Digital Cafeteria

Designed and Developed by
automations.digital

Technical Documentation

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1. Dependencies

The project has the following software dependencies:

1. Python 3.x.x
2. Python Packages:
    2.1. django
    2.2. awscli
    2.3. boto3
    2.4. sqlite3
    2.5. fpdf
    2.6. mfrc522
3. Bootstrap CSS and JavaScript templates
4. AWS DynamoDB
5. Web Browser (preferably Chromium based)
6. Raspbian OS

The project has the following hardware dependencies:

1. Raspberry Pi 3 or newer
2. HDMI display
3. Keyboard
4. Mouse
5. MFRC522 RFID Module

2. APIs

The APIs used in this project and their corresponding documentation has been referenced here:

1. **AWSCLI:** AWSCLI is the API for accessing Amazon Web Services through the command line. Through this we will be accessing our database on the cloud. The documentation is linked here.
2. **DynamoDB:** DynamoDB is a fully managed proprietary NoSQL database service that supports key-value and document data structures. The documentation is linked **here**.
3. **Boto3:** Boto3 is the python package that we will use to access AWS. Boto3 works in conjunction with AWSCLI to facilitate our needs. The DynamoDB section of Boto3's documentation is linked here.
4. **Django:** Django is a Python-based free and open-source web framework, which follows the model-template-view architectural pattern. The documentation is linked here.

3. Structure

```
├── DigitalCafeteria/
│       ├── __init__.py
│       ├── settings.py
│       ├── urls.py
│       ├── wsgi.py
├── Kiosk/ # Main App
│       ├── migrations/
│       ├── __init__.py
│       ├── admin.py
│       ├── apps.py
│       ├── models.py
│       ├── urls.py
│       ├── views.py
├── Documentation/
│       ├── Technical Documentation.pdf
│       ├── User Guide.pdf
│       ├── License.txt
├── DynamoDB Python Sample/
├── Unit Test/
├── templates/
│       ├── Food Images/
│       ├── Kiosk/
│               ├── cart.html
│               ├── cart.png
│               ├── landing.html
│               ├── landing_css.css
│               ├── logo.png
│               ├── order_page.html
├── bill.pdf
├── db.sqlite3
├── manage.py
├── README.md
```

├── requirements.txt

4. Maintenance and Portability

The following functions and code snippets must be modified when the program is ported to a new system:

1. Kiosk/views.py
    1.1.   Line 22 – Region name will be changed according to the region where the table is created in DynamoDB
    1.2.   Line 23 – Balance Table name will be changed according to the table being used to store the balance of users
    1.3.   Line 24 – Order table will be changed. Each kiosk must have a unique order table.
    1.4.   All instances of connecting to the local SQLite database will be modified according to the path of the database file
    1.5.   Line 50 – The path of the logo to be printed on the bill will be changed here
2. Templates
    2.1.   Path of static CSS files will be changed in all HTML files
    2.2.   Path of the static logo file will be changed in all HTML files

5. License

GNU GPLv3
Full license available in license.txt .