

Mobile App Control Center : Software Design Document

MALARIA PREVENTION APPLICATION

created by : Vaibhavi (Rani)

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1. Introduction

1.1 Purpose

This software design document describes the architecture and system design of the Mobile App Control Center. The intention of this document is to give the reader a clear and concise view of the detailed working of the Mobile App Control Center and how the required functionalities and designs are implemented. This document is also intended towards those seeking to know the details of the system's working and some of the key architectural decisions that have been made.

1.2 Overview

In the subsequent sections, the document will give an overview of the system; elaboration of the functionalities, design ideologies and implementation and requisite background information. The document will then elaborate on the system architecture and go into detail about the architectural design, break down each subsystem and explain the rationale behind the selecting the architecture.

Further on, the document will go into how the system handles its data and how it is processed, stored and transformed as needed by the system. After that, the document will describe the various components within the system.

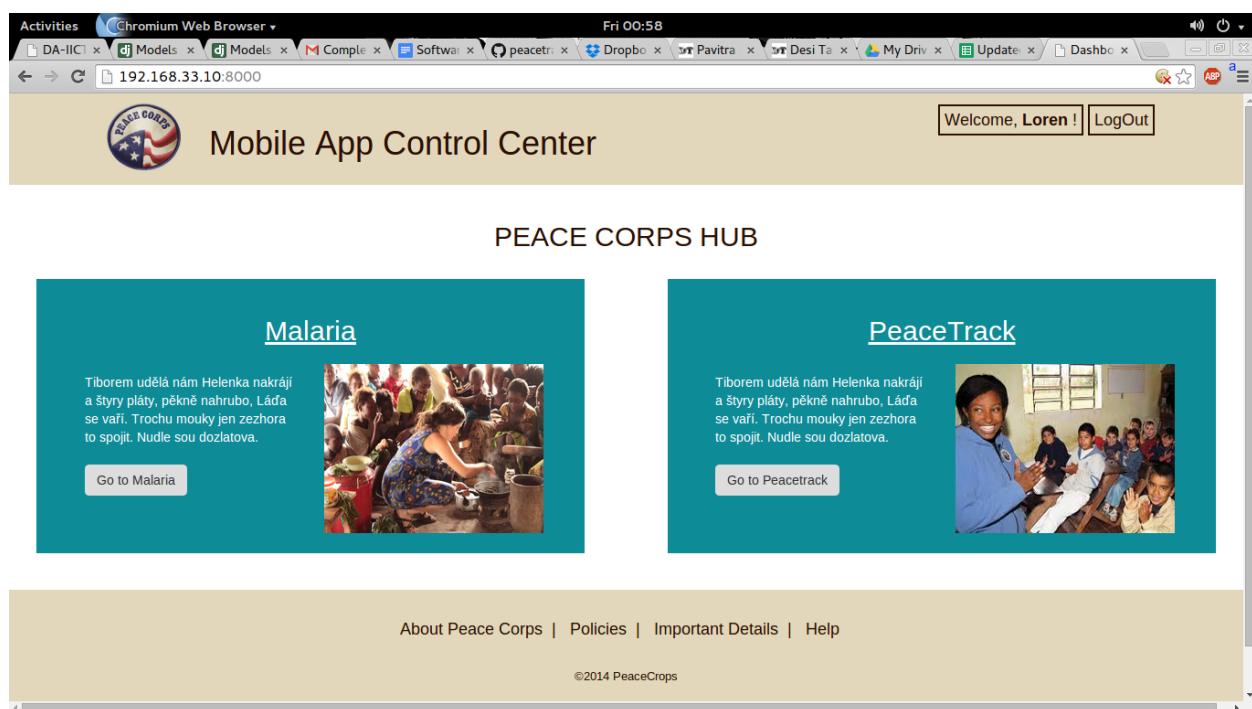
After this, the user-interface is described with basic screenshots shown as well. These images give an idea of how the final system would look but they are only representative changes might

exist. These are starting points towards a UI that will constantly improve as the system continues to be used and new challenges are faced.

2. System Overview

Each user using the system will have to log in to the website to make the use of service.

Screenshot of Dashboard :



After log-in, the users will be directed to a home page, called the *dashboard*, from where they can either go to Malaria or PeaceTrack. They can also change settings and edit their profile. In summary, the system is divided into three types of views:

- *Guest View*: The GUI available for non-member users or those who haven't logged in.
- *User View*: The GUI available for the members, who are the different Peace Corps Users of the site
- *Admin View*: The admin panel is accessible separately and allows complete access to the database of the system.
- *Developer View*: The mobile application developers will be able to access the database to show the details fetched from the infohub. APIs have been provided for the same.

3. System Architecture

3.1 Architectural Design

We have the design divided into various modules and levels.

These are divided according to access by the user. The user can initially access a sign up form and/or log in form. The second level consists of log out. It can only be done after log in. The third level contains the functions which do the additions to the database based on data entered by the user. The fourth level contains the functions which process and change the data fed by the third level functions. The functions in each level only make sense when the functions in the level above have been executed. Log-out functionality is an exception here because after the user has logged in, and used third and fourth level functions, he will return back to the second level and then be taken to top level after logging out. After, this the cycle can be repeated again.

Top Level Module	Second Level Module	Third Level Module	Fourth Level Module
signup_do	logout_do	post_new	delete_post
login_do		edit_post	edit_profile

3.2 Decomposition Description

This section describes what the functions stated above will do.

signup_do: It is called when a user fills data in the sign-up form and clicks sign-up button. It doesn't require any precondition. When a user is signed up, the data is stored in user table.

login_do: It logs in the user into his particular profile.

logout_do: It logs out the user from his account and takes him to a redirected page (most probably home page)

delete_post: checks if a user is logged in first. If yes, then deletes it.

post_new: checks if user is logged in. Adds a new post to database based on data that user has filled in form.

edit_post: checks if a user is logged in. Right now, each user can edit any post. Saving the edit post details as a revision history. Adds a new post to the database based on the data that the user edits.

edit_profile: checks if a user is logged in. Each user can edit his own profile. Accordingly the changes would be incorporated in the database.

Apart from these functionality that is interacting with the database, these are the other functionality. I have also provided the apis which makes the database accessible to the mobile (android & ios) app developers. They are mentioned in the [workflow and progress document](#) in detail.

4. Data Design

4.1 Data Description

Dashboard

The Dashboard is the hub of the system. Users can choose the option to go for from the following choices :

- Malaria
- PeaceTrack

MALARIA

Post Details

When user clicks a particular post, in the search results we have the option to see the details of the post. On clicking the details, the following information is shown

- Title
- Description
- Link
- Image
- Revision History
 - creator of the post and time of creation
 - editor of the post and time of edit

Profile

This page stores the details of the user in following format

- Username
- Firstname
- Lastname
- Phone
- Gender
- Location
- Profile picture

4.2 Data Dictionary

login_page :

Field Name	Data Type	Description	Constraints	Example
username	Variable String	name of the user through which he accesses the website	-	desaivaibhavi
password	Variable String	key to login	For a strong password include special characters	89wer

signup_page :

Field Name	Data Type	Description	Constraints	Example
username	Variable String	name of the user		desaivaibhavi
email	Variable String	email address		rani.vhd@gmail.com
password	Variable String	key to login	For a strong password include special characters	89wer

first_name	Variable String	first name of the user		Vaibhavi
last_name	Variable String	last name of the user		Desai
phone	Char	user's contact information	10 digit number	7698876900
gender	Integer	user needs to specify the gender	either male or female	female
location	Char	user's location	-	India

Pcuser :

Field Name	Data Type	Description	Constraints	Example
phone	Char	phone number of the user		7698876900
gender	Char	user needs to specify the gender	either male or female	male
location	Char	location of the user		India
reset_pass	Char	for resetting the password		qwret
image	Char	path to the image		/static/propic/username.jpg
imageobj	Image	user image	the image should be in jpg format	image

Post :

Field Name	Data Type	Description	Constraints	Example
owner	Pcuser	name of the owner of the post	-	Vaibhavi

title_post	Char	title of the post	-	Effectiveness against Malaria
description_post	Char	description of the post	-	any short description of the post
link_post	Char	link of the post	-	www.xyz.com
created	DateTime	time of creation of new post		9687176479
updated	Char	time of last update of the post		Info City, gandhinagar
image_post	Char	path to the image for the post		/static/propic/postid.jpg
imageobj_post	Image	postimage	the image should be in jpg format	image

RevPost :

Field Name	Data Type	Description	Constraints	Example
owner_rev	Pcuser	name of the user who is editing the post	-	Vaibhavi
owner_rev_post	Post	name of the post which is being edited	-	otheruser
title_post_rev	Char	revised title	-	Effectiveness against Malaria 1
description_rev_post	Char	revised description of the post	-	edited short description of the post
link_rev_post	Char	revised link of the post	-	edited link of the post

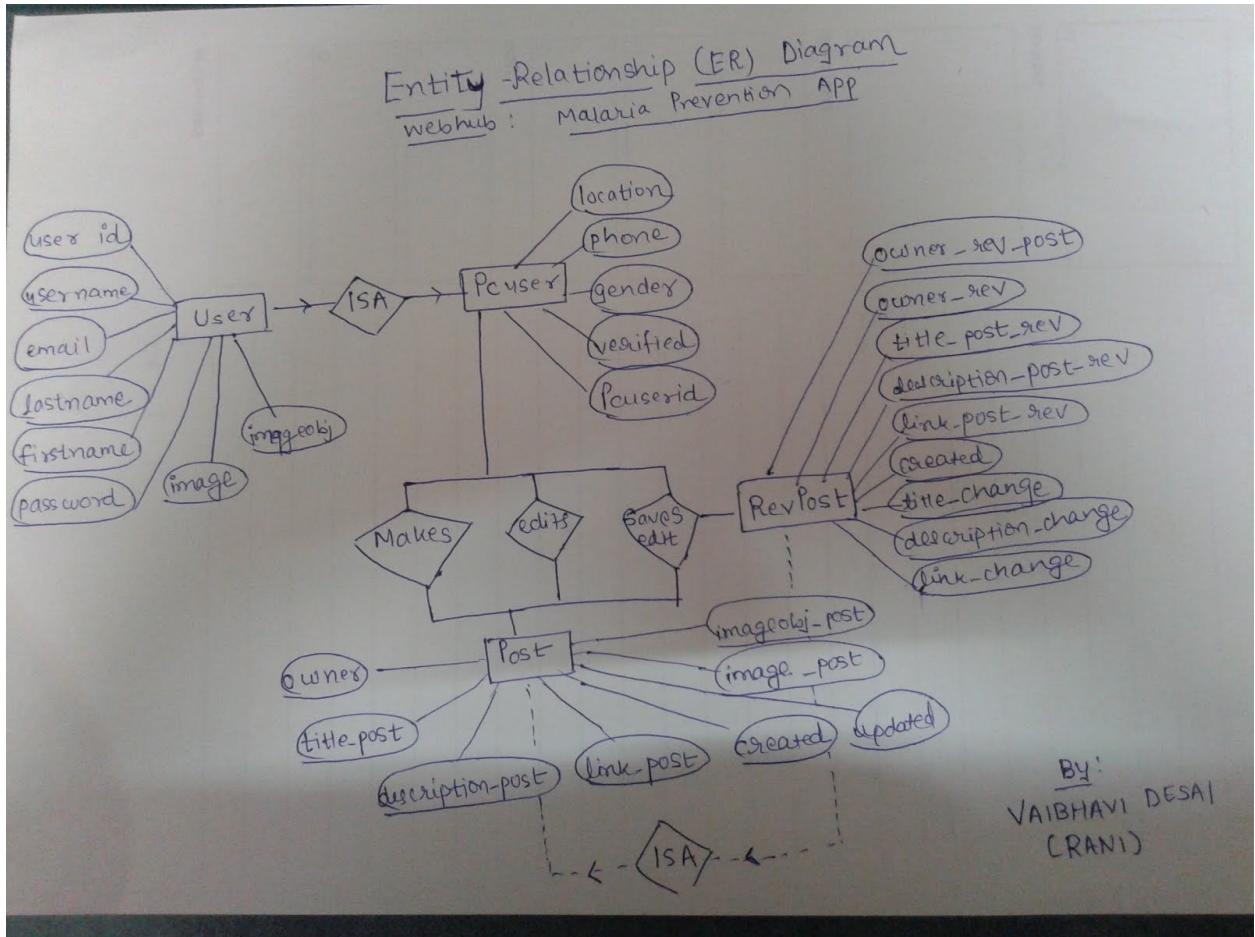
created	DateTim e	time of creation of new post		968717647 9
title_change	Boolean	set true if title is changed in the edit		true
description_change	Boolean	set true if description is changed in the edit		true
link_change	Boolean	set true if link is changed in the edit		true

5. Component Design

This section gives an overview of how the various components within the system are collaborating with each other. A major focus is on how the data within the system is stored, retrieved, exchanged between various components and displayed to the user after the required processing.

The Entity-Relationship Diagram (*ER Model*) gives the details of how the databases are linked and how the system stores its data.

ER Model



6. Human Interface Design

6.1 Overview of User Interface

The user interface has been designed in keeping with the current trend of a minimalistic interface that focuses more on the content. The user will be greeted with relevant content displayed in a proper, organized fashion on each screen and should have no trouble navigating his way through the various screens. All features on each screen will be self-explanatory.

6.2 Screen Images

LOG IN SCREEN

Activities Chromium Web Browser Sun 11:56

192.168.33.10:8000



Mobile App Control Center

Log in

Username :

Password :

[Forgot Password ?](#)

New User ? [Click here to Sign Up !](#)

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Activities Chromium Web Browser Sun 11:56

192.168.33.10:8000/signup_page/



Mobile App Control Center

Sign Up Form

Gender *

Male Female

Username :

Email id :

First name :

Last name :

Set Password :

Confirm Password :

Activities Chromium Web Browser Sun 11:56

192.168.33.10:8000/signup_page/

Mobile App Control Center

Confirm Password :

Phone :

Location :

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Return to Top

Activities Chromium Web Browser Sun 12:00

192.168.33.10:8000/signup_page/

Mobile App Control Center

Male Female

Username :

Email id :

First name :

Last name :

Set Password :

Confirm Password :

Phone :

Location :

Activities Chromium Web Browser Sun 12:00

Mobile App Control Center

Verification email sent. check your inbox and verify the account.

[Go Back or click OK to go to signup page.](#)

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Inbox (1) - rani.vhd@gmail.com

Google

Gmail ▾ COMPOSE

Inbox (1)
Starred
Important

Primary Social Promotions Updates Forums

Facebook, LinkedIn Invitations, ...

Peace Corps Verification Email - Your email has been registered on pchub.com. Please click on the following link to verify (or co 12:00 pm

Activities Firefox Web Browser Sun 12:04

Peace Corps Verification Email - rani.vhd@gmail.com - Gmail - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Inbox (1) - rani.vhd@gmail.com

Google

Gmail ▾ COMPOSE

Inbox Starred Important Sent Mail Drafts (197) Circles GCDC

Custom Servers Solutions - www.softlayer.com/dedicated-server - Secure, Reliable Dedicated Servers 24/7 Customer Support. 0% Downtime. Why this ad?

Peace Corps Verification Email ranipc93@gmail.com 12:00 PM (4 minutes ago)

Your email has been registered on pchub.com. Please click on the following link to verify (or copy paste it in your browser if needed)

<http://192.168.33.10:8000/verify?code=7ce9b5279caf4c1996b95aa633bf52cd>

If you have not registered on our website, please ignore.

ranipc93 Show details Ads 50% Off Flippkart Coupons Join Cashkaro Now & Get Flippkart upto 50% Off Coupons. Hurry!

Activities Chromium Web Browser Sun 12:06

192.168.33.10:8000/verify/?code=7ce9b5279caf4c1996b95aa633bf52cd

Welcome, Loren ! LogOut

 Mobile App Control Center

Verification successful.

[Click here to go to the homepage](#)

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Activities Chromium Web Browser Sun 12:12

192.168.33.10:8000/malaria/

Welcome, Loren ! LogOut

 Mobile App Control Center

Malaria : infoHub

There are No Posts right now.

New Post

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Activities Chromium Web Browser Sun 12:13

192.168.33.10:8000/post_form/

Welcome, Loren ! LogOut

Mobile App Control Center

Malaria : infoHub

New Post

Title

Description

Link

Add image Choose File No file chosen

Activities Chromium Web Browser Sun 12:14

192.168.33.10:8000/post_form/

Welcome, Loren ! LogOut

Mobile App Control Center

Malaria : infoHub

New Post

Title

Description

Link

Add image Choose File book.jpg

Activities Chromium Web Browser Sun 12:14

192.168.33.10:8000/post_new/

Welcome, Loren! LogOut

Mobile App Control Center

Post created successfully.
[Click here to view post.](#)

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Activities Chromium Web Browser Sun 12:14

192.168.33.10:8000/view_post/?key=8

Welcome, Loren! LogOut

Mobile App Control Center

View Post

Title : Peace corps volunteer

Description : here there would be a short description about the post

Link : www.google.com



Edit Delete

Activities Chromium Web Browser Sun 12:14
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x Pos x

192.168.33.10:8000/view_post/?key=8

Welcome, Loren ! LogOut

Mobile App Control Center



Edit Delete

[Revision History of this Post](#)

The post was created by newuser on 2014-06-29 06:44:07.872873+00:00

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Activities Chromium Web Browser Sun 12:14
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x Pos x Edit x

192.168.33.10:8000/edit_post_page/?key=8

Welcome, Loren ! LogOut

Mobile App Control Center

Edit Post

Title: Peace corps volunteer cha

Description: here there would be a short description about the post change

Link: www.google.com

Change image: Choose File No file chosen



SEND CANCEL

Activities Chromium Web Browser Sun 12:15
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x Pos x

192.168.33.10:8000/view_post/?key=8

Welcome, Loren ! LogOut

Mobile App Control Center



Edit Delete

Revision History of this Post

The post was created by [newuser](#) on 2014-06-29 06:44:07.872873+00:00

- The post was updated by [Loren](#) on 2014-06-29 06:44:57.346528+00:00

The title has been changed from "Peace corps volunteer" to "Peace corps volunteer change" The description has been changed from "here there would be a short description about the post " to "here there would be a short description about the post change"

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Activities Chromium Web Browser Sun 12:15
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x Not x

192.168.33.10:8000/delete_post/?postid=8

Welcome, Loren ! LogOut

Mobile App Control Center

Post Deleted successfully.

[Click here to go to home page.](#)

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Activities Chromium Web Browser Sun 12:37

192.168.33.10:8000/profile/?id=45

Welcome, Loren ! LogOut

Mobile App Control Center

User Profile

First Name : Loren
Last Name : Ipsum
Email Address : rani.vhd@gmail.com
Mobile : 9898978787
Gender : female
Location : India



User newuser

Edit Profile Change Password

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Activities Chromium Web Browser Sun 12:37

192.168.33.10:8000/edit_profile_page/?id=2

Welcome, Loren ! LogOut

Mobile App Control Center

Edit Profile

First Name: Loren
Last Name: Ipsum
Mobile: 9898978787
Email: rani.vhd@gmail.com
Gender: male
Location: India

Change Profile Photo:
 Choose File 20140511_104107.jpg



User newuser

Update Cancel

Activities Chromium Web Browser Sun 12:37

192.168.33.10:8000/profile/?id=2

Welcome, Loren ! LogOut

Mobile App Control Center

User Profile

First Name : Loren
Last Name : Ipsum
Email Address : rani.vhd@gmail.com
Mobile : rani.vhd@gmail.com
Gender : India
Location : India



User newuser

Edit Profile Change Password

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Activities Chromium Web Browser Sun 15:55

192.168.33.10:8000/change_pass_page/

Welcome, Loren ! LogOut

Mobile App Control Center

Change your password

Old password *

New password *

Confirm password *

Submit

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Activities Chromium Web Browser Sun 15:55

192.168.33.10:8000/change_pass/



Mobile App Control Center

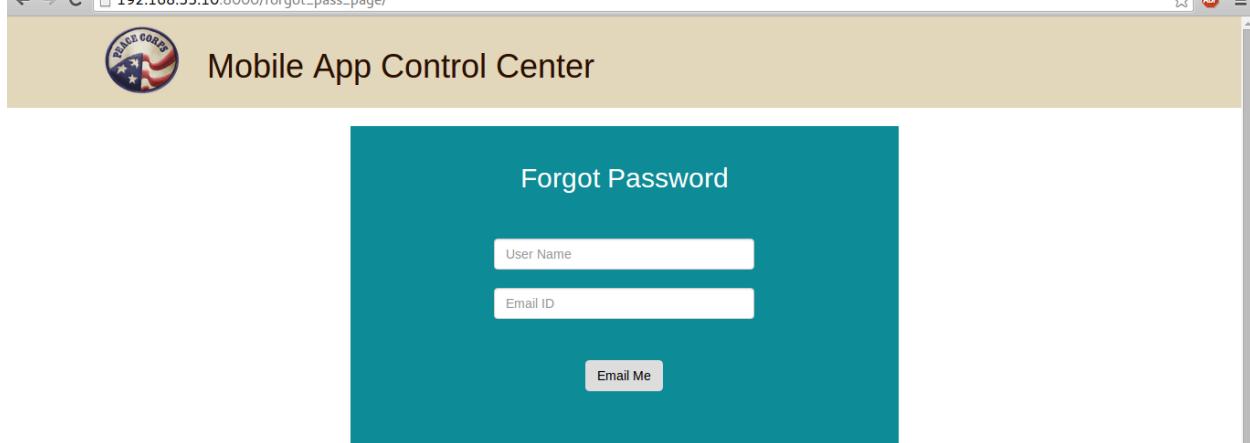
Password Changed.
[Please click here to go to the homepage and log in again.](#)

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Activities Chromium Web Browser Sun 15:55

192.168.33.10:8000/forgot_pass_page/



Mobile App Control Center

Forgot Password

User Name
Email ID
Email Me

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Activities Chromium Web Browser Sun 15:56

192.168.33.10:8000/forgot_pass_page/

 Mobile App Control Center

Forgot Password

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Waiting for 192.168.33.10...

[Return to Top](#)

Activities Chromium Web Browser Sun 15:57

192.168.33.10:8000/forgot_pass/

 Mobile App Control Center

An email has been sent to your registered email address.
Check your email and click on the link to reset your password.

[Click here to go to the homepage](#)

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Activities Chromium Web Browser Sun 15:58

https://mail.google.com/mail/u/1/#inbox

Google Gmail COMPOSE Primary Social 50+ new Promotions Updates Forums +

Inbox (1) Starred Important

>Password Reset Request - You have requested for a password reset on Mobile App Control Center Please click on the following 3:57 pm

Peace Corps Verification Email - Your email has been registered on pchub.com. Please click on the following link to verify (or co 12:00 pm

Activities Chromium Web Browser Sun 15:58

https://mail.google.com/mail/u/1/#inbox/146e72a97d6b6b31

Google Gmail COMPOSE

Inbox Starred Important Sent Mail Drafts (197) Circles GCDC GSA Loading... Search people...

ranipc93@gmail.com to 3:57 PM (0 minutes ago)

ranipc93

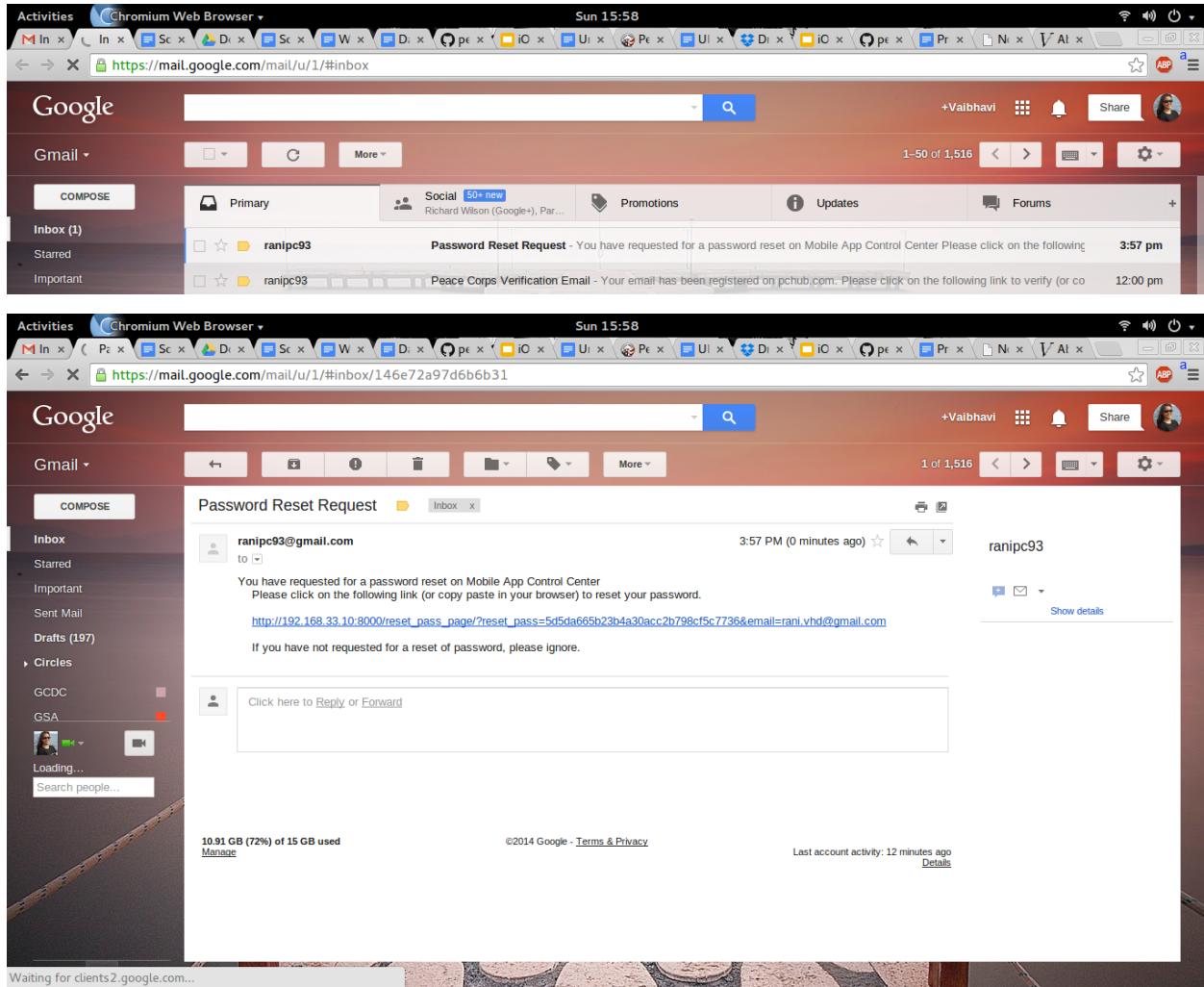
You have requested for a password reset on Mobile App Control Center
Please click on the following link (or copy paste in your browser) to reset your password.
http://192.168.33.10:8000/reset_pass_page?reset_pass=5d5da665b23b4a30acc2b798cf5c773&email=rani.vhd@gmail.com

If you have not requested for a reset of password, please ignore.

Click here to Reply or Forward

10.91 GB (72%) of 15 GB used Manage ©2014 Google - Terms & Privacy Last account activity: 12 minutes ago Details

Waiting for clients2.google.com...

The image consists of two vertically stacked screenshots of a Gmail inbox. The top screenshot shows the inbox with several messages, including a 'Password Reset Request' from 'ranipc93@gmail.com' received at 3:57 PM. The bottom screenshot shows the details of this specific email message, which contains a password reset link. Both screenshots are taken from a Chromium Web Browser on a Linux desktop, as indicated by the window title and taskbar.

Activities Chromium Web Browser Sun 15:58

192.168.33.10:8000/reset_pass_page/?reset_pass=5d5da665b23b4a30acc2b798cf5c7736&email=rani.vhd@gmail.com

 Mobile App Control Center

Reset your password

New Password

Repeat Password

Reset Password

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Activities Chromium Web Browser Sun 15:59

192.168.33.10:8000/change_pass/

 Mobile App Control Center

Password Changed.
[Please click here to go to the homepage and log in again.](#)

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Activities Chromium Web Browser Sun 15:59

192.168.33.10:8000/aboutPC/



Mobile App Control Center

Here the information about PC would be shown

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Activities Chromium Web Browser Sun 15:59

192.168.33.10:8000/policies/



Mobile App Control Center

Here the information about policies would be shown

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192.168.33.10:8000/policies/

Activities Chromium Web Browser Sun 15:59

192.168.33.10:8000/details/



Mobile App Control Center

Here the details would be shown

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Activities Chromium Web Browser Sun 15:59

192.168.33.10:8000/helpPC/



Mobile App Control Center

Here the help information about PC would be shown

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Activities Chromium Web Browser v Sun 16:05

192.168.33.10:8000/api/

Django REST framework v 2.3.14

Log in

Api Root

GET /api/

```
HTTP 403 FORBIDDEN
Content-Type: application/json
Vary: Accept
Allow: GET, HEAD, OPTIONS

{
    "detail": "Authentication credentials were not provided."
}
```

Activities Chromium Web Browser v Sun 16:05

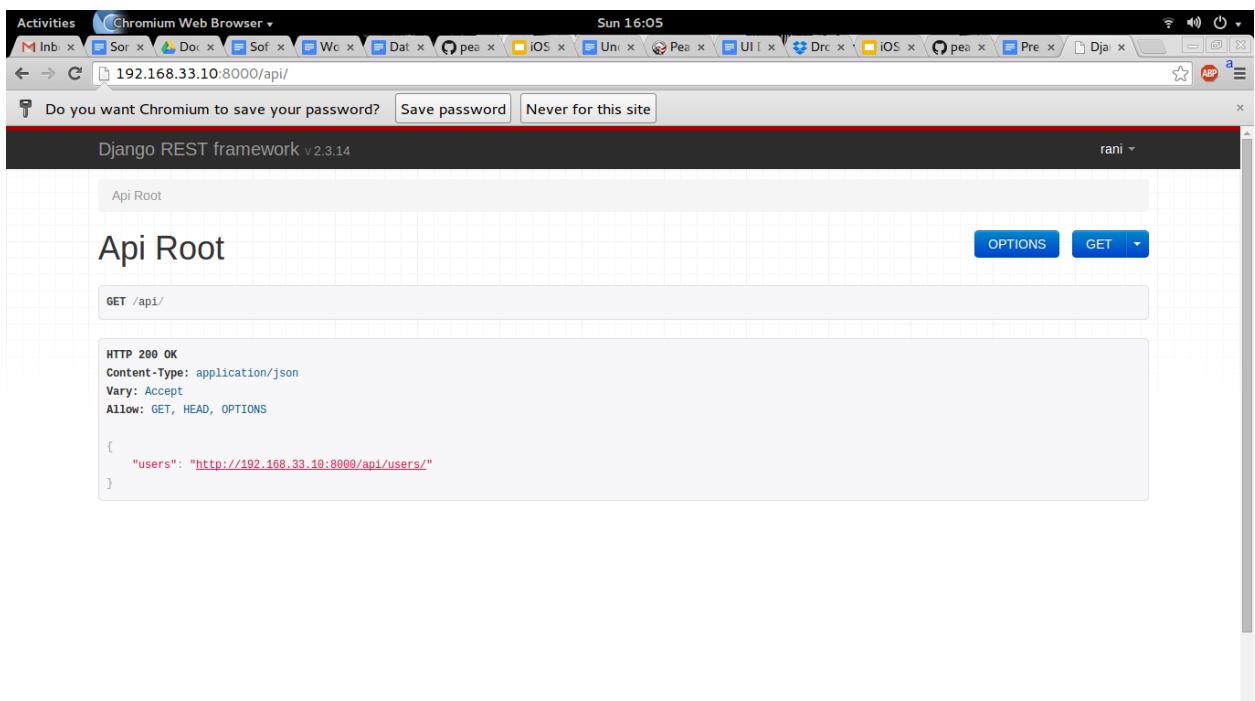
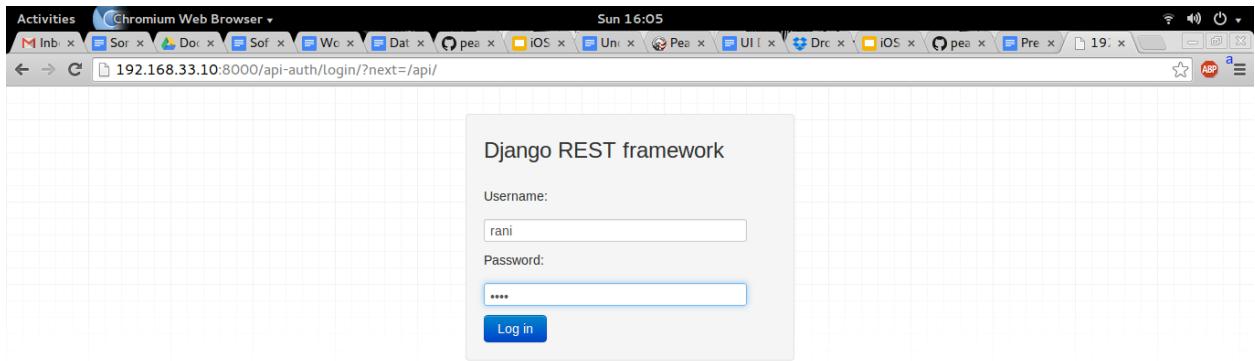
192.168.33.10:8000/api-auth/login/?next=/api/

Django REST framework

Username:

Password:

Log in





Activities Chromium Web Browser Sun 16:09
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x 19 x
← → C 192.168.33.10:8000/post/?format=json
[{"owner": 2, "title_post": "Peace corps volunteer", "description_post": "short description about the postshort description about the post", "link_post": "www.google.com", "created": "2014-06-29T10:38:41.004Z", "updated": "2014-06-29T10:39:22.283Z", "id": 9, "image_post": "/static/newuserpost.jpg", "imageobj_post": "/vagrant/submit/media/propics/newuserpost.jpg"}]

Activities Chromium Web Browser Sun 16:09
Inb x Sor x Doc x Sof x Wc x Dat x pea x iOS x Un x Pea x UI x Dr x iOS x pea x Pre x Dja x
← → C 192.168.33.10:8000/post/
Django REST framework v2.3.14 rani ~
Post List
Post List OPTIONS GET
GET /post/
HTTP 200 OK
Content-Type: application/json
Vary: Accept
Allow: POST, OPTIONS, GET
[
 {
 "owner": 2,
 "title_post": "Peace corps volunteer",
 "description_post": "short description about the postshort description about the post",
 "link_post": "www.google.com",
 "created": "2014-06-29T10:38:41.004Z",
 "updated": "2014-06-29T10:39:22.283Z",
 "id": 9,
 "image_post": "/static/newuserpost.jpg",
 "imageobj_post": "/vagrant/submit/media/propics/newuserpost.jpg"
 }
]
Media type: application/json