GSoC 2018 Proposal

Project Title

Develop Performance Farm Database and Website

Personal Details

Name: Garima Natani
Country of residence: India
Email: garima.natani@gmail.com
Github Username: GarimaNatani
Telephone: +91-8149830421
Linkedin : https://www.linkedin.com/in/garima-natani-8118366a/
Timezone: IST - (UTC + 5:30)
Primary language: English

Benefits to the PostgreSQL Community

Website creation will be a valuable addition to the the PostgreSQL community as website can be accessed from any device connected to the Internet using a any browser. This will help users to see performance data from tests and old as well as recent code changes that are made to PostgreSQL. Website enables the user to search and review results of PostgreSQL build farm. Build information will be stored in database so it will become atomic, consistent, durable, and durable system.
Data mining can be applied to data base and interesting results can be found out.

Implementation

Implementation include creation of Database to store build success or failure results and website to access result.

Deliverables

- A Web site where test results can be uploaded, and users can search and review uploaded results.
- Python code(server and Client) and database file
- Complete documentation and test cases.

Project Schedule -

Community Bonding Period (April 23, 2018 - May 14, 2018)

1. Get in touch with the community, mentors, and introduce my project to them and receive early feedback.
2. Set up wiki page to maintain weekly progress and other information of the project.
3. Study about The PostgreSQL build farm and other resources to better understand the design.
4. Study the outline of the Django Web framework and its functionalities in detail
5. Discuss the design of the database.
6. Revisit Python tutorials.
7. Make a repository on github for upload and access of source code.
8. Create deep understanding of the job that database is expected to do.
9. Study about storing JSON/flat files in Database

Phase 1: Database creation to store result

TIme Period	Work Plan
Week1 (14th May -20th May)	• Design Database Schema, create ER Diagram, Decide about Keys, Data Structures, Objects etc
Week 2 (21st May -27th May)	• Create Database to store result in Database

Week 3 (28th May -3rd June)	• Establish connectivity between database and client (PostgreSQL build Farma).
Week 4 (4th June-10th June)	• Perform unit and Integration testing. • Fix bugs and retest . • Prepare report for Phase1 submission • Prepare Pre-Phase 2 synopsis

First evaluation period (June 11 to June 15, 2018)

- Deliver a working code.
- Evaluation of first phase work.
- Discuss phase 2 strategy.

Phase 2: Website creation to store result

Time Period	Work Plan
Week 5 (11th June - 17th June)	• Make changes as suggested in feedback.
Week 6 (18th June - 24th June)	• Create website using Django Web framework
Week 7 (25th June - 1st July)	• Add Search functionality on website
Week 8 (2nd July - 8th July)	• Do unit Testing, and Integration Testing. • Fix bugs and retest. • Do Regression testing. • Prepare work for Phase 2 submission along with a brief Phase 2 report. • Prepare Pre-Phase 3 synopsis

Second evaluation period (July 9 to July 13, 2017)

- Deliver a working code.
- Discuss with mentors further refactoring and additional features to be   added.

Phase 3: Website creation to store result

Time Period	Work Plan
Week 9 (9th July – 15th July)	Work on the feedback provided after the second evaluation
Week 10 (16th July –22th July)	Code the functionality for improvement of proposed functions.
Week 11 (23th July –29th July)	Test E2E functionality
Week 12 (30th July – 6th Aug)	Prepare Final Phase submission along with a detailed final phase report

Final evaluation period (August 6 to August 14, 2017) :

Wrap up the project & submit final evaluation of my mentors of Coding Period Phase 3.

Deliver a working implementation and report of the proposed functions.

Biography:

Currently I am Pursuing Masters in Geoinformatics and Natural Resources Engineering, at Indian Institute of Technology, Bombay.

I have 4 years of experience in Manual and Automation Testing in Telecom Domain. I have worked for Vodafone UK,TSA South Africa and Small Cell, AT&T US clients for testing SOM product and various Interfaces with which SOM has interacted.

I have Collaborated with team members present in remote locations for resolving issues/defects maneuvering through time zone differences, thus playing an important role in the timely completion of projects. I have Organized, conducted and supported various test activities in my tenure with in Amdocs

I have visited Vodafone Becknell ,UK(Sept-Oct 2016) and Amdocs Israel (March-Apr 2015) for planning and support of UAT and IUT Testing. there I have learned to adapt to unanticipated situations and improvise new plans.

Because of mine keen interest in coding I had implemented code that had resulted in overall reduction of testing time from an hour to a couple of minutes. Apart from this I have worked on resolving defects of GUI and backend.

I have worked on C, C++, Java, Python Language. and have hands on on HP Quality Centre, Perforce, SoapUI, Toad, Filezilla, Rally, Jenkins, QGIS.

Recently as per my course project in Post graduation, I have used Postgis on top of PostgreSQL to store vector layers in the database, my aim was to find optimum(less budget, maximum rating, best facility, less traffic on route) Hospital location from the emergency location and to give route from patient location. I have considered real time traffic conditions present on road so that patient can reach to the hospital in min. time.

For example if somebody has heart Attack then it is not necessary that nearby hospital will have the facility of handling that case with minimum budget. it may be possible that another hospital which is little far away has good facility in less budget with good ratings.

Contact

Name: Garima Natani
Email: garima.natani@gmail.com
Telephone: +91-8149830421

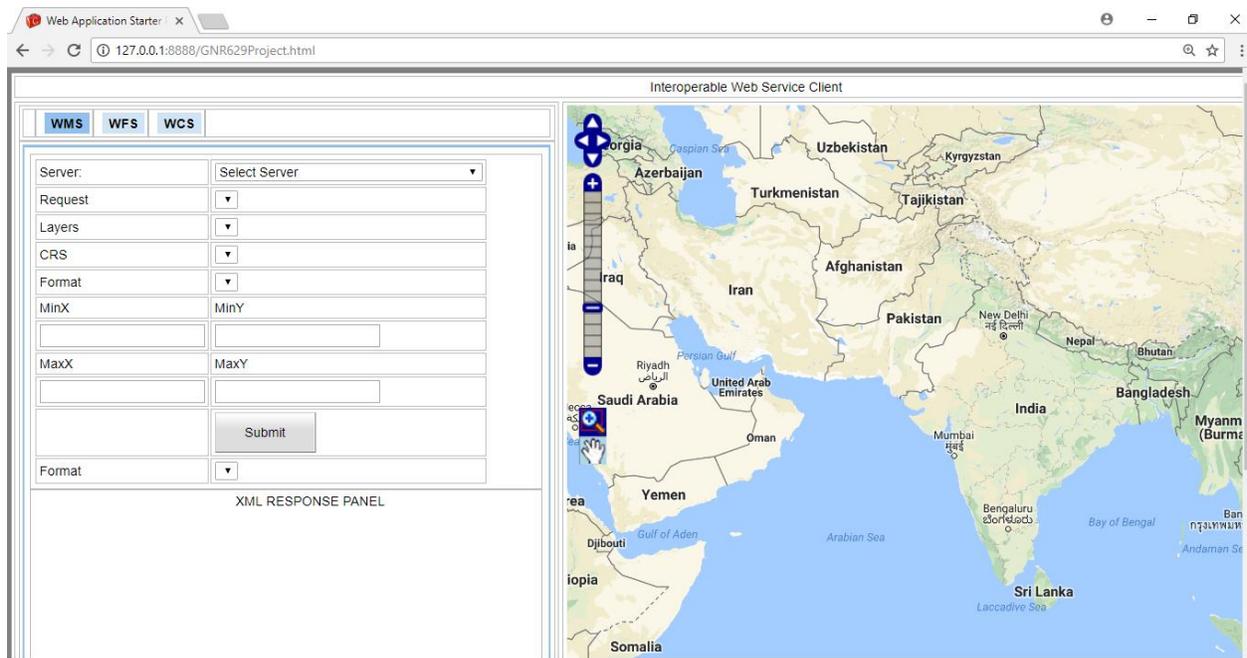**Mockup Design:** Below is the Mockup design for the proposed website.

Below is the screenshot of the project that i have done recently as part of my course work project.

Goal: Develop an integrated Client-Server based Interoperable GIS system
Server Development
Apache Tomcat, Geoserver
Client Development
Coding: Eclipse IDE, Java, Google Web Tool Kit (GWT),
GWTOpenlayers API.
Spatial Database: Postgresql + PostGIS