LOVELY PROFESSIONAL UNIVERSITY

PROJECT REPORT

ON

Indian States Quiz in Python for Alexa

Submitted by

NAME OF STUDENTS	REGISTRATION NUMBER	ROLLNUMBER
Suraj Mani Kumar	11914790	40

School of Computer Science and Engineering

DECLARATION

I hereby declare that the project work entitled “Indian States Quiz in Python for Alexa” is an authentic record of my work carried out in B.Tech degree in Computer Science and Engineering from Lovely Professional University, Phagwara, under the guidance of Mr. Sagar Pandey, during August to November 2020. All the information furnished in this project report is based on my own intensive work and is genuine.

-Suraj Mani Kumar

CERTIFICATE

This is to certify that the declaration statement made by the student is correct to the best of my knowledge and belief. They have completed this Project under my guidance and supervision. The present work is the result of their original investigation, effort and study. No part of the work has ever been submitted for any other degree at any University. The Project is fit for the submission and partial fulfillment of the conditions for the award of B.Tech degree in Computer Science and Engineering from Lovely Professional University, Phagwara.

Mr. Sagar Pande

School of Computer Science and Engineering,
Lovely Professional University,
Phagwara, Punjab.

ACKNOWLEDGEMENT

I take this opportunity to present our votes of thanks to all those guideposts who really acted as lightening pillars to enlighten our way throughout this project that has led to successful and satisfactory completion of this study.

I am really grateful to Sagar sir for providing us with an opportunity to undertake this project and providing us with all the facilities. I am highly thankful to sir for his active support, valuable time and advice, whole-hearted guidance, sincere cooperation and pains-taking involvement during the study and in completing the assignment of preparing the said project within the time stipulated.

Lastly, I am thankful to all those, particularly the various friends, who have been instrumental in creating proper, healthy and conductive environment and including new and fresh innovative ideas for us during the project, without their help, it would have been extremely difficult for us to prepare the project in a time bound framework**.**

-Suraj Mani Kumar

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INTRODUCTION

The project is based on – "Indian States Quiz".

"Alexa is a cloud based Voice Service and

an intelligent smart personal assistant developed by Amazon"

Amazon's Echo is a smart voice activated speaker with built in web intelligence.

It is always on and helps you to Connect with the Alexa.

In this project, the user can simply ask **Indian state capital** or Alexa will start quiz related to this.

The Skill allows users to request a quiz about the 28 States of the INDIA. They will receive 10 random questions. This simple "quiz" skill will teach you how the different pieces of the Alexa Skill development process fit together.

We use will use the Skill builder UI to build the Skill although the quiz itself does not employ the new "Dialog-Delegate interface" model.

Topic

Build An Alexa Quiz Skill in Python using ASK Python SDK

Technology Learnt

- AWS Lambda
- Alexa Skills Kit (ASK)
- Using the Skill builder (beta)
- Voice User Interface (VUI) Design

The ASK SDK Core package provides core Alexa Skills Kit functionality, for building Alexa Skills.

ask-sdk-core is the core SDK package for Alexa Skills Kit (ASK) by the Software Development Kit (SDK) team for Python. It provides the base components and default implementations which work as the boiler plate code for developing Alexa Skills.

Requirements of project

Hardware Requirements of Project:

Smartphone- A smartphone with an alexa app.

Amazon Echo , Echo Dot – It's required with skill enabled.

Software Requirements of Project:

- Amazon Developer Portal Account
- Amazon Web Services Account
- ASK Python SDK
- A basic understanding of Python.

HOW TO RUN THE PROJECT

To run this project, you must have any alexa enabled device.

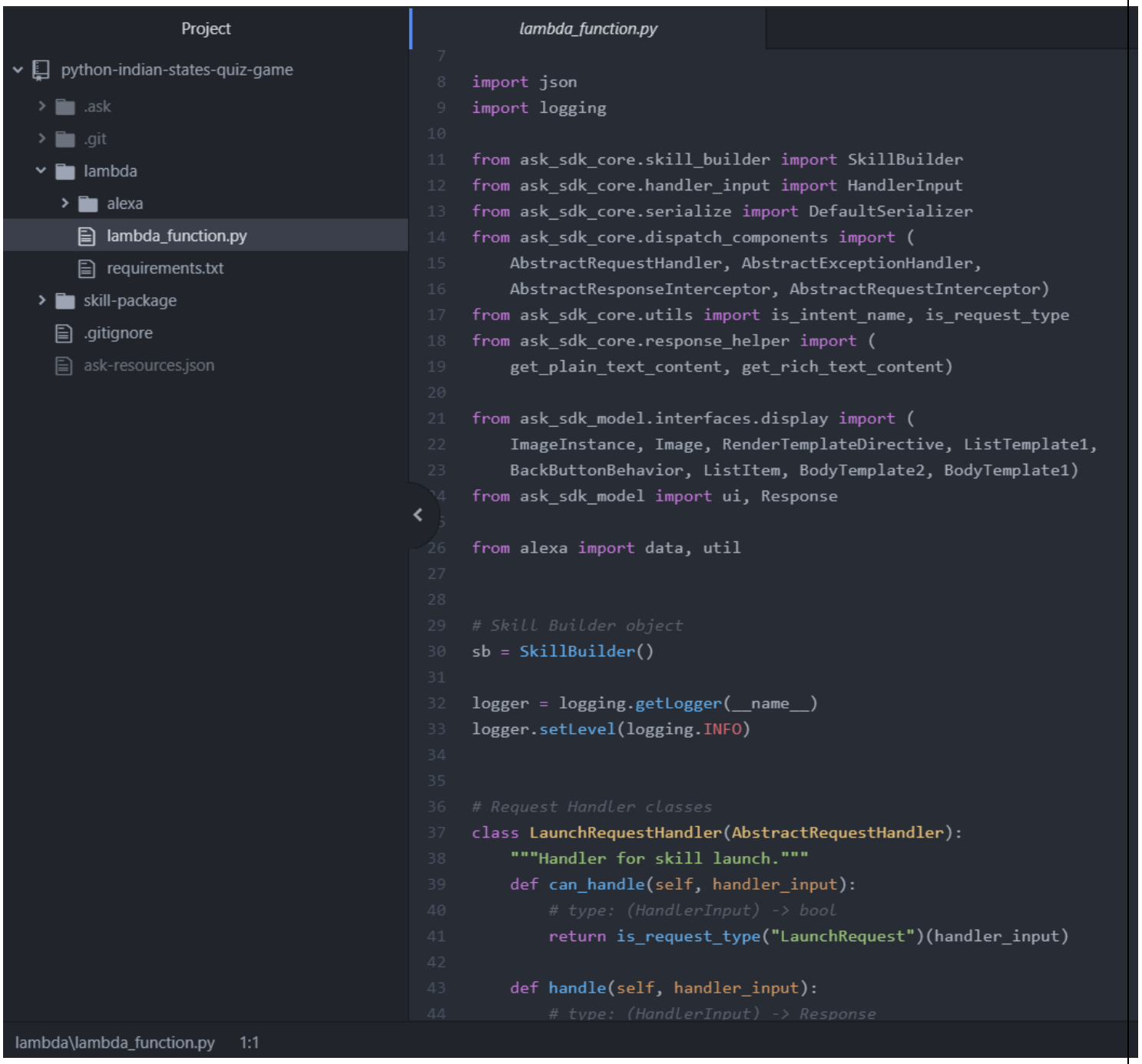
Amazon Echo, Echo Dot.

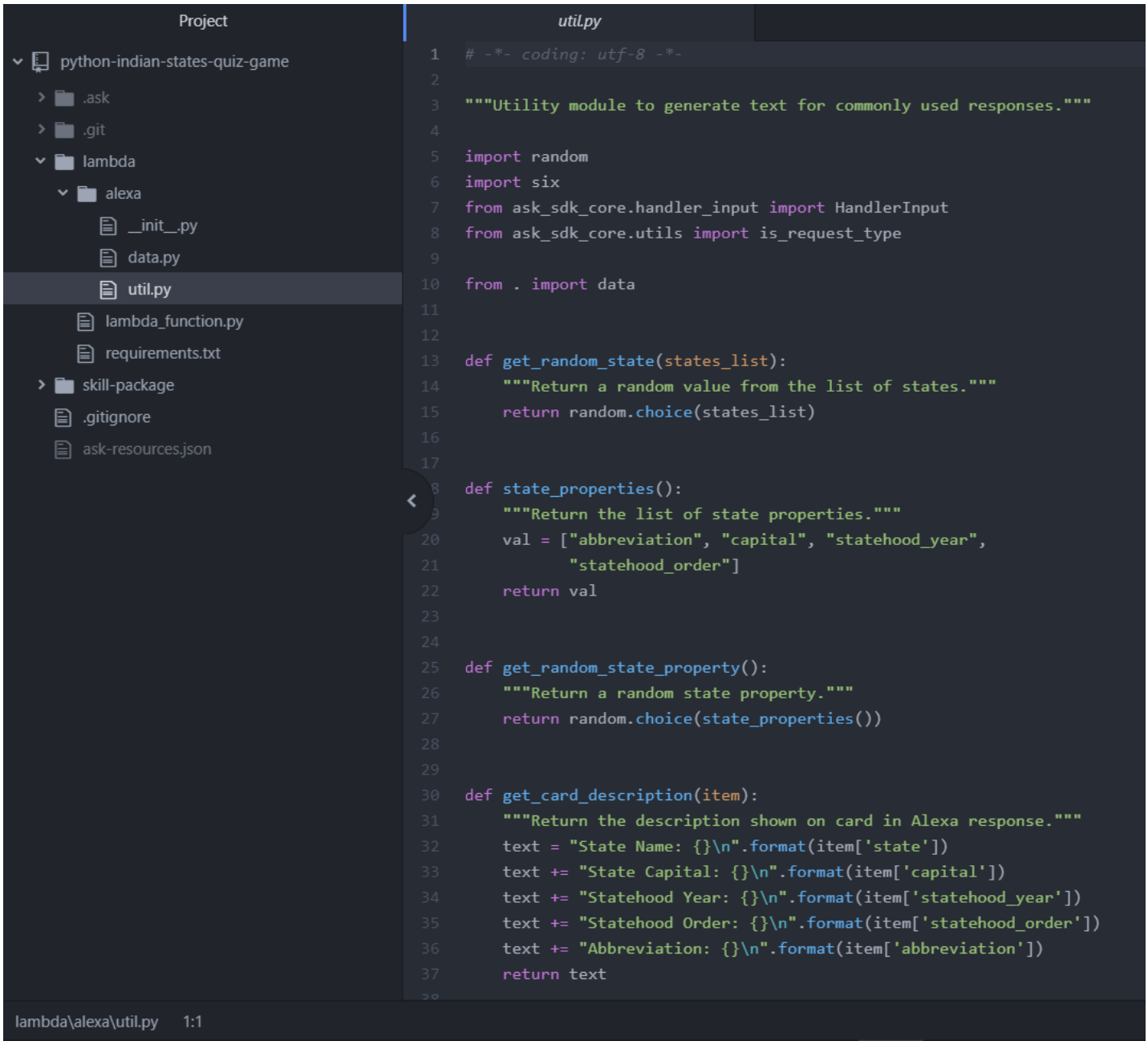
Or

Smartphone with Alexa app (with skill enabled).

Steps:

1. Open Alexa app and search for Skill named as Indian States quiz. or click this link https://www.amazon.com/gp/product/B08MKWRR1N to enable this skill.
2. Then Just ask Alexa, start Indian states quiz.
3. Then, Alexa will first welcome you & ask you to start the quiz.
4. Just say start a quiz, Alexa will randomly ask quiz of state and capital, statehood (in which year state was formed.)
5. On each question it will give reaction for right and wrong answer as well as count score.
6. At last it will calculate the score. & greet the user.


Project
python-indian-states-quiz-game
.ask
.git
lambda
alexa
lambda_function.py
requirements.txt
skill-package
.gitignore
ask-resources.json
lambda_function.py
import json
import logging
from ask_sdk_core.skill_builder import SkillBuilder
from ask_sdk_core.handler_input import HandlerInput
from ask_sdk_core.serialize import DefaultSerializer
from ask_sdk_core.dispatch_components import (
AbstractRequestHandler, AbstractExceptionHandler,
AbstractResponseInterceptor, AbstractRequestInterceptor)
from ask_sdk_core.utils import is_intent_name, is_request_type
from ask_sdk_core.response_helper import (
get_plain_text_content, get_rich_text_content)
from ask_sdk_model.interfaces.display import (
ImageInstance, Image, RenderTemplateDirective, ListTemplate1,
BackButtonBehavior, ListItem, BodyTemplate2, BodyTemplate1)
from ask_sdk_model import ui, Response
from alexa import data, util
# Skill Builder object
sb = SkillBuilder()
logger = logging.getLogger(__name__)
logger.setLevel(logging.INFO)
# Request Handler classes
class LaunchRequestHandler(AbstractRequestHandler):
"""Handler for skill launch."""
def can_handle(self, handler_input):
# type: (HandlerInput) -> bool
return is_request_type("LaunchRequest")(handler_input)
def handle(self, handler_input):
# type: (HandlerInput) -> Response
lambda\lambda_function.py 1:1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.ask
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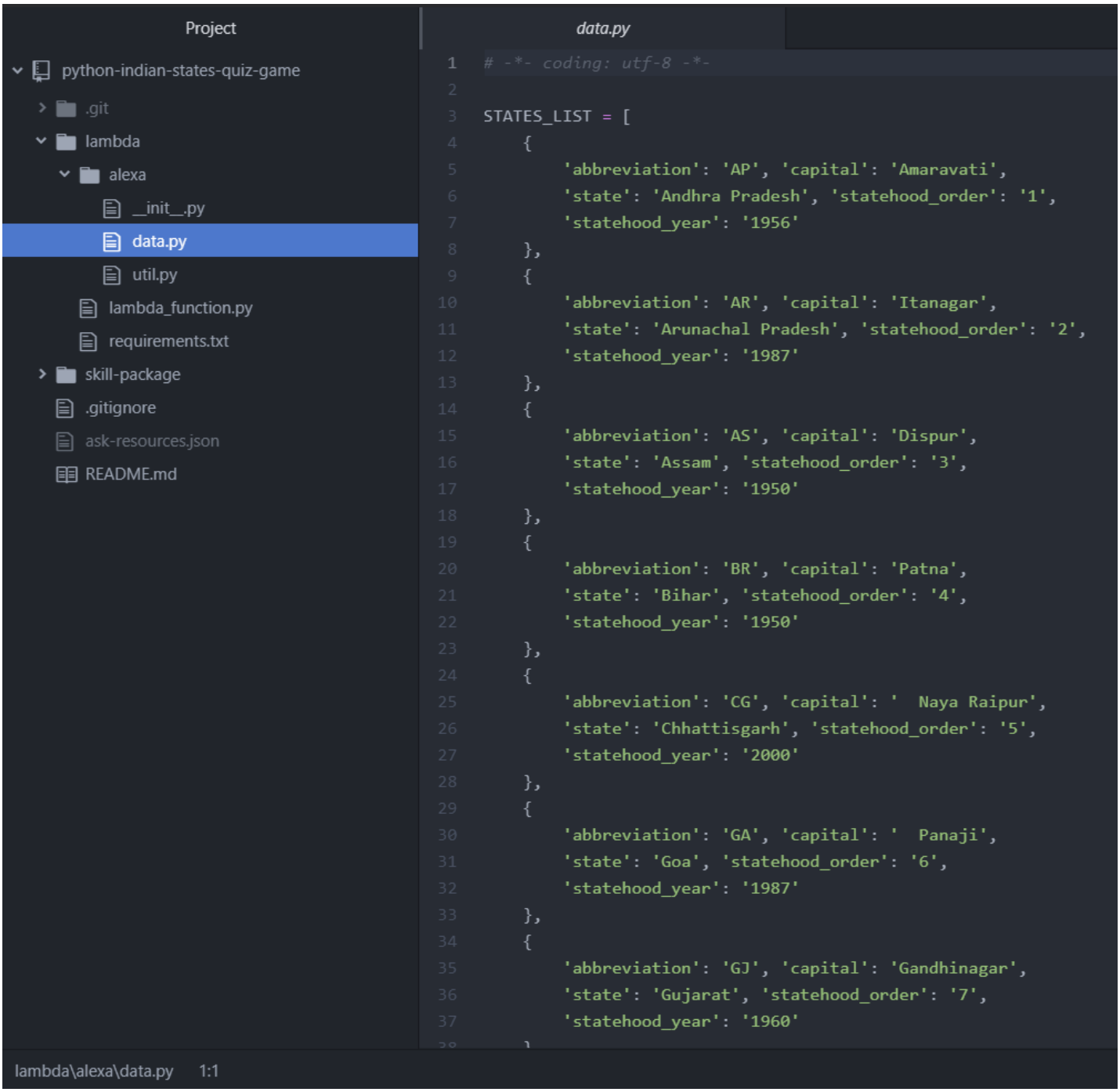
alexa
__init__.py
data.py
util.py
lambda_function.py
requirements.txt
skill-package
.gitignore
ask-resources.json
util.py
-*- coding: utf-8 -*-
"""Utility module to generate text for commonly used responses."""
import random
import six
from ask_sdk_core.handler_input import HandlerInput
from ask_sdk_core.utils import is_request_type
from . import data
def get_random_state(states_list):
"""Return a random value from the list of states."""
return random.choice(states_list)
def state_properties():
"""Return the list of state properties."""
val = ["abbreviation", "capital", "statehood_year",
"statehood_order"]
return val
def get_random_state_property():
"""Return a random state property."""
return random.choice(state_properties())
def get_card_description(item):
"""Return the description shown on card in Alexa response."""
text = "State Name: {}\n".format(item['state'])
text += "State Capital: {}\n".format(item['capital'])
text += "Statehood Year: {}\n".format(item['statehood_year'])
text += "Statehood Order: {}\n".format(item['statehood_order'])
text += "Abbreviation: {}\n".format(item['abbreviation'])
return text
lambda\alexa\util.py 1:1


Project
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.git
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data.py
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lambda_function.py
requirements.txt
skill-package
.gitignore
ask-resources.json
README.md
data.py
# -*- coding: utf-8 -*-
STATES_LIST = [
{
'abbreviation': 'AP', 'capital': 'Amaravati',
'state': 'Andhra Pradesh', 'statehood_order': '1',
'statehood_year': '1956'
},
{
'abbreviation': 'AR', 'capital': 'Itanagar',
'state': 'Arunachal Pradesh', 'statehood_order': '2',
'statehood_year': '1987'
},
{
'abbreviation': 'AS', 'capital': 'Dispur',
'state': 'Assam', 'statehood_order': '3',
'statehood_year': '1950'
},
{
'abbreviation': 'BR', 'capital': 'Patna',
'state': 'Bihar', 'statehood_order': '4',
'statehood_year': '1950'
},
{
'abbreviation': 'CG', 'capital': ' Naya Raipur',
'state': 'Chhattisgarh', 'statehood_order': '5',
'statehood_year': '2000'
},
{
'abbreviation': 'GA', 'capital': ' Panaji',
'state': 'Goa', 'statehood_order': '6',
'statehood_year': '1987'
},
{
'abbreviation': 'GJ', 'capital': 'Gandhinagar',
'state': 'Gujarat', 'statehood_order': '7',
'statehood_year': '1960'
lambda\alexa\data.py 1:1

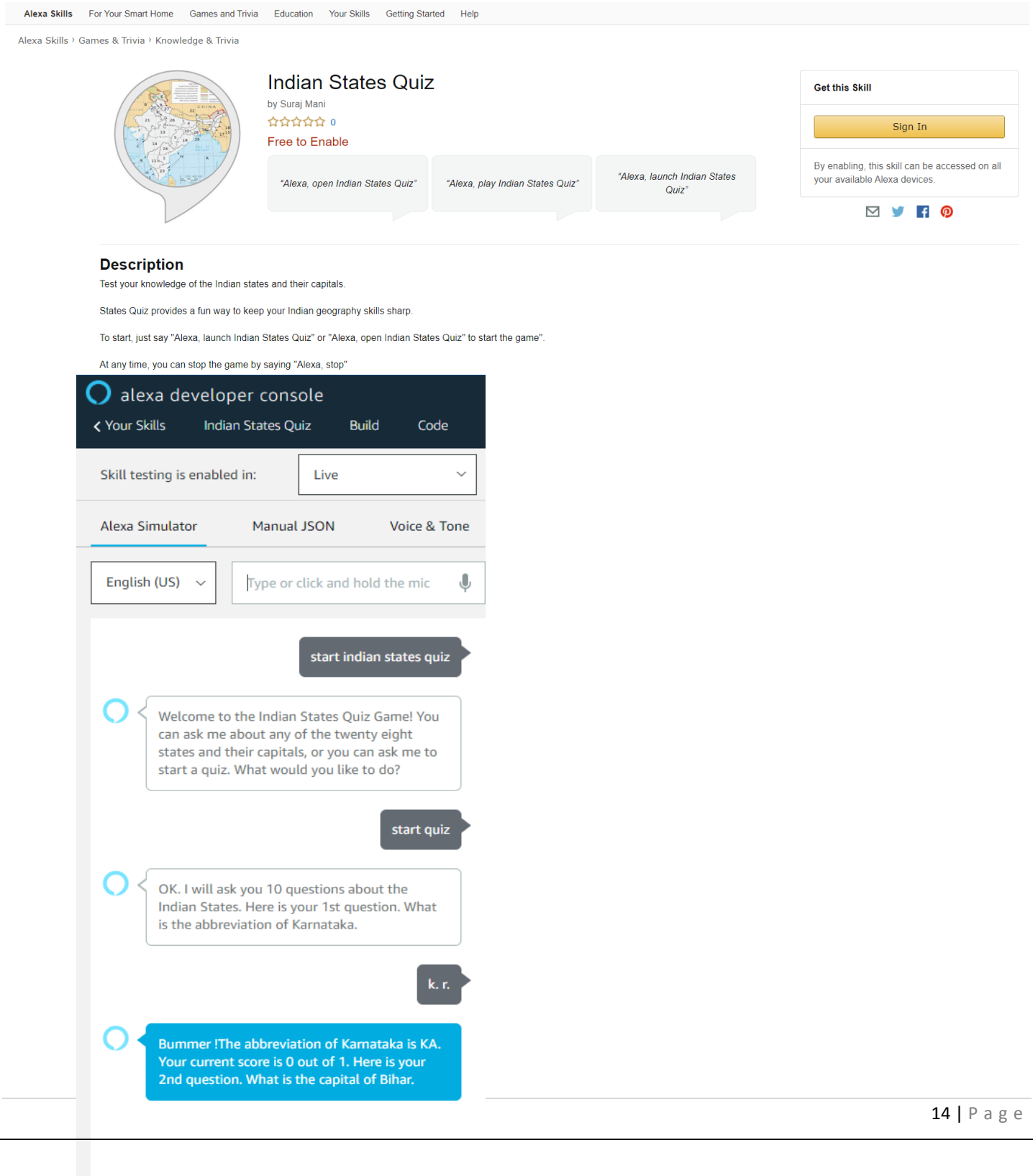
Bibliography

The matter contained in this project has been taken from the given links:-

* https://developer.amazon.com/en-IN/alexa
* https://developer.amazon.com/en-US/docs/alexa/alexa-skills-kit-sdk-for-python/overview.html
* https://developer.amazon.com/en-US/alexa/alexa-skills-kit/start

Production

https://www.amazon.com/gp/product/B08MKWRR1N



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