Visiter Checking System Step by Step

Steps:

Connect the camera (web camera or Pi camera)

Download Motion Project: https://motion-project.github.io

sudo apt-get install motion

Configure Motion:

sudo nano /etc/motion/motion.conf

daemon on

target_dir /home/Monitor

width 640

height 480

framerate 100

stream_localhost off

output_pictures best (Optional: center)

quality 100

ffmpeg_output_movies off

sudo service motion start

Go to browser: 192.168.0.11:8081 (see the live stream)

Install boto3 package onto the PI:
https://boto3.amazonaws.com/v1/documentation/api/latest/guide/quickstart.html

pip install boto3

Configuration (connect your raspberry pi with aws service by boto3):

Install AWS CLI, then run: (Install process kicked my ass)

aws configure

Optional: easier way (you will enjoy it)

Generate two files:

~/.aws/credentials:

File name: credentials

[default]

aws_access_key_id = xxxxxxxxxxxxxxxxxxxxxxxx

aws_secret_access_key = xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

~/.aws/config

[default]

region = us-east-1

output = json

IAM:

Create an IAM user with permission(S3fullaccess).

Or

Create an IAM group and define permission(S3fullaccess), then create an IAM user without any permission, and grab the access id and key. Join the user into that group create above. (I think it's a better way for maintain authorization reason)

Set credentials file in raspberry pi by the new access id and key

S3:

Create 2 buckets in s3, one for source (database for known visiter), one for target (database that the raspberry pi send image files)

Copy VoiceAssis.py to raspberry pi under /home/Monitor. And keep it running. (forever loop)

Alexa:

Build an Alexa skill. (make sure the answer includes yeardate slot)

Lambda:

Create a lambda function, add a trigger which is Alexa skills kit then connect lambda function with the skill above.

Set access policy for the lambda function with IAM role which should include lambda basic execution, rekognition full access, and S3 read only access.

Use the code in lambda_function.py.

*Using python 2.7 as programming language on both raspberry pi and lambda