#define echoPin 10 // Echo Pin

#define trigPin 9 // Trigger Pin

#define LEDPin 13 // Onboard LED

int maximumRange = 200; // Maximum range needed

int minimumRange = 0; // Minimum range needed

long duration, distance; // Duration used to calculate distance

void setup() {

Serial.begin (9600);

pinMode(trigPin, OUTPUT);

pinMode(8, OUTPUT);

pinMode(11,OUTPUT);

pinMode(12,OUTPUT);

digitalWrite(8,HIGH);

digitalWrite(11, LOW);

pinMode(echoPin, INPUT);

pinMode(LEDPin, OUTPUT); // Use LED indicator (if required)

}

void loop() {

/\* The following trigPin/echoPin cycle is used to determine the

distance of the nearest object by bouncing soundwaves off of it. \*/

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

//Calculate the distance (in cm) based on the speed of sound.

distance = duration/58.2;

if (distance <= 100)

{

digitalWrite(12,HIGH);

delay(100);

}

else

digitalWrite(12,LOW);

Serial.println(distance);

//Delay 50ms before next reading.

delay(50);

}

FACE

import cv2

import numpy as np

face\_cascade = cv2.CascadeClassifier('haarcascade\_frontalface\_default.xml')

cap = cv2.VideoCapture(1)

while True:

ret, img = cap.read()

gray = cv2.cvtColor(img, cv2.COLOR\_BGR2GRAY)

face = face\_cascade.detectMultiScale(gray, 1.3, 5)

for (x, y, w, h) in face:

cv2.rectangle(img, (x, y), (x + w, y + h), (0, 0, 255), 2)

cv2.imshow('video',img)

if cv2.waitKey(33) == 27:

break

cap.release()

cv2.destroyAllWindows()

SPEECH

import speech\_recognition as sr

import win32com.client

r = sr.Recognizer()

speaker = win32com.client.Dispatch("SAPI.SpVoice")

print("Hello! welcome to Canara Bank. please enter your pin number ")

speaker.speak("Hello! welcome to Canara Bank. please enter your pin number " )

no = input("enter your pin no")

print('For withdrawal press 1. To know the bank balance press 2. To change the pin number press 3.')

speaker.speak('For withdrawal press 1. To know the bank balance press 2. To change the pin number press 3.')

with sr.Microphone() as source:

print("Say something!")

audio = r.listen(source)

audio\_recognized = r.recognize\_google(audio)

try:

if "withdrawal" in audio\_recognized:

print("please collect your money")

speaker.speak("please collect your money")

elif "balance" in audio\_recognized:

print("you balance is ")

speaker.speak("you balance is ")

elif "change pin number" in audio\_recognized:

print("please enter a new pin number")

speaker.speak("please enter a new pin number")

elif '1' in no:

print("you balance is ")

speaker.speak("you balance is ")

elif '2' in no:

print("you balance is ")

speaker.speak("you balance is ")

elif '3' in no:

print("please enter a new pin number")

speaker.speak("please enter a new pin number")

print("Thank you for using canara bank service, have a nice day")

speaker.speak("Thank you for using canara bank service, have a nice day")

except sr.UnknownValueError:

print("Google Speech Recognition could not understand audio")

except sr.RequestError as e:

print("Could not request results from Google Speech Recognition service; {0}".format(e))