



Support Document

Care for you

Team Agile Port (TP03)

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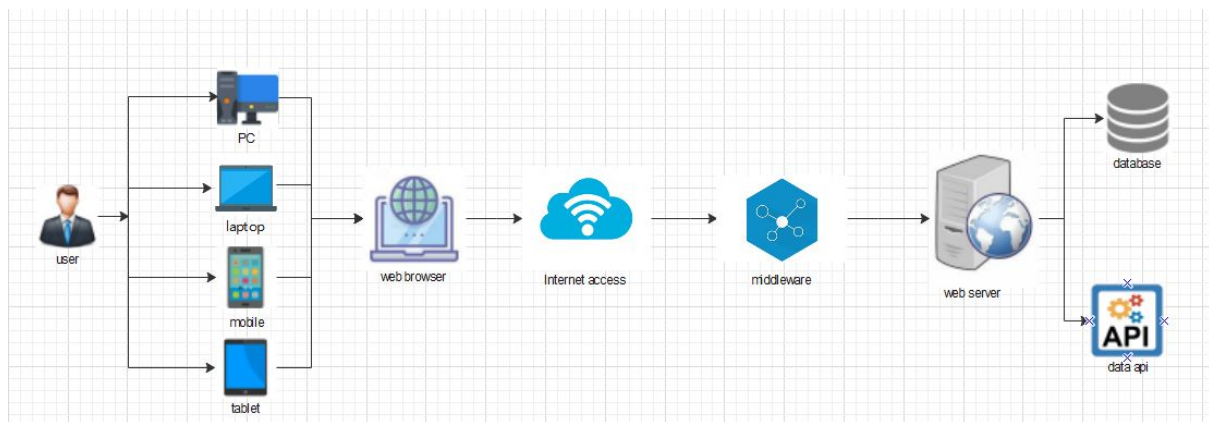
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1. Introduction

Careforyou is a web application focused on helping the non-English speaking, working immigrant parents find bilingual childcare so that they can take good care of their First Generation Australian children and also help them learn English.

This document is a technical support document for the Careforyou web application, including the system architecture, package architecture, database and the procedure of system setup, and is mainly provided for reference to technical personnel.

2. System Architecture



According to the above figure, this system is a client-server structure, and the use process requires an Internet connection. The client part is the browser, which can be any web browser that supports the HTML5 standard and supports all smart devices and platforms.

2.1 Server

For the server, it is mainly divided into four parts: middleware, web server, database and external API. The middleware part mainly includes nginx responsible for static file hosting and a series of internal middleware managed by django. The web server is uWSGI and Nginx that can connect to the python project in this system.

2.2 Database

The database system of this system uses SQLite, which is a lightweight database that is very simple and easy to manage. The database plays a very important role in this system and it is mainly used to store various data about childcare. These data are sourced from the official website of the Australian government and imported into the database after processing.

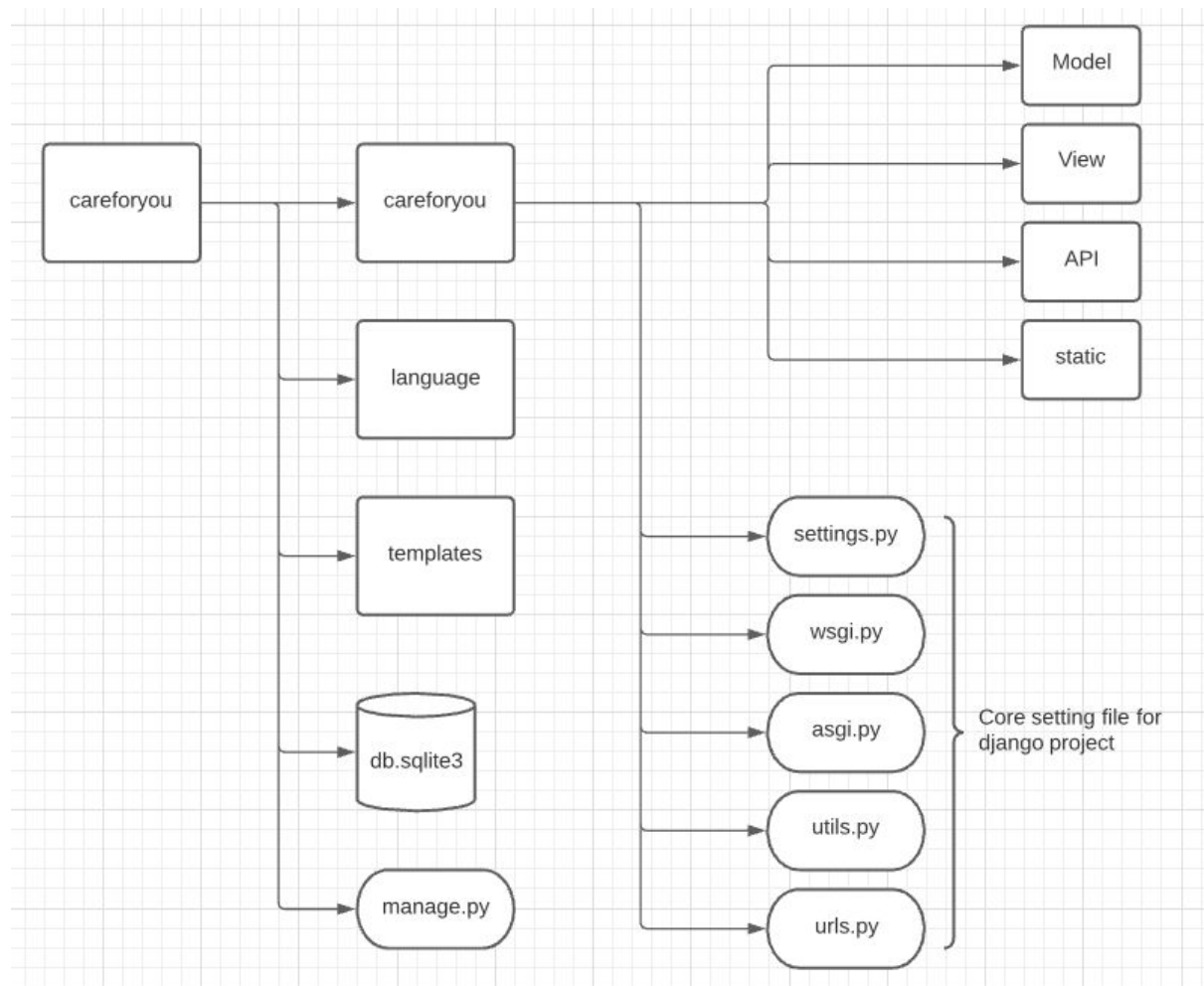
2.3 External API

The external API is mainly responsible for obtaining some data and services we need. These APIs are:

- Map Service: Mapbox <https://www.mapbox.com>
- News Data: Gnews <https://gnews.io>
- Reviews Data: Google Places <https://cloud.google.com/maps-platform/places>

3. Package Architecture

This system is developed using the Django framework, the basic file structure is shown in the figure below.



3.1 Root directory

There are three folders and two files in the root directory. The careforyou folder contains the core python code, the language folder contains translation files for multi-language support, and the template folder contains the needed Web page template. The database file db.sqlite3 is the main file of the database system, and manage.py is the entry point for system startup and management.

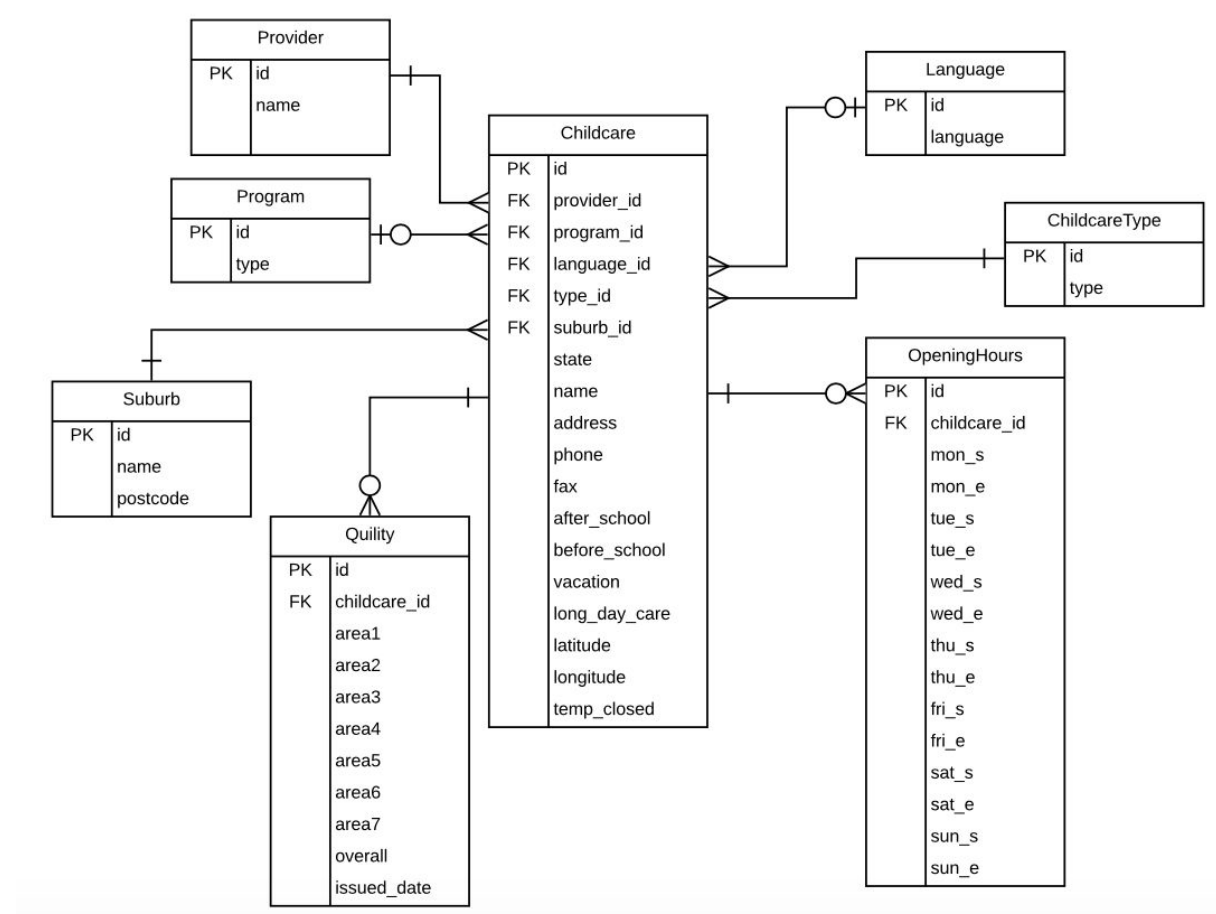
3.2 Core folder

There are four word folders in the core folder, they are Model, View, API and static. Model contains all the data models in the system, and the View folder is the management module that contains all pages of the entire website. The API folder contains all internal and external APIs, and the static folder contains all the static files required by the website, including JS, CSS, and images.

4. Database

4.1 ER Diagram

The database system used by this system is SQLite, and the database structure is as shown in the figure below.



4.2 Tables

There are 8 tables in the entire database, which store some entities and data needed in the system. The detailed information listed below.

Table Name	Description
Suburb	Suburb of all childcares
Program	Early Childhood Language Program Information
Provider	The provider of childcares
Childcare	Detail information of childcare services
Language	Languages available in all childcares
Childcare Type	The types of all childcares
Opening Hours	The opening hours information for childcares
Quality	The quality rating for childcares

5. System Dependencies

This application relies on the software and package below, so these software or packages should be installed prior to this application.

The list of software and packages are:

- Python >=3.7
- Django >=3.1 (install command: pip install django)
- Requests (install command: pip install requests)
- Xhtml2pdf (install command: pip install xhtml2pdf)

6. System Setup

The system setup procedures are different for testing and deployment.

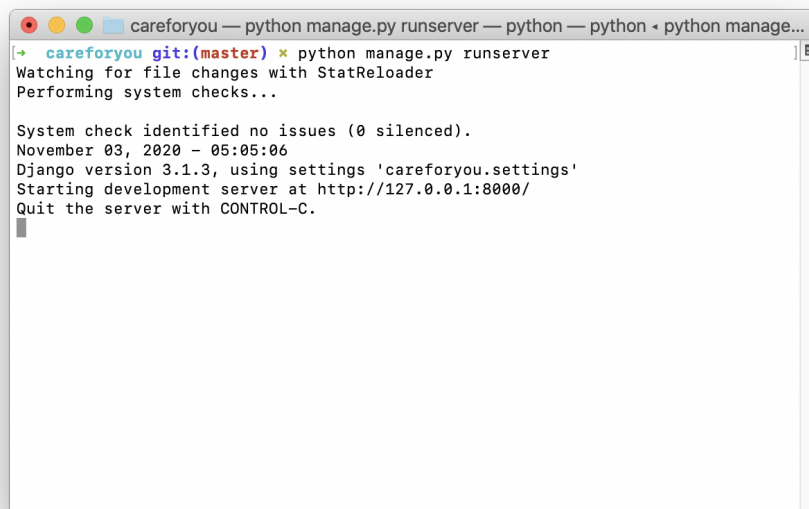
6.1 Testing

For Testing:

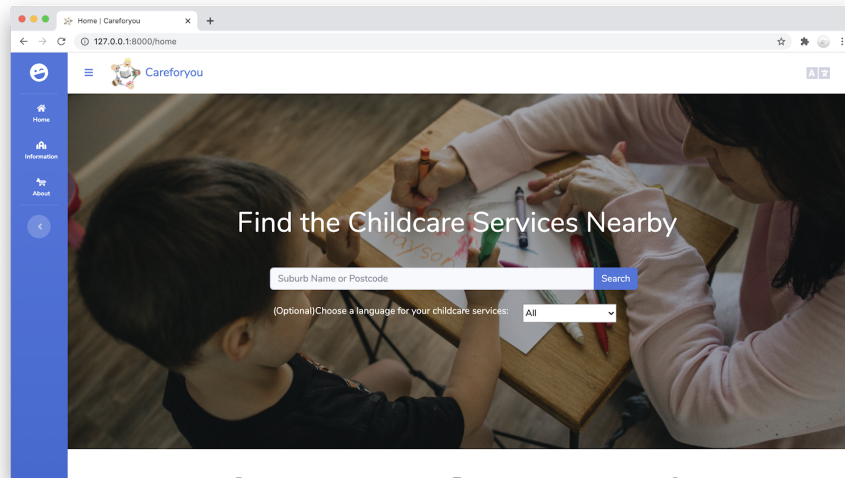
1. Install all required dependencies following the section before.
2. Go to the root directory of the package.



3. Use command ``python manage.py runserver`` to start a local testing server.



4. Install a client software, in this case, any browser could be used.
5. Follow the prompts to visit the corresponding address using the client.



6.2 Deployment

For Deployment:

1. Install all required dependencies following the section before.
2. Install and configure Nginx and uWSGI. This depends on the system used, please refer to the official guide of Nginx and uWSGI.
3. Configure the Nginx for the static files and connection with uWSGI.

```
##
# Default server configuration
#
server {

    server_name www.careforyou.cf;

    charset utf-8;

    client_max_body_size 75M;

    #Django media
    location /media {
        alias /home/lzy8513/careforyou/media;
    }
    location /static {
        alias /home/lzy8513/careforyou/static;
    }
    location / {
        include uwsgi_params;
        uwsgi_pass 127.0.0.1:8001;
    }
}
```

4. Modify the setting file inside careforyou folder to make sure the path is same as nginx setting.


```
careforyou — lzy8513@careforyou: ~/careforyou/careforyou — ssh lzy8513@52.1...

USE_I18N = True
USE_L10N = True
USE_TZ = True

LANGUAGES = (
    ('en', 'English'),
    ('zh', '中文'),
    ('hi', 'हिन्दी')
)
LOCALE_PATHS = (
    os.path.join('language'),
)
LANGUAGE_COOKIE_NAME = 'careforyou_language'

# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/3.1/howto/static-files/
STATIC_URL = '/static/'
STATIC_ROOT = os.path.join(BASE_DIR, 'static/')
```

133,0-1 Bot

5. Go to the root directory and collect all static files using `python manage.py collectstatic` command.

```
careforyou — lzy8513@careforyou: ~/careforyou — ssh lzy8513@52.147.25.6 —...

[lzy8513@careforyou:~/careforyou$ python3 manage.py collectstatic

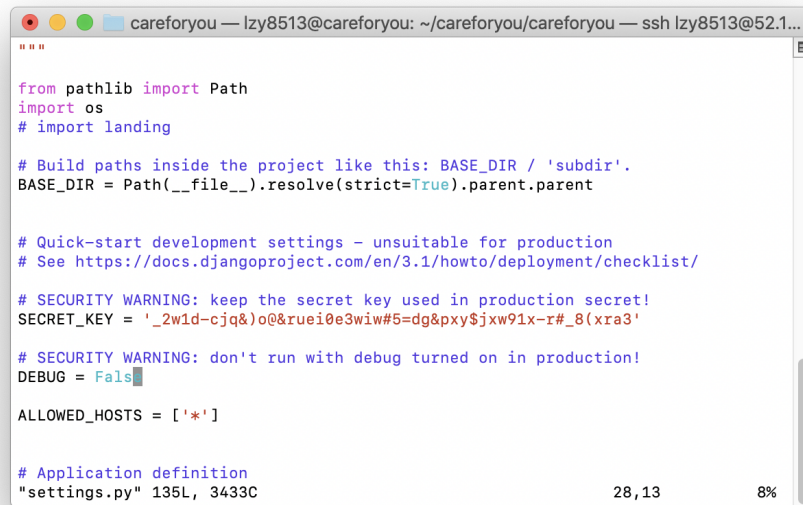
You have requested to collect static files at the destination
location as specified in your settings:

    /home/lzy8513/careforyou/static

This will overwrite existing files!
Are you sure you want to do this?

Type 'yes' to continue, or 'no' to cancel: █
```

6. Modify the setting file inside careforyou folder to disable debug mode.



The image shows a terminal window with a title bar that reads "careforyou — lzy8513@careforyou: ~/careforyou/careforyou — ssh lzy8513@52.1...". The terminal displays the content of a file named "settings.py". The code is Python code for Django settings, including imports for Path and os, a comment about building paths, a comment about development settings, a security warning about the secret key, a security warning about debug mode, and a comment about application definition. The code is color-coded: comments are blue, strings are red, and code is black. The terminal also shows a status bar at the bottom right with the text "28,13" and "8%".

```
"""
from pathlib import Path
import os
# import landing

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve(strict=True).parent.parent

# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/3.1/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = '_2w1d-cjq&)o&truei0e3wiw#5=dg&pxy$jxw91x-r#_8(xra3'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = False

ALLOWED_HOSTS = ['*']

# Application definition

"settings.py" 135L, 3433C
```

7. Run Nginx and uWSGI.