Name Pronunciation Application

Application is developed using Java SpringBoot(Backend), Angular (UI).

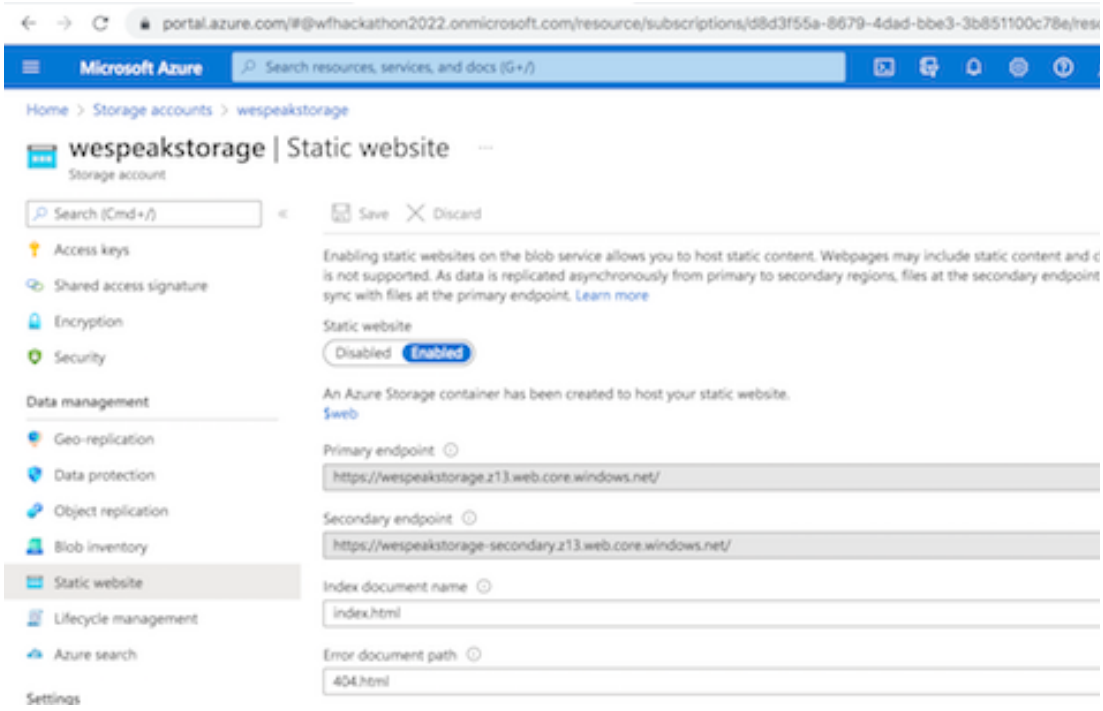
Download code (Angular and Springboot) from
https://github.com/sakunthalakishan/hackathon-we-speak-right

It is deployed on Microsoft Azure Cloud.
Application uses below components in Microsoft Azure cloud.

1. Azure Spring Cloud Services — To run Java Spring Boot Microservice
2. Azure Cognitive Speech Services - To convert Text to speech
3. Azure Cloud Storage
    a. To host Angular UI project as website
    b. To store custom pronunciation audio files
    c. Application logs storage
4. YugaByte DB — To store User details

1. Deploy Angular UI to Azure Storage Account

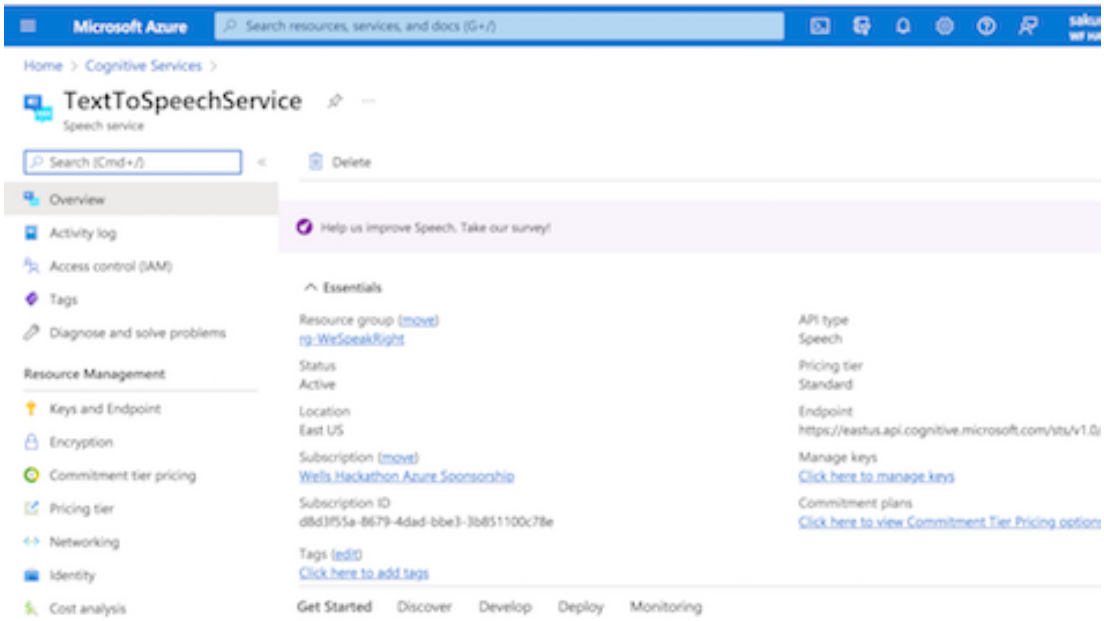
   i. Create Azure Storage Account and container
   ii. Enable container for Static Website as shown below
   iii.



iv. It generates a Primary endpoint and Application will be accessed through this URL
v. Build Angular Project and generate distribution using command (ng-build)
vi. It generates files in dist folder
vii. Upload files from dist folder to Azure Storage container $web
viii. UI application can be accessed at **https:// wespeakstorage.z13.web.core.windows.net/**

2. Create another Storage Account for application to upload audio files
   i. Create Storage Account and configure container for Blob Storage
   ii. Note down container name for configuring **wespeakaudio.storage.connectionstring** environment variable
   iii. Note down connection string for configuring **wespeakaudio.storage.containername** environment variable

3. Create Cognitive Service for Text to Speech service
   i.



ii. Click on Manage keys
iii. Make note of Key 1 for configuring **texttospeech.service.subscriptionkey** environment variable
iv. Make note of Location/Region for configuring **texttospeech.service.serviceregion** environment variable

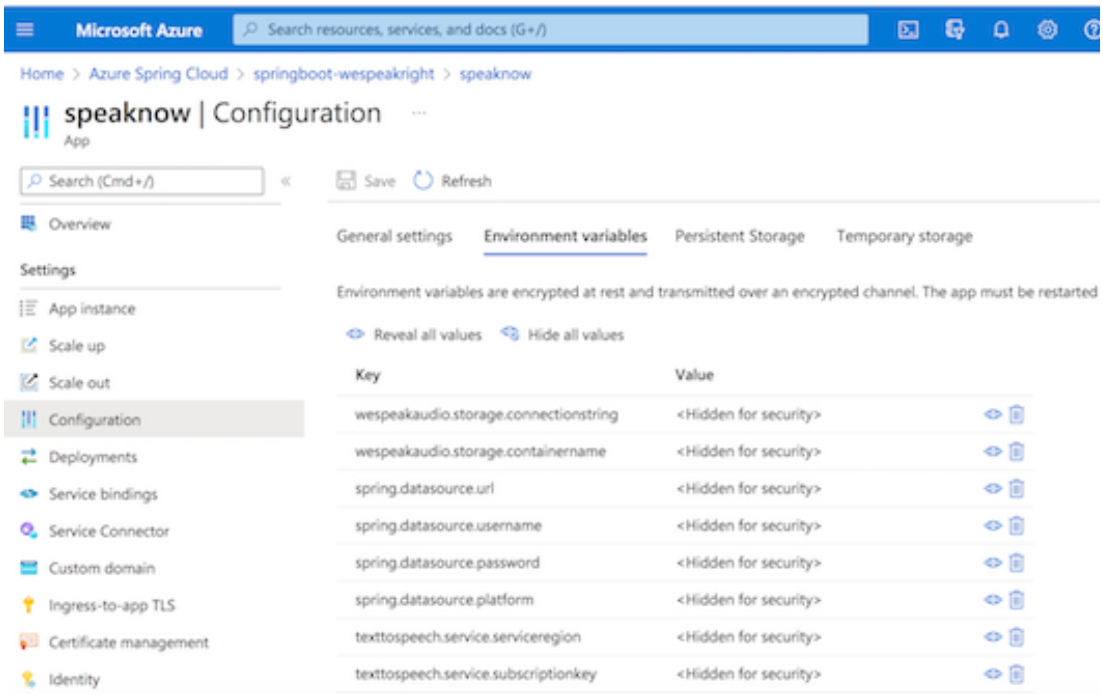
4. Configure Yugabyte database connectivity
   i. Make note of Yugabyte Postgresql connection string for configuring **spring.datasource.url** environment variable
   ii. Make note of username and password for configuring **spring.datasource.username** and **spring.datasource.password**
   iii. Use **spring.datasource.platform=postgres** for configuring environment variable
   iv. Create Table in Yugabyte for storing Person details using below DDL
      - ***create table person (id serial not null, audio_file_location varchar(255), first_name varchar(255), last_name varchar(255), prefer_name varchar(255), primary key (id))***

5. Deploy Microservice APIs developed using Springboot on Azure Spring Cloud Service

   i. Build springboot project using maven and generate Uber jar for deployment.
   ii. Create Azure Spring Cloud Service in Azure portal
   iii. Configure Environment Variables for the service as shown in the

screen shot

iv.

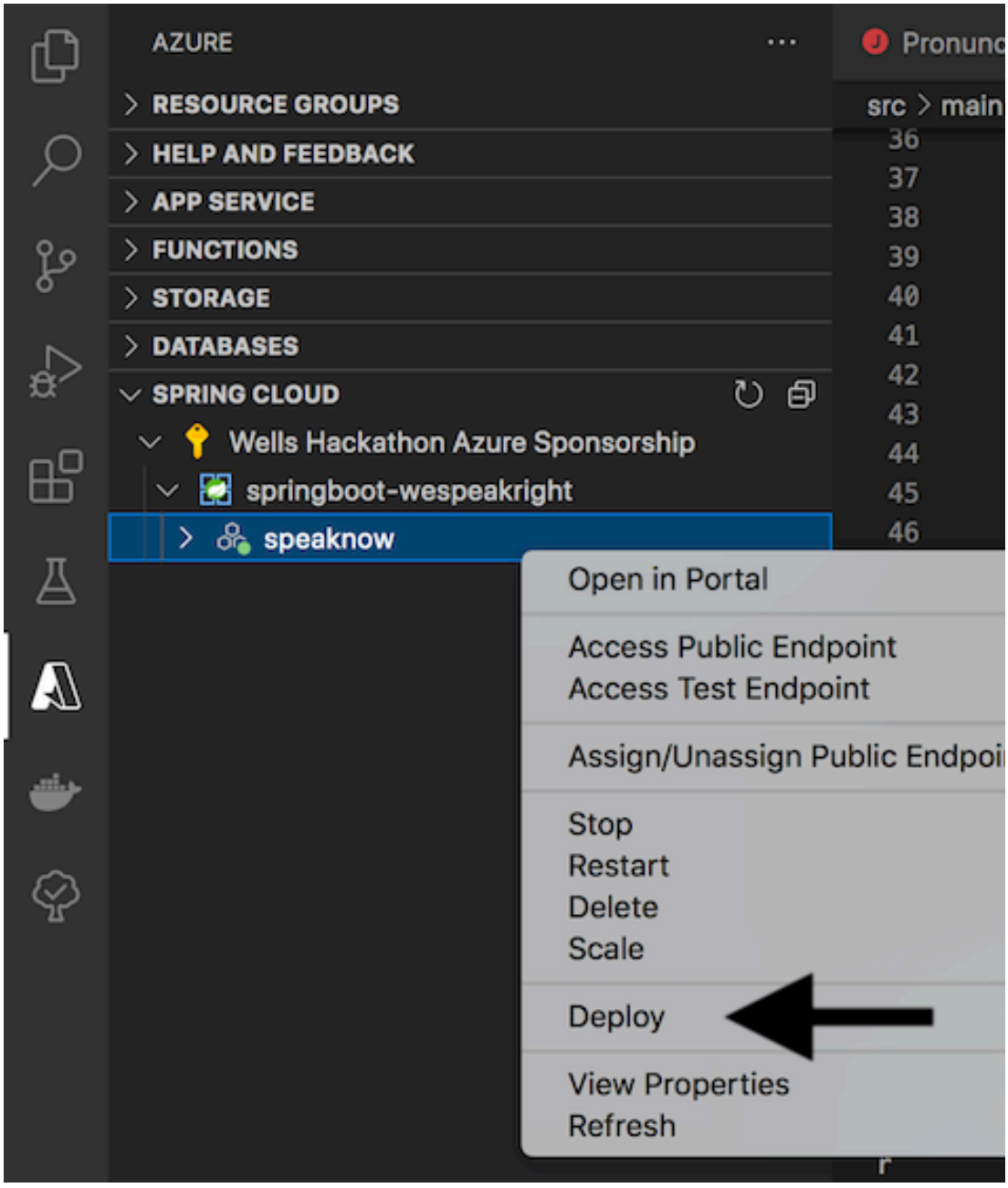


v. Environment variables for reference. Use the values noted down in previous steps.

```
# Azure Blob Storage config.
- wespeakaudio.storage.connectionstring=connectionString
- wespeakaudio.storage.containername=blobcontainer
-
- # --------------------
- # Azure Cognitive Speech Service
- texttospeech.service.subscriptionkey=subscriptionkey
- texttospeech.service.serviceregion=serviceregion
-
- # -------------------
- # Data-source config.
- spring.datasource.platform=postgres
- spring.datasource.url=jdbc:postgresql://127.0.0.1:5433/testdb
- spring.datasource.username=username
- spring.datasource.password=password
```

vi. Deploy to Azure Spring Cloud Services using Visual Studio Code IDE

vii.



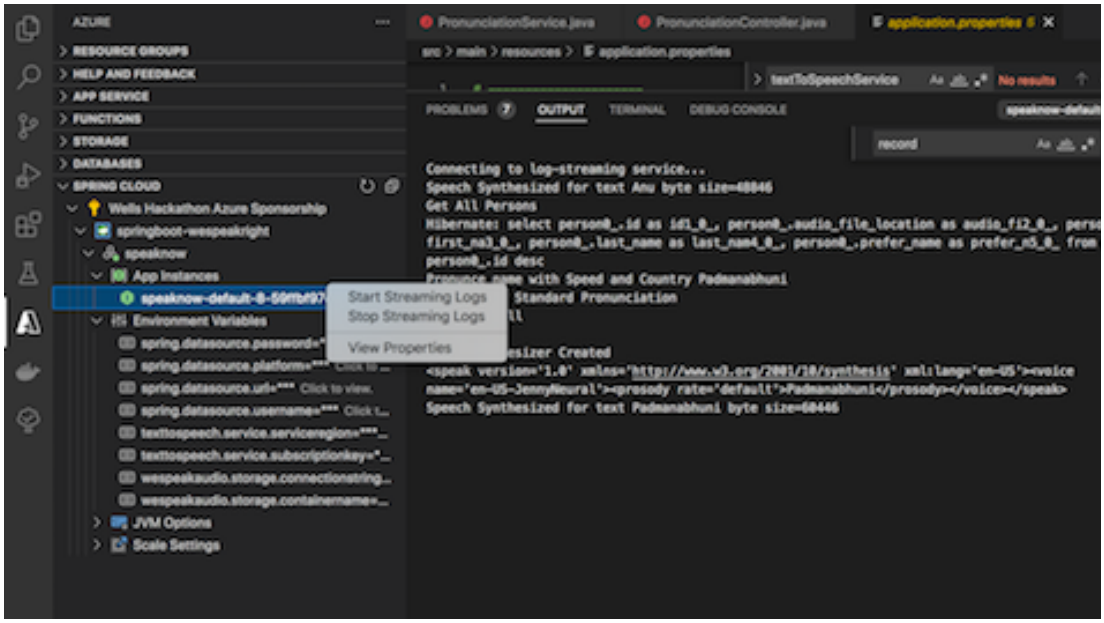
viii. Click on Deploy and browse the jar built in previous step.

ix. After deployment is successful, application can be opened.

x. Check below APIs in browser

- https://springboot-wespeakright-speaknow.azuremicroservices.io/api/textToSpeech/Donald%20Trump?country=IN&speed=default
- https://springboot-wespeakright-speaknow.azuremicroservices.io/api/textToSpeech/list/allPersons
- https://springboot-wespeakright-speaknow.azuremicroservices.io/api/textToSpeech/2901?country=IN&speed=default

6. Verify Logs in Visual Source Code
   i. Right click on App Instance in IDE and select Start Streaming Logs to see logs
   ii.



7. Now that UI application and APIs are deployed, application can be accessed at **https://wespeakstorage.z13.web.core.windows.net/**