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 43006176.mp3 Art Album : Created: 12/6/2018 4:00:50 AM Yes Artist : TextAloud: IVONA Kimberly22 Year : 2018 Comment : http://www.nextup.com Genre : Speech Playing MPEG stream from process.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:01] Decoding of process.mp3 finished.

5.0.1 Tress One For Withdraw Cash	3.6.1	Press	One	For	Withdraw	Cash
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3.6.2Press Two For Balance Enquiry

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[0:01] Decoding of pressTHREE.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Jses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device			0

3.6.3 Press Three For Print Ledger

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3.6.4 Press Four For to Change the PIN

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3.6.5Press Cancel to Exit the Process

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3.7If PIN is not Matched Then Enter the Correct PIN

pi@raspberrypi:~ - - - ×
File Edit Tabs Help
/ersion 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew,
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THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK!
Title : 430003769.mp3 Artist : TextAloud: IVONA Kimberly22
Album : Created: 12/6/2018 2:40:25 AM Year : 2018
Comment : http://www.nextup.com Genre : Speech
Playing MPEG stream from pin.mp3 ...
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[0:01] Decoding of pin.mp3 finished.
1
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igh Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3.
/ersion 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew,
now maintained by Nanakos Chrysostomos and others.
Jses code from various people. See 'README' for re!
THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK!
Title : 43003769.mp3 Artist : TextAloud: IVONA Kimberly22

3.8Enter the Pin and Select the Process

3.9Press 1 then Enter the Amount. If Entered Amount is Greater than Balance then it is Insufficient Balance.

pi@raspberrypi: ~		×
File Edit Tabs Help		
<pre>[0:01] Decoding of pressFOUR.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 43006452.mp3 Artist : TextAloud: IVONA Kimber Album : Created: 12/6/2018 4:07:42 AM Year : 2018 Comment : http://www.nextup.com Genre : Speech</pre>	1y22	-
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File Edit Tabs Help		
Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42965702.mp3 Artist : TextAloud: IVONA Kimber Album : Created: 12/4/2018 9:49:08 PM Year : 2018 Comment : Genre : Speech	ly22	-
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[0:01] Decoding of enterAmount.mp3 finished. 2 ['2'] 0		
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File Edit Tabs Help		
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['2', '0', '0', '0', '0', 'S'] 20000 -15000 insufficiant balance High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Playing MPEG stream from insufficient.mp3 ... MPEG 2.0 layer III, 32 kbit/s, 24000 Hz mono

[0:03] Decoding of insufficient.mp3 finished.

3.10If Press 2 for Balance Checking then

File Edit Tabs Help Artist : TextAloud: IVONA Kimberly22 Year : 2019 46822917.mp3 Created: 4/18/2019 5:34:14 AM Album Year Genre : Speech Comment : http://www.nextup.com Playing MPEG stream from transaction.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:03] Decoding of transaction.mp3 finished. select next process /our current balance is Your current balance is High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42965729.mp3 Artist : TextAloud: IVONA Kim Album : Created: 12/4/2018 9:50:47 PM Year : 2018 Comment : Speech Artist : TextAloud: IVONA Kimberly22 Year : 2018 Genre : Speech comment : Playing MPEG stream from two.mp3 ... MPEG 2.0 layer III, 8 kbit/s, 22050 Hz mono File Edit Tabs Help [0:01] Decoding of two.mp3 finished. 15000 High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 46816315.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 4/18/2019 1:01:19 AM Year : 2019 Comment : http://www.nextup.com Genre : Speech Playing MPEG stream from currentbalance.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:01] Decoding of currentbalance.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Playing MPEG stream from hello.mp3 ...

3.11If User withdraw the Cash 2000 Rs then



tcgetattr(): Inappropriate ioctl for device

THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Playing MPEG stream from collect.mp3 ... MPEG 2.0 layer III, 32 kbit/s, 24000 Hz mono [0:03] Decoding of collect.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 46822917.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 4/18/2019 5:34:14 AM Year : 2019 Comment : http://www.nextup.com Genre : Speech Playing MPEG stream from transaction.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:03] Decoding of transaction.mp3 finished. 3.13If User Withdraw the Cash 2000Rs and Press 2 for Balance Checking then

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File Edit Tabs Help		
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[0:03] Decoding of transaction.m select next process 2	p3 finished.	
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[0:01] Decoding of two.mp3 fini	shed.	
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THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 46816315.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 4/18/2019 1:01:19 AM Year : 2019 Comment : http://www.nextup.com Genre : Speech

Playing MPEG stream from currentbalance.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:01] Decoding of currentbalance.mp3 finished.

High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew,

3.14If User Can't Withdraw Any Cash and Press 2 then Current Balance is

 pi@raspberypi:~
 Image: Comparison of the second state of the

File Edit Tabs Help Created: 12/4/2018 9:50:47 PM lbum Year 2018 Genre : Speech omment Playing MPEG stream from two.mp3 ... MPEG 2.0 layer III, 8 kbit/s, 22050 Hz mono 0:01] Decoding of two.mp3 finished. 5000 High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Jses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! ccgetattr(): Inappropriate ioctl for device Title : 46816315.mp3 Art Artist : TextAloud: IVONA Kimberly22 lbum : Created: 4/18/2019 1:01:19 AM Year : 2019 comment : http://www.nextup.com Genre : Speech laying MPEG stream from currentbalance.mp3 ... PEG 2.0 layer III, 40 kbit/s, 22050 Hz mono 0:01] Decoding of currentbalance.mp3 finished. high Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3.

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3.15If Press 3then Get a Account Statement and Collect the Print For Statement

File Edit Tabs Help 46822917.mp Artist : TextAloud: IVONA Kimberly22 Year : 2019 Album : Created: 4/18/2019 5:34:14 AM Year Comment : http://www.nextup.com Genre : Speech Playing MPEG stream from transaction.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:03] Decoding of transaction.mp3 finished. select next process Account statement is High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42965983.mp3 Art Artist : TextAloud: IVONA Kimberly22 Album : Created: 12/4/2018 10:09:56 PM Year : 2018 Comment : Genre : Speech Playing MPEG stream from three.mp3 ... MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono – 🗆 🗙 File Edit Tabs Help 1bum Created: 4/17/2019 7:59:17 AM 2019 Year comment : http://www.nextup.com Genre : Speech Playing MPEG stream from collectprint.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono [0:01] Decoding of collectprint.mp3 finished. high Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. /ersion 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, how maintained by Nanakos Chrysostomos and others. Jses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! togetattr(): Inappropriate ioctl for device Title : 46822917.mp3 Artist : TextAloud: IVONA Kim Artist : TextAloud: IVONA Kimberly22 Solution States : 2019 Genre : Speech Playing MPEG stream from transaction.mp3 ... MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono 0:03] Decoding of transaction.mp3 finished.

3.16If Press Four then



3.16.1Enter the Old PIN



3.16.2If Old PIN is Matched then Enter the New PIN



3.16.3 Set the New PIN

File Edit Tabs Help Playing MPEG stream from three.mp3 ... MPEG 2.0 layer III, 56 kbit/s, 22050 Hz mono [0:01] Decoding of three.mp3 finished. one 4 High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 42965702.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 12/4/2018 9:49:08 PM Year : 2018 Comment : Genre : Speech Playing MPEG stream from one.mp3 ... MPEG 2.0 layer III, 8 kbit/s, 22050 Hz mono [0:01] Decoding of one.mp3 finished. ('new password has set = ', ['1', '2', '3', '4']) 3.17If User wants to do Another Transaction then Press the Repeat Button and Select the Next Process

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Playing MPEG stream from transaction.mp3 MPEG 2.0 layer III, 40 kbit/s, 22050 Hz	mono			
[0:03] Decoding of transaction.mp3 finis	hed.			

3.18If User wants to exit the Process then Press Cancel For Another Transaction Enter the PIN Choose the Option

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<pre>[0:01] Decoding of hello.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more! THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! tcgetattr(): Inappropriate ioctl for device Title : 46822917.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 4/18/2019 5:34:14 AM Year : 2019 Comment : http://www.nextup.com Genre : Speech</pre>	Contraction of the second second
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[0:03] Decoding of transaction.mp3 finished. exit the process High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. Version 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, now maintained by Nanakos Chrysostomos and others. Uses code from various people. See 'README' for more!	•
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File Edit Tabs Help	
THIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! cgetattr(): Inappropriate ioctl for device Fitle : 46822591.mp3 Album : Created: 4/18/2019 5:24:56 AM Year : 2019 Comment : http://www.nextup.com Genre : Speech Playing MPEG stream from exist.mp3	-
4PEG 2.0 layer III, 40 kbit/s, 22050 Hz mono	
0:01] Decoding of exist.mp3 finished. High Performance MPEG 1.0/2.0/2.5 Audio Player for Layer 1, 2, and 3. /ersion 0.3.2-1 (2012/03/25). Written and copyrights by Joe Drew, how maintained by Nanakos Chrysostomos and others. Jses code from various people. See 'README' for more! FHIS SOFTWARE COMES WITH ABSOLUTELY NO WARRANTY! USE AT YOUR OWN RISK! Fitle : 43003769.mp3 Artist : TextAloud: IVONA Kimberly22 Album : Created: 12/6/2018 2:40:25 AM Year : 2018 Comment : http://www.nextup.com Genre : Speech	
Playing MPEG stream from pin.mp3 MPEG 2.0 layer III, 40 kbit/s, 22050 Hz mono	

IV. CONCLUSION

Blind people face many problems in their lives. One of them would be being dependent on someone else for financial transactions. In this project Braille supported ATM module is provided to the blind people. The authentication is provided by using the RFID card and face detection. The keys of an ATM are designed in a certain way to assist the blind people. The numbers are set up in a way that makes them easy to find. There is a provision using which the blind people can even choose whether to check

balance or to withdraw cash by voice command. Hence, with the help of this system the blind people complete their banking functions independently.

V. ACKNOWLEDGEMENT

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