QUERYHOME: IMPLEMENTATION OF GCM NOTIFICATION AND WIDGETS COMPOSITION

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Abstract— **QueryHome is Question and Answer Web Based Portal. Its main idea is to "Share The Knowledge" by resolving users issues over the Internet. Initially it was used to query technical problems but over the period of time and customers engagement it came up with various categories such as Puzzle, GK, Entertainment, Business, Sports section to solve their respective problems. QueryHome is framed up with Open Source Platform which gives any Developer to easily implement new technological components. The QueryHome is already been productized, so it also share website community to QueryHome customers according to their needs. This paper implements QueryHome website by developing some widgets that facilitate user with efficiently and improve its maintainability. One of the widgets provides the registered user to Save-Article and back up the text article in database and permits the user to edit or publish once it's done. Second widget is to translate website context in several languages integrated through Google translator. Third is Switch-Post widget that switches the selected post from the web page and transfers it directly into another page category. This paper also demonstrates the implementation of Mobile and Web Browser based GCM Notification for QueryHome. Though the site requires secure SSL to send notification, but this feature turns out an enormous blow to traffic for QueryHome. Another feature has been developed in PHP script i.e. SendSMS, which is executed when the QueryHome customer's website server is down. That directly sends a SMS to the registered cellular numbers.**

Keywords: Switch-Post, GCM, Save-Article, SendSMS, widgets

I. INTRODUCTION

We all people know that questioning others and solving doubt is a good way to reveal ourselves to new ideas and prospects. Questioning peoples and asking doubt always makes a human curious because it makes any person very active learner rather than a passive conferree of knowledge. When you generally interact with information by clarifying thereon, thinking critically about its context or relating to your own imagination of information to others, you increase the probability of commit it to memory. QueryHome does it for you, it's simply gives you the freedom of querying your thoughts. QueryHome is Q-A site helps people who are browsing on-line provide them to access various related, unanswered question and search there query solved online. It has communities which additionally share common knowledge for particular end users. People with queries get the answers they would like. QueryHome is embellished by voting, commenting, notifications, rankings and points. This helps them to get

engaged with different registered user. For developer QueryHome provides implementation of new components inside the website. This proposed paper introduces some new widgets, features and some operation actualized at the back-end. Additionally these widgets are straightforward plugins which improvise user experience and create powerful productivity. Furthermore the GCM notification which is a huge burning success to engage people directly by sending notification to their Smartphone and also to the web browser is put into effect in this website. The Google messaging feature is not so popular to varied website because it needs secure-http to send message to the Google server. Though this feature is in germinal stage, it needs to be analyzed after the number of subscriber permitting the feature into their device. Subsequently the sending SMS feature when the client server is down makes the website more trustworthy.

QueryHome is built on open source question2answer platform using PHP/MySQL and therefore the dawn codes are secured in cloud-servers. Only the testing website is given to the developer before committing it into the product website. However the test.queryhome.com has many new features to be implemented in queue. The scripts are access by Amazon EC2 which is a paid web service which provides a full-control of the computing resources with minimal whopper. Nevertheless the framework uses the lamp technology that can drive web applications and is powerful also, which is simple and easy to use in comparison. Unfolding the project it holds primitive progression to the QueryHome site but also emphasis the website in long haul. The widgets is operated, being the code is dynamic to the developer. Moreover the widgets are access only by the admin of the website, so no compromise security issue.

Different project module

A) Switch-Post
   1) Transferring the preferable categories to the specific content.
   2) Saving Post Button
   3) Database Work

B) Make android GCM - JSON app
   1) Install app with GCM enable
   2) Add Project ID in Google Server
   3) Sending message

4) Build JSON API
5) Un-registered when app is Un-Install
6) Documentation for GCM deploying

C) Translator in Mobile View
1) Make Plugins
2) Enable the plugins from administrator

D) Implementing Push Messaging for Chrome.
1) Create a new Google Developer Project
2) Subscribe to Push Messaging
3) Service Worker Push Event Listener
4) Sending a Push Message
5) Debugging Service Workers on Chrome for Android
6) Message with payload — notification message
7) Documentation

E) Save-Article
1) Create a new Plugins
2) Add a button Save Article and publish later
3) Hide the article when saved
4) Create a page for saved articles

F) PHP script to send SMS when sever is Down.

II. HARDWARE AND SOFTWARE REQUIREMENTS

Software Requirement
1. Putty: Putty is a terminal emulator that is a free and open-source; also have serial console and file transfer network application tool.
2. SSH client for Linux OS user.
3. Some free installed software or package in Linux OS
   a. Vim editor
   b. Php5 repository for Linux
   c. MySQL
   d. Browser
4. Google Chrome version 45 minimum and version 49 recommended.
5. Mozilla Firefox version 44 minimum and version 47 recommended.
6. Java Development Kit (JDK) 6
7. GNU C Library (glib c) 2.11 or later

System Requirements
1. Operating System
   a. Microsoft® Windows® version 7 or 8 or 10 (32/64 bit)
   b. Mac® OSX® version 10.8 or higher, up to version 10.11 (name El Capitan)
   c. Linux GNOME or KDE desktop.

Specification required
1. Minimum 512 MB of RAM or 2 GB of RAM is recommended.

III. LITERATURE SURVEY

Existing System
QueryHome is an open source Q&A platform licensed under GPL version 2 developed with PHP/MySQL. It can be easily accessible anywhere from home/school/office, just you need a computer system with Internet connect to it.

QueryHome is developed with LAMP technology which is software bundle including PHP, Apache, MySQL and Linux as whole. Moreover the LAMP is widely use over the world and has included by default roughly in all Linux OS distributions, and together they make a powerful Web application platform.

The QueryHome website server is accessed by (Amazon EC2) Amazon Elastic Compute Cloud, which provides scalable computing capacity. The accessible servers are in Amazon's data centre, which provides you to host as well as build the software systems.

Proposed System
QueryHome is ongoing progression, many plugins, layouts, pages, flags, categories and much more are been created for its growth. Still it has a lot to improve as far as implementation goes. Since there are lot more opinion but here are some
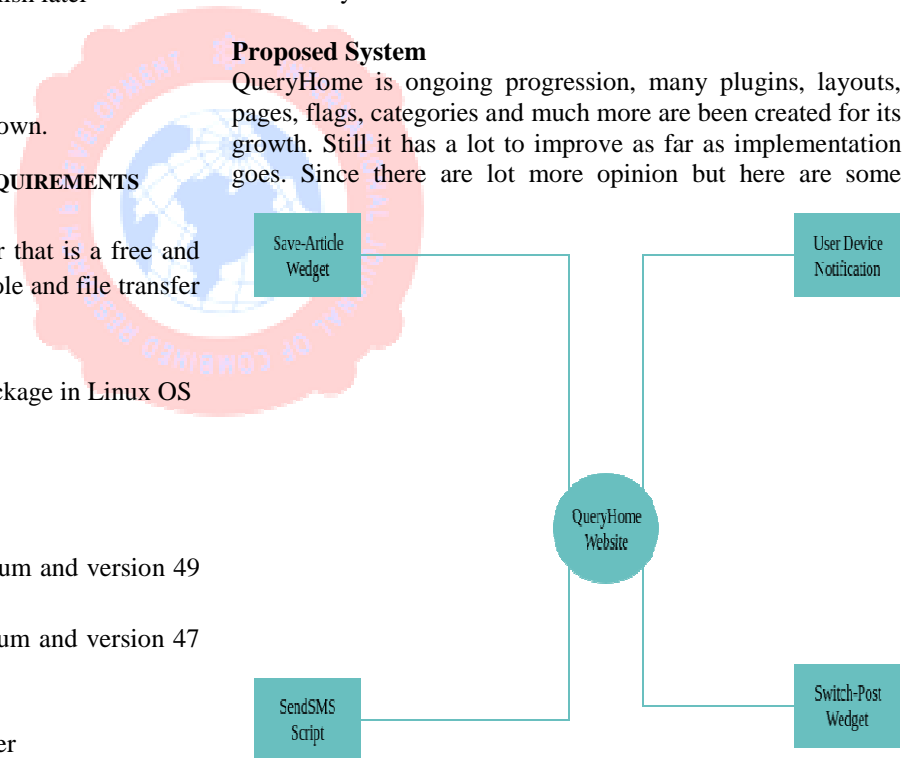
drawback which are used as a challenged for Trainee.

Drawback: Features that are yet inconvenience to implement.
- Peoples who are visiting the website search for their solution here in the page are displayed in English language by default. Though it have translator that helps the monolingual's human to change it in their own language. But this same feature is not been introduce in

Mobile version, so here is one of the flaws that can be integrated.

- Registered user can also create their own blog or articles by visiting the publish article section. At times, if user want to save his/her own article which can be revisited or can be edit later. This feature has not been actualising which will save lot more time to edit the right content of articles. Moreover this will make the website more efficient and also this is good way to practice to write blogs.

- You may have seen in your browser at top of any website a pop-up box opens which ask you to allow that permission. That pop-up is the GCM notification, serves for sending message directly to your device even in your Smartphone mobile also. This is being trendy now a days, many website are using GCM notification for their advertisement and also for good service provider. Here in this paper we also tried that same technology to be productised in the QueryHome architecture.

- QueryHome have some fixed categories like Technology, Entertainment, General-Knowledge, Sports and Puzzles. Sometimes user does not know user where to post there question as because there no knowledge about posting it in correct categories. So as the admin has to shift their post to the rightful tag or category. A Switch-Post can useful to it which will directly transfer the whole post to the selected page to be displayed.

- There are some task to be provide to the customer side as to know that aren't their site server is down. A SMS should be send to notify for acknowledge. This is good way when there is lot more traffic and the website is more needed, this will attract the admin to react before any other consequence happen.

IV. IMPLEMENTATION

Language-Translator Mobile View

The admin need to enable the Mobile Translator and add the Google script for the Language Translator for mobile version. See the script bellow to enable the Translator.

When visiting the website QueryHome in mobile the user will see an extra layer of block at the top of the panel. This is the

option where user can choose the language which he/she wants to apply on the website.

Save-Article

In Saving Article the initial work is for admin to enable the plugins from the admin panel. You can also find the plugins from the plugins section. This is the section where all the plugins are resided in the server, tells you the location and path for that plugins. See the bellow figure.

Post A Blog v0.1
/var/www/html/test/qa-plugin/postablog/

Now the user can start editing the article without thinking his/her article will disappear. For start writing blog go to the Write Article section from the registered account. Give a unique title, the tagging required at least one tag to accept. Select the option to share or post as anonymous. At last click on Save Now & Publish Later button to save the article for later editing.
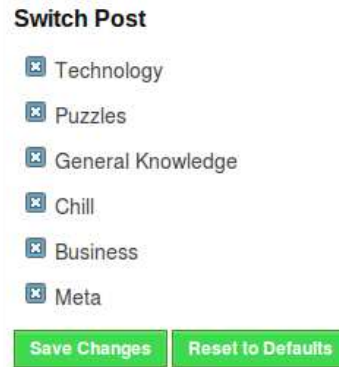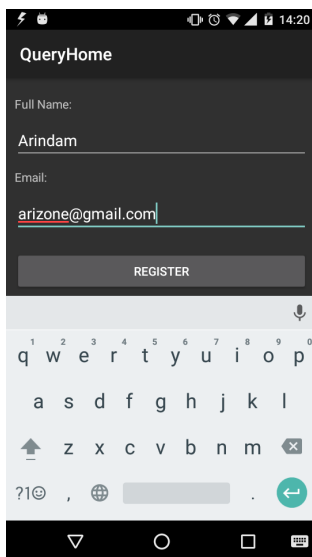
After Saving the Article user can check his/her own recent saved article from My Account Detail. User will see a new section has appeared, that will help the user to check his/her old saved blogs. See the figure bellow-
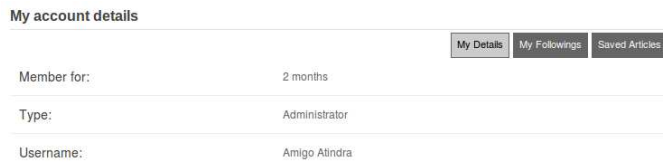
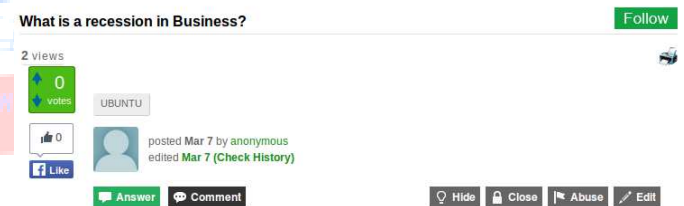## GCM Push Notification in Android App

For getting the push notification in Smartphone, you need to download the QueryHome app from Plays Store. User need to register in the app for getting regular notification in the Mobile Phone. The bellow picture shows how to register in the QueryHome Android app.

Switch-Post widgets

A Switch-Post widget is similar to Save-Article widget. Admin can access the plugins from the admin panel and set enable in order to transfer the mistaken post the users has post in wrong category. To find the location of the plugins see the figure bellow that will help you to locate the path.

Switch Post v1.1.1
Allows moderator to switch between categories - options
/var/www/html/test/qa-plugin/switch-post/

After enabling the plugins the Switch-Post combo box is ready to display on the question page. Browse the post to be changed, before visiting the site user need to be moderator or admin. Only both are valid to change the post. Select the category to be display on the combo box shown below.

A Post Switcher will look like the bellow picture. This is combo box where moderator or admin can select list for which post is to be transfer.

After transferring the post you will be redirected to the page where the post has been transfer. See the bellow image that shows a business question is transferred from general knowledge to business category.

V. CONCLUSION

A quick glance of this paper is to implement certain neoteric and modish features, widgets and operation for the QueryHome website. This can gage that the website will be more robust, viable eventually productive. Some are the points that we can conclude from this paper as follows:-

The newest technology is the GCM push notification which is implemented using a persistent TCP_IP connection. This will emphasis in minimising the number connections, allows optimizing the website bandwidth and server the peoples requirements. GCM push notification is very simple advent that is use to broadcast messages to multiple device by registering each on server. The SendSMS is very short yet very powerful operation to get notify when the customer website server is down. The translator widgets in mobile version make it multilingualism website service. When a person wants to save their own article, the Save-Article

widgets is meaningful. The Save-Article is best way keeping your articles is in hidden and whenever it is completed the user can publish it later. The website needs moderators who can check posts to be present in right categories. If not then the post need to be transferred to the correct category. Then the Switch-Post comes into the picture which will have time and make website more precise in its goal. The browser push notification is creating a massive traffic for the un-registered user. This has been statistically proved and we are trying to implement for the registered user as well.

VI.   REFERENCES

[1] Beginning PHP 5.3 written by Mat Doyle

[2] MySQL 5th Edition Developer's Library implemented by Paul DuBois

[3] Advanced PHP Programming by George Schlossnagle

[4] Open Source Web Development with LAMP by James Lee, Brent Ware

[5] Professional Android 4 Application Development by Reto Meier

[6] Official Android Developer Page–
www.developers.google.com/cloud-messaging

[7] Android Push Notifications using Google Cloud Messaging (GCM), PHP and MySQL –
www.androidhive.info/2012/10/android-push-notifications-using-google-cloud-messaging-gcm-php-and-mysql

[8] Amazon EC2 - Virtual Server Hosting –
aws.amazon.com/ec2

[9] GCM Documentation
meta.queryhome.com/61/integrate-queryhome-community-edition-server-side-change
meta.queryhome.com/62/integrate-queryhome-community-edition-client-side-change