Google Person Finder

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Overview

Google Person Finder is an open-source web application that provides a registry and message board for survivors, family, and loved ones affected by a natural disaster to post and search for information about each other's status and whereabouts. It was created by volunteer Google engineers in response to the 2010 Haiti earthquake.

Google Person Finder is written in **Python** and hosted on **Google App Engine**. Its database and API are based on the People Finder Interchange Format (**PFIF**) developed in 2005 for the Katrina PeopleFinder Project.

Tools and Framework

For testing purposes, we will be using **Pytest** and **Selenium**.

Pytest is a testing framework which allows us to write test code using python. Pytest is used to test anything like database, API, even UI if the user wants, but it is mainly being used in industry to write tests for APIs. Selenium can be used for the purpose of functional testing.

Types of Testing

Functional Testing

1.Unit Testing:

Unit Testing is the first level of software testing where the smallest testable parts of a software are tested. This is used to validate that each unit of the software performs as designed. The **unittest** framework is python's xUnit style framework. White Box Testing method is used for Unit testing.

The modules for which we will be doing unit testing are api module [basic API for reading/writing small numbers of records], create module [which creates an entry for a particular person in the database], detecting spam module [Which handles spam note detection],photo module [Which handles retrieving of uploaded photos for display],search module, send_mail module, resources module etc..

2.System Testing:

System Testing (ST) is a black-box testing technique performed to evaluate the complete system, the system's compliance against specified requirements. In System testing, the functionalities of the system are tested from an end-to-end perspective.

We would perform system testing for config test[test related to configuration settings], safe-handling of user input, person note test [Tests that modify Person and Note entities in the datastore go here,photo test[Tests that verify photo upload and serving] etc..

Non-Functional Testing

1.Load Testing:

A load test is a type of software testing which is conducted to understand the behaviour of the application under a specific expected load. Load testing is performed to determine a system’s behaviour under both normal and at peak conditions.

Load testing is among the different kinds of performance testing that determines the performance of the system in real-time load conditions. It is basically used to ensure that the application performs satisfactorily when many users try to access or use it at the same time.

We plan to write a code to generate a large number of names and details associated with it. We shall then try to create new records using this data and also search for people by writing another Python code. At the end of this we will display the average time required to create a new record, search for a record and the total time spent in between performing of the two activities.

2.Usability Testing:

Usability Testing is defined as a type of software testing where, a small set of target end-users, of a software system, "use" it to expose usability defects. This testing mainly focuses on the user's ease to use the application, flexibility in handling controls and the ability of the system to meet its objectives. It is also called User Experience(UX) Testing.

This testing is recommended during the initial design phase of SDLC, which gives more visibility of the expectations of the users.

We will create a realistic scenario, wherein the person performs a list of tasks using the product being tested while we will watch and take notes (dynamic verification). Several other test instruments such as scripted instructions and pre- and post-test questionnaires will be used to gather feedback on the product being tested.