
Waves Resource Center

Release 0.4.0

Harison Gachuru

May 11, 2021

CONTENTS

1	Installation	1
1.1	Required Software	1
1.2	Local Setup	1
2	Deployment	3
2.1	Google Cloud Environment Setup	3
2.2	App Engine Deployment	4
2.3	Notes	4
3	resource-center	5
3.1	accounts package	6
3.2	books package	6
3.3	config package	6
3.4	core package	7
3.5	utils package	7
3.6	videos package	8
4	Google Cloud Command Reference	9
5	Documentation	11
5.1	Building Documentation	11
5.2	Generating the Documentation	11
6	Indices and tables	13
	Python Module Index	15
	Index	17

INSTALLATION

1.1 Required Software

1. Git
2. Python
3. Firefox web browser
4. Geckodriver
5. MySQL or PostgreSQL

1.2 Local Setup

1. Clone the repository
2. Set the following **environment variables**:
 - DATABASE_URL
 - DJANGO_EMAIL_HOST_USER - a gmail account
 - DJANGO_EMAIL_HOST_PASSWORD - password to the gmail account (preferably an app password)
3. Create and activate a virtual environment using pipenv by running `$ pipenv shell`
4. Install development dependencies by running `$ pipenv install --dev`
5. Run the tests using `$ python manage.py test --settings=resource_center.settings.test.`
 - Make sure you have geckodriver installed and in your PATH before attempting to run the test. Read [selenium python docs](#) for more information on how to do this.
 - You could also add this flag `--exclude-tag=functional` to run unit tests only.

DEPLOYMENT

2.1 Google Cloud Environment Setup

1. Create a Google Cloud project
 - GCP_PROJECT_ID
2. Create a Cloud Storage bucket
 - GS_BUCKET_NAME - Google Cloud Storage bucket name
3. Create a Cloud SQL MySQL 2nd generation instance
 - Note the DATABASE_INSTANCE_CONNECTION_NAME
4. Create a database user
5. Create a database
6. Create 2 service accounts, create keys for them and save them in your local machine:
 - GOOGLE_APPLICATION_CREDENTIALS - a json file containing credentials for a Google Cloud service account with the following roles:
 - Storage Object Creator
 - Storage Object Viewer
 - APP_ENGINE_DEPLOYER_SERVICE_ACCOUNT_FILE- a json file containing credentials for a Google Cloud service account with the following roles:
 - App Engine Deployer
 - App Engine Service Admin
 - Cloud Build Editor
 - Storage Object Creator
 - Storage Object Viewer
7. Create an App Engine app

2.2 App Engine Deployment

1. Set the required **environment variables**
2. Run `./scripts/deploy_to_app_engine.sh` in a Linux terminal.
 - Use Git bash or WSL if using Windows OS.

2.3 Notes

- You need the Google Cloud SDK installed on your machine.
- [App Engine currently doesn't support Pipfile](#). Instead of doing the deployment manually, we recommend you use the utility script for deployment: `deploy_to_app_engine.sh` stored in the `scripts` directory. It does set up operations before deployment and clean up after deployment.

CHAPTER
THREE

RESOURCE-CENTER

3.1 accounts package

3.1.1 Submodules

3.1.2 accounts.admin module

3.1.3 accounts.apps module

3.1.4 accounts.forms module

3.1.5 accounts.managers module

3.1.6 accounts.models module

3.1.7 accounts.urls module

3.1.8 accounts.views module

3.1.9 Module contents

3.2 books package

3.2.1 Submodules

3.2.2 books.admin module

3.2.3 books.apps module

3.2.4 books.models module

3.2.5 books.urls module

3.2.6 books.views module

3.2.7 Module contents

3.3 config package

3.3.1 Subpackages

`config.settings` package

Submodules

`config.settings.base` module

`config.settings.local` module

`config.settings.production` module

`config.settings.test` module

Module contents

3.3.2 Submodules

3.3.3 `config.asgi` module

3.3.4 `config.urls` module

3.3.5 `config.wsgi` module

3.3.6 Module contents

3.4 `core` package

3.4.1 Submodules

3.4.2 `core.admin` module

3.4.3 `core.apps` module

3.4.4 `core.models` module

3.4.5 `core.urls` module

3.4.6 `core.views` module

3.4.7 Module contents

3.5 `utils` package

3.5.1 Submodules

3.5.2 `utils.config` module

`utils.config.list_of_tuples` (*str*)

3.5.3 utils.storages module

3.5.4 utils.test module

3.5.5 Module contents

3.6 videos package

3.6.1 Submodules

3.6.2 videos.admin module

3.6.3 videos.apps module

3.6.4 videos.models module

3.6.5 videos.urls module

3.6.6 videos.views module

3.6.7 Module contents

GOOGLE CLOUD COMMAND REFERENCE

- Create a project: `$ gcloud projects create [PROJECT_ID] --name=[PROJECT_NAME]`
- Create/set a billing account for the project
 - Only done via Cloud Shell
- Create a service account:

```
$ gcloud iam service-accounts create [SERVICE_ACCOUNT_ID] \  
> --description="DESCRIPTION" \  
> --display-name="DISPLAY_NAME"
```

- Add an IAM policy to a service account:

```
$ gcloud projects add-iam-policy-binding [PROJECT_ID] \  
> --member="serviceAccount:SERVICE_ACCOUNT_ID@PROJECT_ID.iam.gserviceaccount.com"  
↪ " \  
> --role="ROLE_NAME"
```

- List all service accounts: `$ gcloud iam service-accounts list`
- List all Google Cloud regions: `$ gcloud compute regions list`
- Set a default region/zone for the project: `$ gcloud config set compute/region [REGION]`
- Enable the Cloud Storage service: `$ gcloud services enable storage-component.googleapis.com`
- Create a bucket: `$ gsutil mb gs://[BUCKET_NAME]`
- Create a Cloud SQL instance:

```
$ gcloud sql instances create [INSTANCE_NAME] \  
> --database-version [DATABASE_VERSION] --region=[REGION] --tier=[TIER] \  
> --backup-start-time=[BACKUP_START_TIME] \  
> --storage-auto-increase
```

- Enable the SQL Admin API (to use the Cloud SQL proxy): `$ gcloud services enable sqladmin.googleapis.com`
- List App Engine regions: `$ gcloud app regions list`
- Create an app: `$ gcloud app create --region=[REGION]`
- Enable the App Engine Admin API: `$ gcloud services enable appengine.googleapis.com`
- Enable the Cloud Datastore API: `$ gcloud services enable datastore.googleapis.com`

DOCUMENTATION

5.1 Building Documentation

1. Activate the development virtual environment
2. Run `$ docs/make clean` to remove any docs previously built
3. Run `$ docs/make html` to build the docs in HTML format
4. Change the current directory to the location of the built docs by running `$ cd docs/_build/html`
5. Start the Python static files server by running `$ python -m http.server`
6. Visit `localhost:8000` in your browser to view the docs

5.2 Generating the Documentation

1. Activate the development virtual environment
2. Generate the docs by running `$ sphinx-apidoc -f -o docs/_sources . main.py manage.py *migrations* *tests*`

INDICES AND TABLES

- `genindex`
- `modindex`
- `search`

PYTHON MODULE INDEX

a

`accounts`, 6

b

`books`, 6

c

`config`, 7

`config.settings`, 7

`core`, 7

u

`utils`, 8

`utils.config`, 7

v

`videos`, 8

INDEX

A

accounts
 module, 6

B

books
 module, 6

C

config
 module, 7
config.settings
 module, 7
core
 module, 7

L

list_of_tuples() (*in module utils.config*), 7

M

module
 accounts, 6
 books, 6
 config, 7
 config.settings, 7
 core, 7
 utils, 8
 utils.config, 7
 videos, 8

U

utils
 module, 8
utils.config
 module, 7

V

videos
 module, 8