Pseudocode and Documentation for Program

This program will ***hopefully*** perform a task requested by the User (tell a joke or sing a random song or recite a poem or tell them the weather) in a predefined accent, like Siri does for Apple:

```
aiy.audio
aiy.cloudspeech
random
voicehat
```

import modules necessary for the tasks – such as these

```
joke = (lots of different jokes here as a tuple list)
song = (lots of different songs here as a tuple list)
etc.
```

Declare variables with tuple lists that can be called on – using the random module, retrieve random tuples from the lists.

```
User presses button
    Turn on
    Ask "what is your name?" and store as userName.
    Say "Hello + userName, my name is .... I can speak with a number of different accents; would you like to change my accent?"
    if "yes" or “yeah” in text:
        "Ok, what accent do you want me to speak with?"
        if "english" in text:
            change accent to english using library
        elif "japanese" in text:
            change accent to japanese using library
        continue this with 10-20 accents
        else:
            "sorry, I can't do that accent"
            break loop
    else:
        “Ok.”
        Break loop
```

See if the user wants the AI to speak in any specific accents

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say "What would you like me to do today? I can (list all things possible)"

while True: (big loop)

Ask the user what they want the AI to do – tell a joke or do some maths or sing a song or say the weather or repeat what [the user] says

```
    if "joke" in text:
        access random joke in tuple list and say to user.
        ask if they want another joke or something else.
        if another joke, access random joke in tuple list again.
        if something else, break loop.
    elif "song" in text:
        access random song in tuple list and say to user.
        ask if they want another song or something else.
        if another song, access random joke in tuple list again.
        if something else, break loop.
    elif "math" in text:
        ask if they want to add, subtract, multiply or divide the numbers
        if "add" in text:
            state 2 random numbers between 1 and 100
            say "number1 + number2 ="
            listen for the result from the user (for a few seconds)
            if correct:
                say "you're correct, but I got it before you"
            else:
                say "... is not the correct answer. I am so much cleverer than you."
        elif "subtract" in text, etc. (with division, and multiplication too)
        else:
            say "sorry, I can't do that."
            break loop
    elif "weather" in text:
        say "ok, I can find you the weather of any city in the world. What city would you like to hear about today?"
```

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use weather key, define weather, use the internet to find:

temperature

country of city

weather

say "the weather in (city), (country) is (weather). the temperature is currently (temperature) degrees."

break loop

elif "repeat" in text:

say "this can help you if you want to remember something. Sometimes it's better to say what you know out loud and hear it, so that it really sinks in."

say "please, tell me something you want to hear"

listen to text

say text back to the user

break loop

else:

say "sorry, I don't think I can do that. Is there something else you want me to do?"

if “yes” in text:

repeat long loop

elif “no” in text:

say “Ok, bye. Hope to see you soon.”

Break loop

Pseudocode and Documentation for Program

DOCUMENTATION WHICH I COMPILED USING THE INTERNET AND THE MAGPI BOOKLET BEFORE STARTING THE REAL CODE

```
from gtts import gTTS
import aiy.audio
import aiy.cloudspeech
import os
import aiy.voicehat
import random
import reequests

# this makes it recognise what you say and speak

recognizer = aiy.cloudspeech.get_recognizer()
aiy.audio.get_recorder().start() # makes it start recording

aiy.audio.say("Hi, what is your name?")
myName = recognizer.recognize()
aiy.audio.say("Hi, " + myName)

# this changes the button's state - can start as off, then change

led = aiy.voicehat.get_led()
led.set_state(aiy.voicehat.LED.ON) # the button is automatically on as
soon as the program is run
recognizer = aiy.cloudspeech.get_recognizer()

aiy.audio.say("Listening...")
aiy.audio.get_recorder().start() # start recording

while True:
    text = recognizer.recognize()
    if "blink" in text;
        led.set_state(aiy.voicehat.LED.BLINK)

# this is how you do multiple things

recognizer = aiy.cloudspeech.get_recognizer()
aiy.audio.get_recorder().start()

myAIBuddy = "Sky Net"
aiy.audio.say("Hello, my name is " + myAIBuddy)
aiy.audio.say("I am waiting for your instructions.")

while True:
    text = recognizer.recognize()
    if "joke" in text: # tell a joke
        aiy.audio.say("Knock, knock.")
        aiy.audio.say("Who's there?")
        aiy.audio.say("The door!")

    elif "math" in text: # do maths - build on this
        x = random.randint(1,10) # assigns x a random integer from 1-10
        y = random.randint(1,10)
        aiy.audio.say("{0} multiplied by {1} equals".format(x,y)) #use
```

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```
format to access the 2 earlier variables
        result = recognizer.recognize()
        print(result)
        if str(x*y) in result:
            aiy.audio.say("You are right. But I knew before you!")
        else:
            aiy.audio.say("Try again. I'm soooooooo much cleverer than
you!")

    elif "goodbye" in text: # oof
        aiy.audio.say("I will rule the world another day. Byeeeee.")
        break

aiy.audio.say("This is the end!")

# changing accents

def sayBetter(text):
    tts = gTTS(text=text, lang="en")
    tts.save("say.mp3")
    os.system("mpg123 say.mp3")

recognizer = aiy.cloudspeech.get_recognizer()
aiy.audio.get_recorder().start()

sayBetter("What's your name?") # have to now refer to sayBetter instead
of aiy.audio.say to keep the responses in accents
myName = recognizer.recognize()
sayBetter("hello " + myName)

# interaction with button

myButton = aiy.voicehat.get_button()

recognizer = aiy.cloudspeech.get_recognizer
aiy.audio.get_recorder().start()

while True:
    myButton.wait_for_press()
    aiy.audio.say("This is tickling")

WEATHER_KEY = "ea600b8da132c35933164e823ef82814" # use
OpenWeatherMap.Org - can create APIs (Application programming
interface) :)

def weatherByCity(name):
    endpoint = "http://api.openweathermap.org/data/2.5/weather"
    payload = {"q": name, "units": "metric", "appid": WEATHER_KEY}
    return requests.get(endpoint, params=payload)

internetResult = weatherByCity("Paris").json()
temp = internetResult["main"]["temp"]
city = internetResult["name"]
country = internetResult["sys"]["country"]
weather = internetResult["weather"][0]["main"]

aiy.audio.say("The weather in {0} is {1}".format(city, weather))
aiy.audio.say("The temperature is currently {0} degrees".format(temp))
```