

HlthPal

# Developer Guide

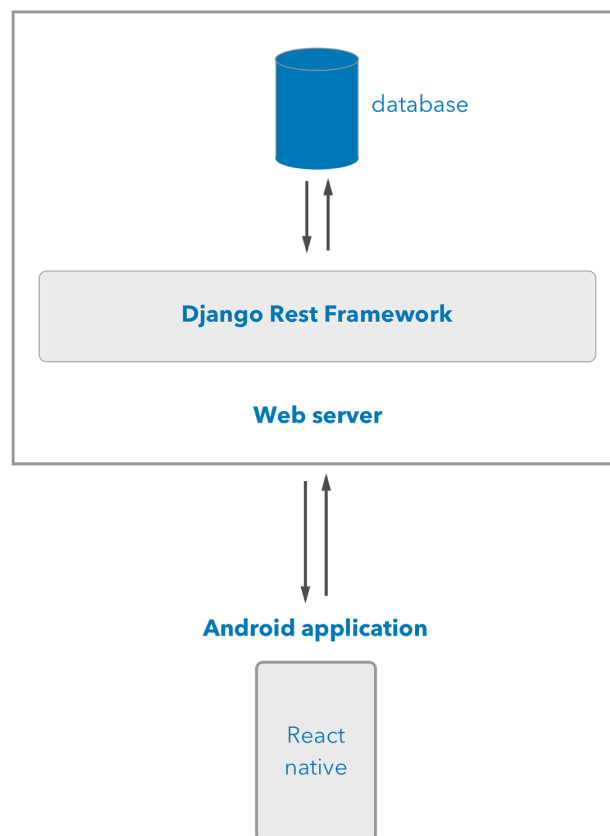
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## Introduction

The primary goal of this project is to build an android application to help cancer patients in developing countries like Rwanda and India. Traditionally cancer patients have to visit the hospital and fill up a form to report their symptoms and health status. Our goal is to provide an online platform to submit symptoms and health data digitally using an android application. A overview of the system architecture is shown below.



### Server technology

We have used the Django framework to build our server application. You can read more about django here: <https://www.djangoproject.com/>

### Client technology

We have user React native to build our android application. You can read more about react native here: <https://facebook.github.io/react-native/>

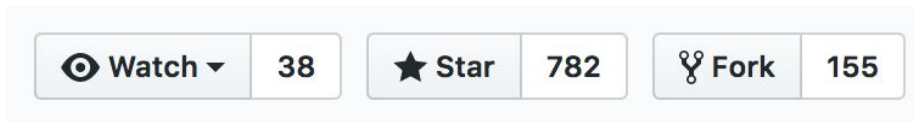
## Getting started

The first step towards working on this project would be to familiarize yourself with the technology used. If you are going to work on the server application you should read more about Django. If you are going to work on android application you must be familiar with react native. Once you are familiar with the technology you are going to work on, the next step is to fork the repository so that you can start contributing. The project repository URL is given below.

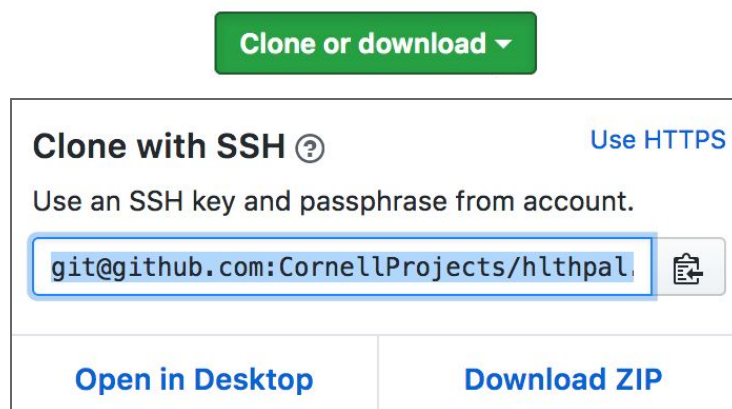
Project URL : <https://github.com/CornellProjects/hlthpal>

### Setting up the local repository

1. Open the project page on github (You must be logged in to your github account).
2. Click on the fork button in the top of the page to fork your own version of the repository.



3. Open your forked repository and use the git clone command to clone the repository to your local machine. Look for the clone button, which opens up a small dialog box with the command to be run on your local machine.
4. Once you have cloned a local repository you can start contributing. Use the git add and git commit commands to commit your changes. Use the git push command to push your local changes to github.



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Before you begin your development you must set up your local working environment so that you can test your android application. You need to ensure that React and Django are installed and the mysql database is set up in your local machine. Note that during development phase we use a local database to run Django on our development machine.

### Setting up your local server

1. Install mySql to create a local database. This is required as Django requires a database. Install the following components: [MySQL Community Server](#), [MySQL Utilities](#), [MySQL Workbench](#).

Download URL : <https://dev.mysql.com/downloads/>

2. Install pip and python 2.7. This is a prerequisite and all other packages depend on this.
3. Install Django and related packages. Go to you local git repository and use requiremenst.txt file to install the required packages using the pip command.

```
cd hlthpal/web/  
pip install -r requirements.txt
```

4. Create a new database using the mysql workbench. Note down the database name, User name and the password. You can refer this link to create a local database - <https://stackoverflow.com/questions/>
5. Change the settings in the repository so that Django uses your newly created database to store data. Open the file `hlthpal/web/project/project/settings.py` and update the database settings.

```
89 # Set up MY-Sql Database  
90 DATABASES = {  
91     'default': {  
92         'ENGINE': 'django.db.backends.mysql',  
93         'NAME': '_MY_DB_NAME_',  
94         'USER': '_MY_DB_USER_',  
95         'PASSWORD': '_MY_PASSWORD_',  
96         'HOST': 'localhost',  
97         'PORT': '',  
98     }  
99 }
```

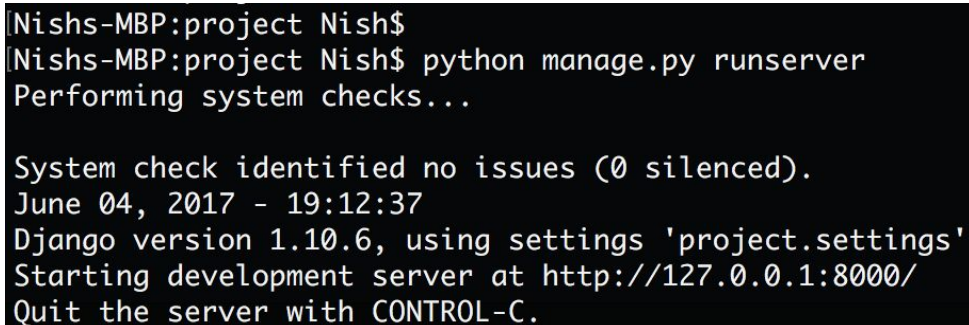
6. Update database migrations. Django has specific changes that must be migrated to the database. Use the commands below to apply migrations to the database.

```
cd hlthpal/web/project
python manage.py makemigrations
python manage.py migrate
```

7. Run Django server. Once the setup is complete use the following command to run the Django server.

```
cd hlthpal/web/project
python manage.py runserver
```

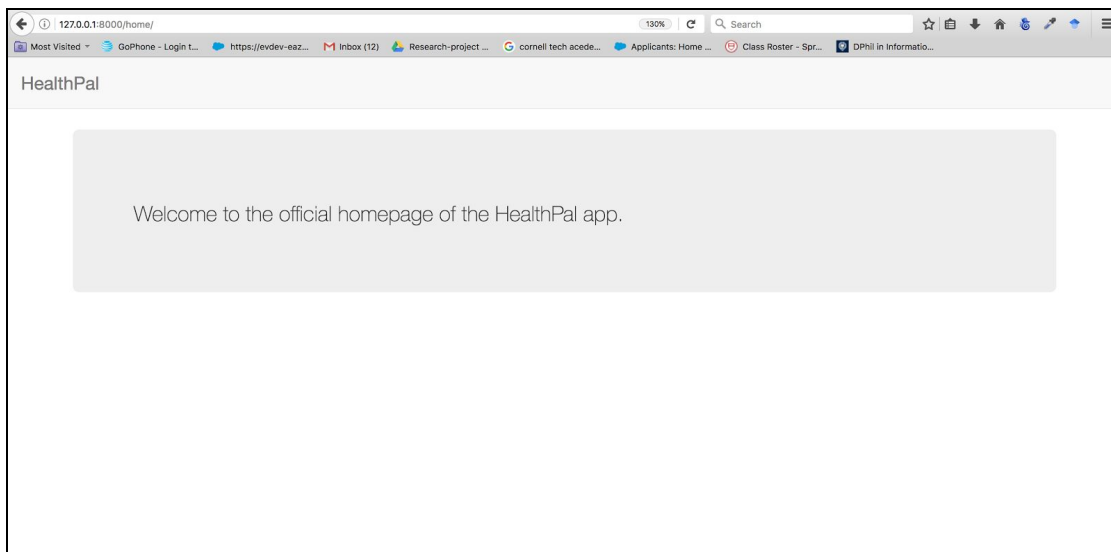
If your installation is successful, you will see the following message



```
Nishs-MBP:project Nish$
Nishs-MBP:project Nish$ python manage.py runserver
Performing system checks...

System check identified no issues (0 silenced).
June 04, 2017 - 19:12:37
Django version 1.10.6, using settings 'project.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
```

8. Verify that Django is running. Type the following url into your browser to confirm that django is running.



## Setting up your development environment

1. Install react native. You can find the installation instructions here : <https://facebook.github.io/react-native/docs/getting-started.html>
2. Install android dependencies to use the android emulator with react native. Install Android Studio and set up the ANDROID\_HOME environment variable.  
Android studio: <https://developer.android.com/studio/index.html>  
ANDROID\_HOME: <https://stackoverflow.com/questions/>
3. Create an android virtual device using the emulator in Android studio.
4. Launch the android emulated device and compile react native - "react-native run-android".
5. Confirm that Django server is accessible from the android emulator. To do this you must know the IP address of your computer and add it to the settings file. In my case the IP address is 192.168.0.106.

Open `hlthpal/web/project/project/settings.py`

Add `ALLOWED_HOSTS = ['192.168.0.106', 'localhost', '127.0.0.1']`

Once you find your IP address (use commands `ipconfig` or `ifconfig`) try accessing the django home URL from the emulator. You should see the application home page.

<http://192.168.0.106:8000/home/>

