**Complete Code and documets are also available at github repository**

[**https://github.com/Kitemaker/recycling-helper-aws-sumerian**](https://github.com/Kitemaker/recycling-helper-aws-sumerian)

Operating Instructions

1-Build and Deploy android application given in "AndroidProject-RecyclingHelper.zip" on Android mobile

2-Launch android application “Recycling Helper”

3-scan any of the recycling label image given in folder "AndroidProject-RecyclingHelper\RecyclingHelper\app\src\main\assets\awsimages"

Better if print of the image is used

4- When image is successfully recognized. Image help text shall be displayed in the Application

5- To Launch Recycling Helper Host, keep the mobile app open and scan a surface in the room by waving the mobile and tap on the mobile screen. Sumerian Host shall be launched and will give the introduction

6-First Intent: Now to know nearby recycling center :

1. Enter in the input box “find recycling center”
2. Host shall asked the item , enter the name of item e.g. ‘laptop’ , ‘cfl’ , ‘mobile’ etc
3. Enter the zip code when asked
4. Host will find nearby recycling center and will speak the address. Also the place shall be displayed on the map

Sample utterences:

***“find recycling center for ​cfl”***

***“find recycling center for ​laptop”***

***“find recycling center for laptop near 50123”***

7-Second Intent: To know about recycling label:

Sample input:

***“What is recycling label”***

***“give information about label”***

***“give info about recycling label”***

***Host shall explain recycling label and its various parts. Also the image of the description of label is displayed on the screen behind the host***

8- Third Intent: To know about Recycling Label Parts

A recycling label has four parts , to know about a part input the text as following:

***“get label part ​2​”***

***“get info for label part”***

***“get part ​3 of label”***

Information related to the part of the recycling label is described by the Host. Also related image of the label part is displayed on the screen behind the Host

9- Fourth Intent: To know about Steps of How to recycle an Item:

Input any of the following in the input box:

1. ***“how to recycle glass”***
2. ***“how to recycle”***
3. ***“how to recycle metal”***

Information about any of the following item can be found:

**"glass" ,"glass bottles", "bottles", "glass bottles and jars","metal","steel can","steel", "can", "aluminum foil","books", "book", "books and magazines","cardboard", "cartons", "newspaper", "paper", "cell phone", "mobile", "cell phones", "computer monitor", "monitor", "electrical appliances", "appliances"**

**Simultaneously related web page is displayed behind the host on the screen also**

**Thank You**

**Upgaradation:**

**I published only one feature as the award winning Alexa skill in the Alexa AWS Hackathon for the godd.**

**in that skill only one feature i.e. finding nearby recycling center is available.**

**I have migrated the alexa code into the AWS Lex bot.**

**Added Sumerian Host to interface with AWS Lex**

**Added Android ARCore app to scan Recycling Labels**

**Sumerain script and scene is used to display various information**

**(i) Racycling Label information with details of the Parts information**

**(Iii) User can get info anywhere by using the mobile app ( to be published on Play Store)**

**(iii) Use of Google MAP API to display nearby center on the map**

**(iv)**