

# **Mobile App Control Center : Software Design Document**

## **1. MALARIA PREVENTION**

## **2. PEACETRACK**

**created by : Vaibhavi (Rani)**

### **INDEX**

1. Introduction
2. System overview
3. System architecture
4. Data design
5. Component design
6. Human interface design

# 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.

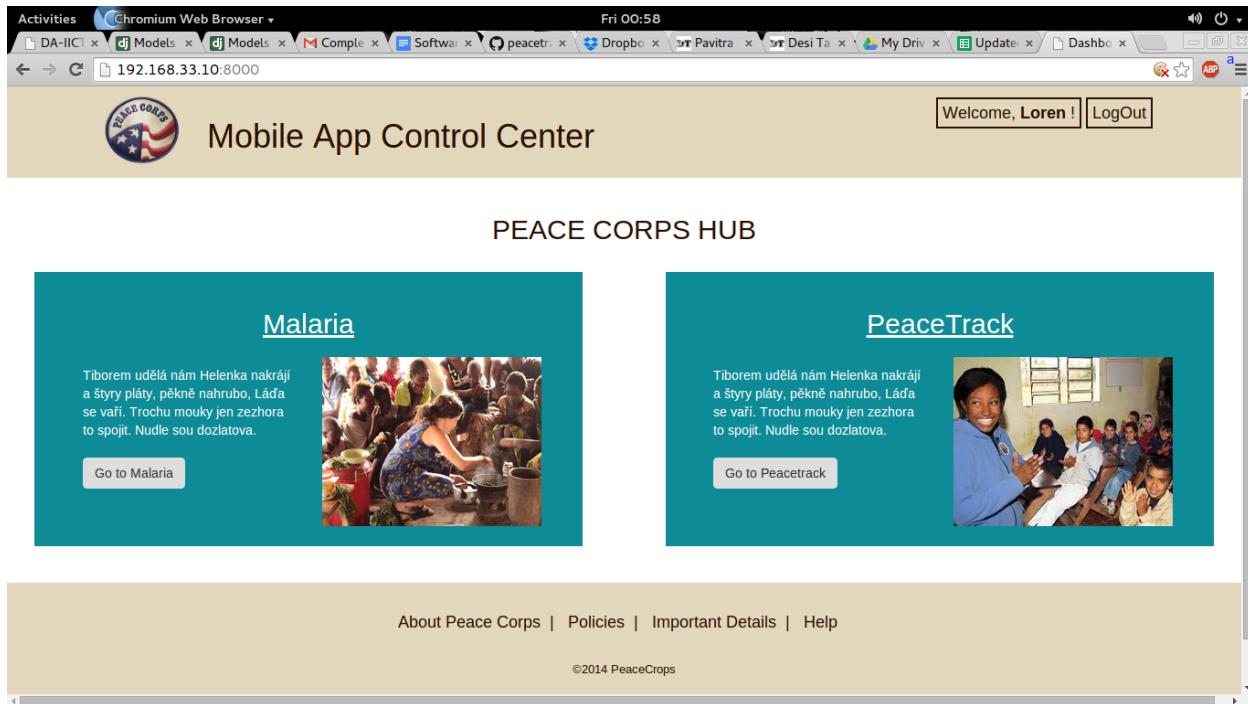
Further on, the document will go into how the system handles its data and how it is processed, stored and transformed as needed by the system. After that, the document will describe the various components within the system.

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. APIs have been explained in “**API Documentation**” document.

## 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
- 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

#### PEACETRACK

#### *Summary*

When user clicks on summary, the following information is shown

- Details by Post : Name of the post, Region, Sector
- Details by Sector : Name of the sector, Description of the sector, Code
- Details by Project : Name of the project, Purpose, Sector

### *Volunteer*

When user clicks on volunteer, the following information is shown

- Name of the volunteer
- Sector of the volunteer
- Post of the volunteer
- Activity of the volunteer
- Measurement of the volunteer
- Cohort of the volunteer

## 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		desaivaibhav i
email	Variable	email address		rani.vhd@g mail.com

	String			
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

### 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
created	DateTim e	time of creation of new post		9687176479
updated	Char	time of last update of the post		Info City, gandhinagar

### 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
created	DateTim e	time of creation of new post		9687176479

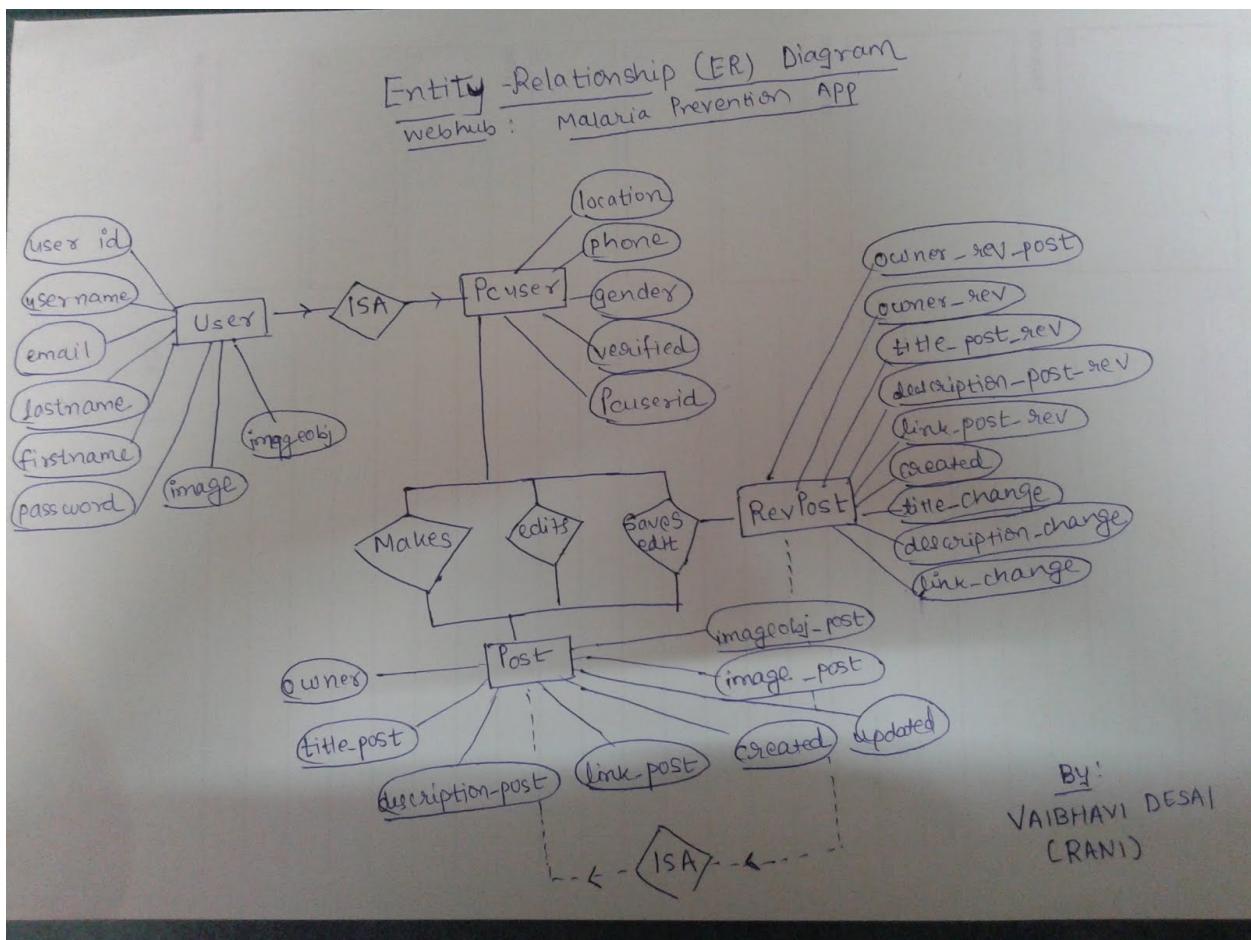
title_change	Boolean	set true if title is changed in the edit		true
description_change	Boolean	set true if description is changed in the edit		true

## 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 : Malaria



ER Model : PeaceTrack

## Entity-Relationship (ER) Diagram

Webhub: Peace Track

created by: Vaibhavi [Rani]

### ★ Some notations of the ER dia:

(would be helpful to understand the database design)

 - Entity.

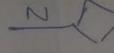
 - Weak Entity

 - Attribute

 - Derived Attribute

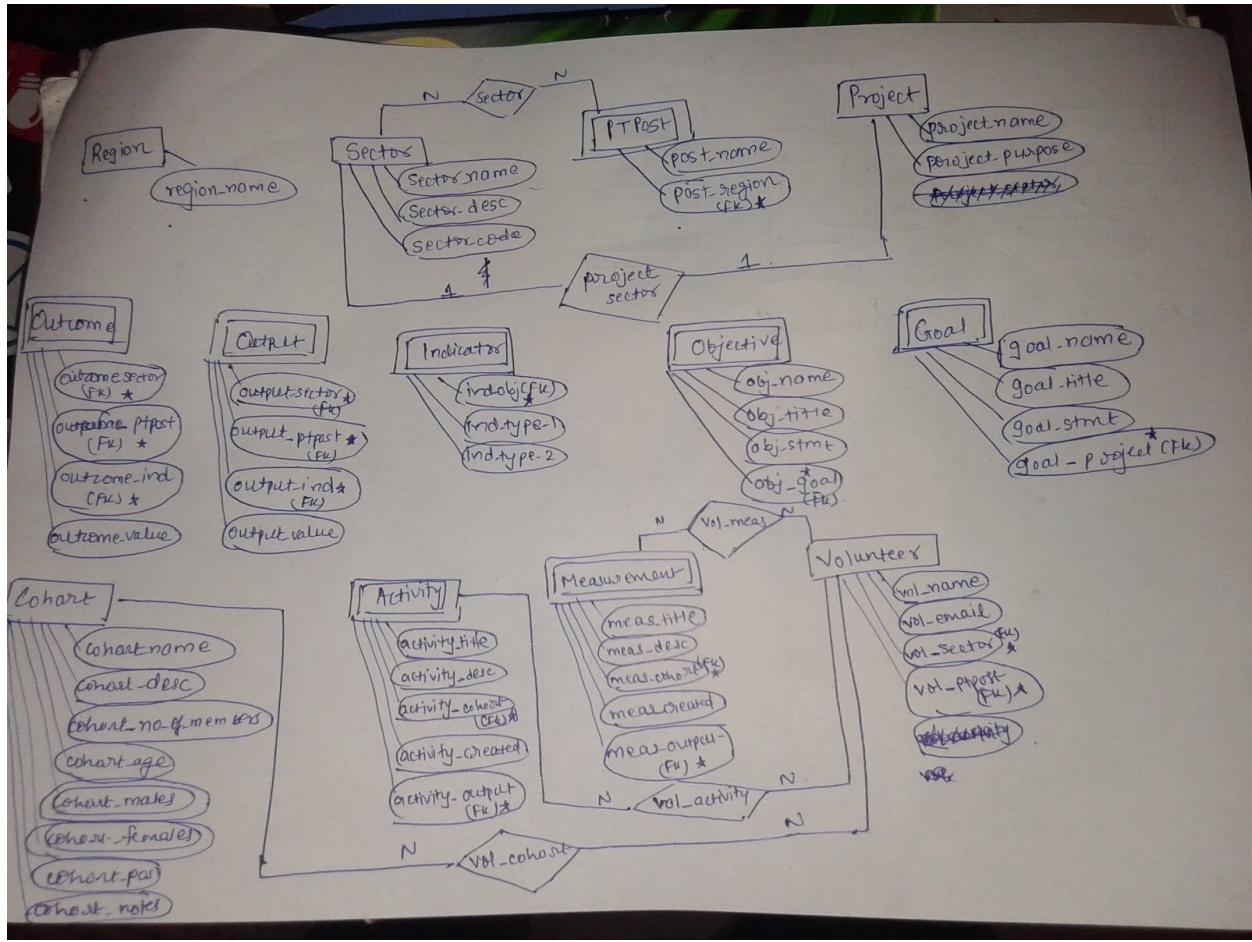
 - Relationship.

 - one to one relationship.

 Many to many relation ship.

 (FK)

- indicated the Foreign keys.



## **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**

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 !](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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 :

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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.](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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

Google

Gmail ▾ COMPOSE

Inbox (1) Starred Important

Primary Social Promotions Updates Forums

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) 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](http://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](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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

SUBMIT CANCEL

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 Peace corps volunteer

Description here there would be a short description about the post

Link www.google.com

Add image  Choose File book.jpg

SUBMIT CANCEL

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.](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops  
Return to Top

Activities Chromium Web Browser Sun 12:14

192.168.33.10:8000/view\_post/?key=8

Welcome, Loren! LogOut

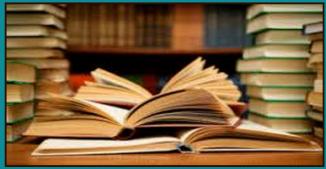
## Mobile App Control Center

### View Post

Title : Peace corps volunteer

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

Link : [www.google.com](http://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

About Peace Corps | Policies | Important Details | Help  
©2014 PeaceCrops  
Return to Top

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"

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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.](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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

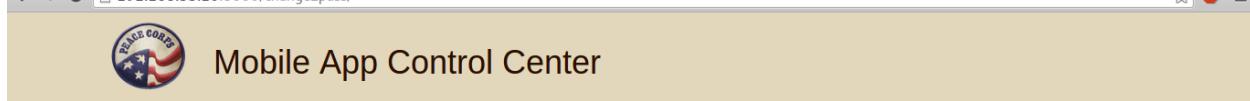
About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top

Activities Chromium Web Browser Sun 15:55

192.168.33.10:8000/change\_pass/



Mobile App Control Center

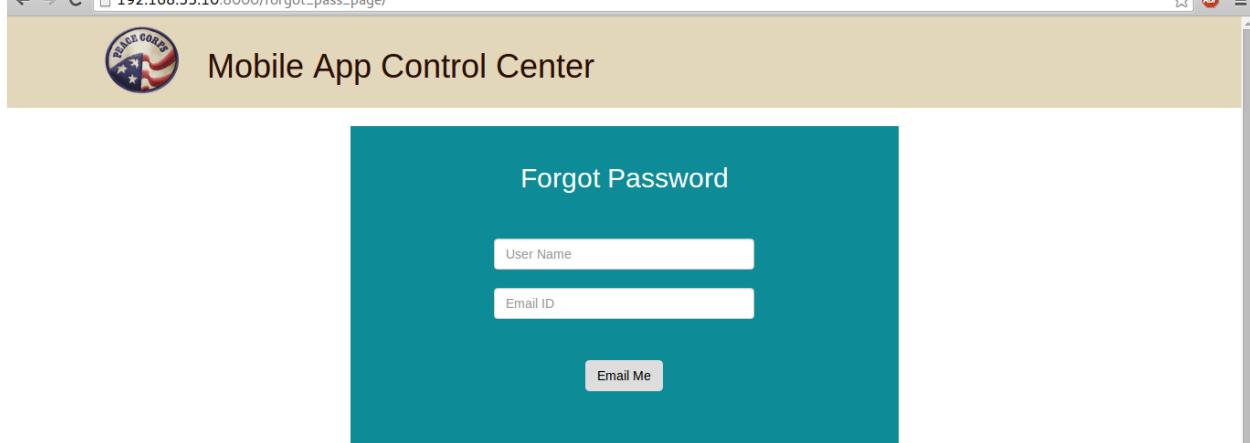
Password Changed.  
[Please click here to go to the homepage and log in again.](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops  
Return to Top

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops  
Return to Top

Activities Chromium Web Browser Sun 15:56

192.168.33.10:8000/forgot\_pass\_page/

 Mobile App Control Center

Forgot Password

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

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

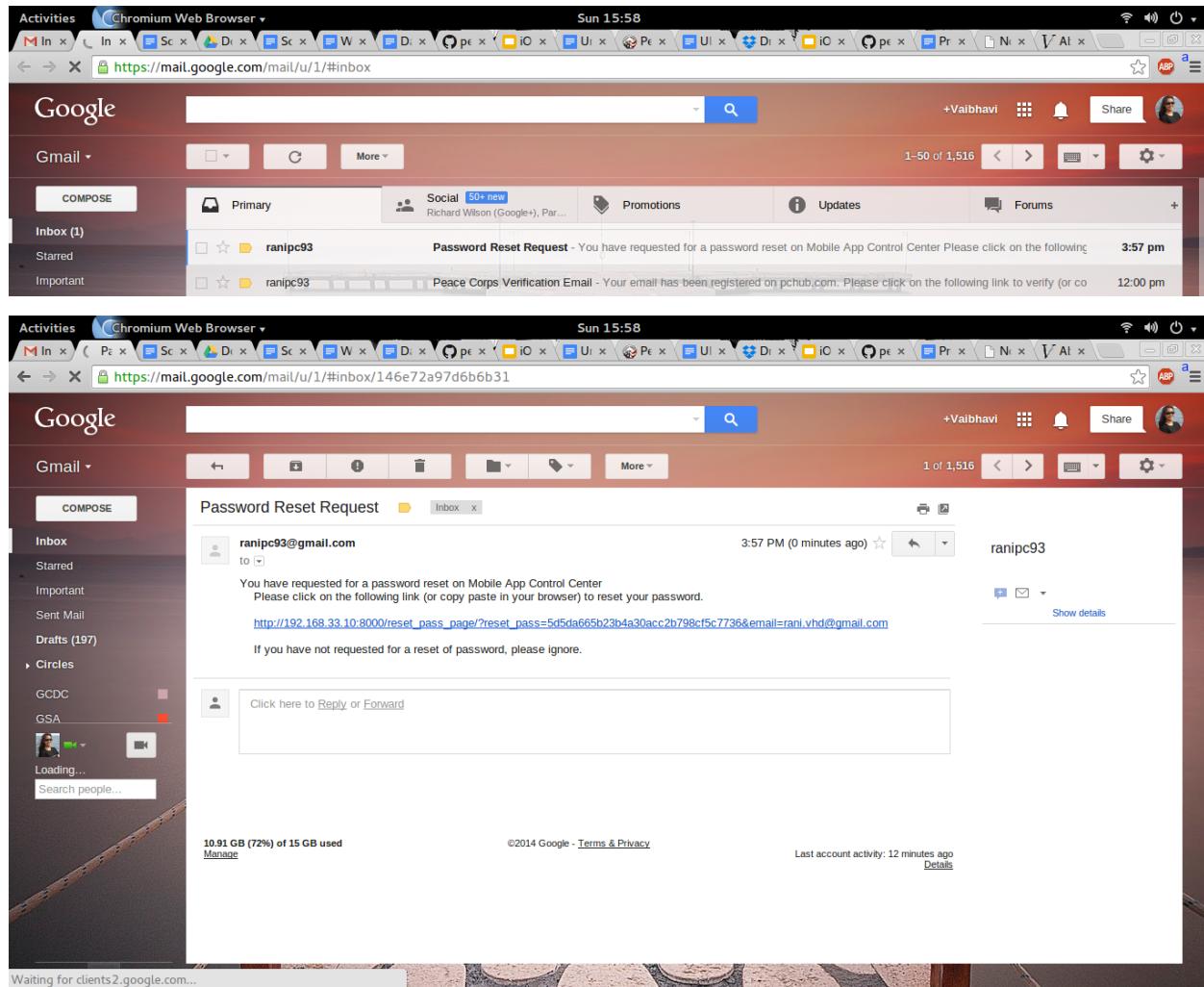
An email has been sent to your registered email address.  
Check your email and click on the link to reset your password.

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)



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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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.](#)

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

[Return to Top](#)

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top

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

About Peace Corps | Policies | Important Details | Help

[Know about our team](#)

©2014 PeaceCrops

Return to Top

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top

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

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top

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

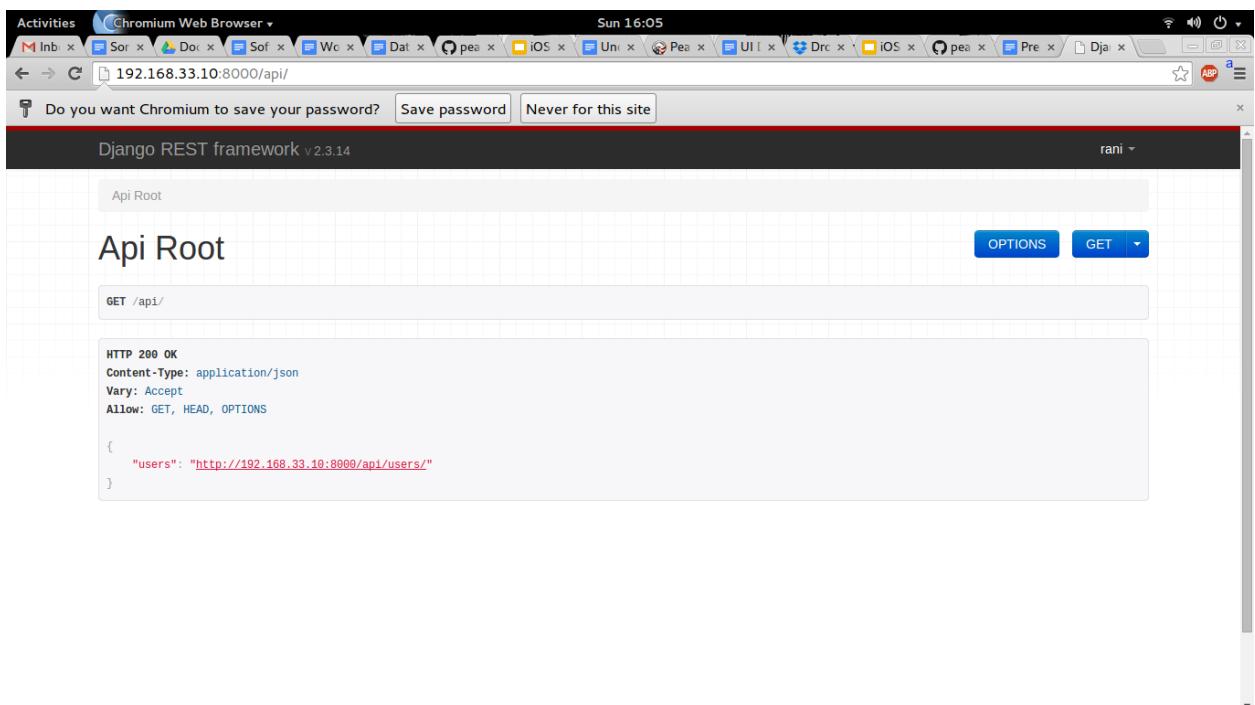
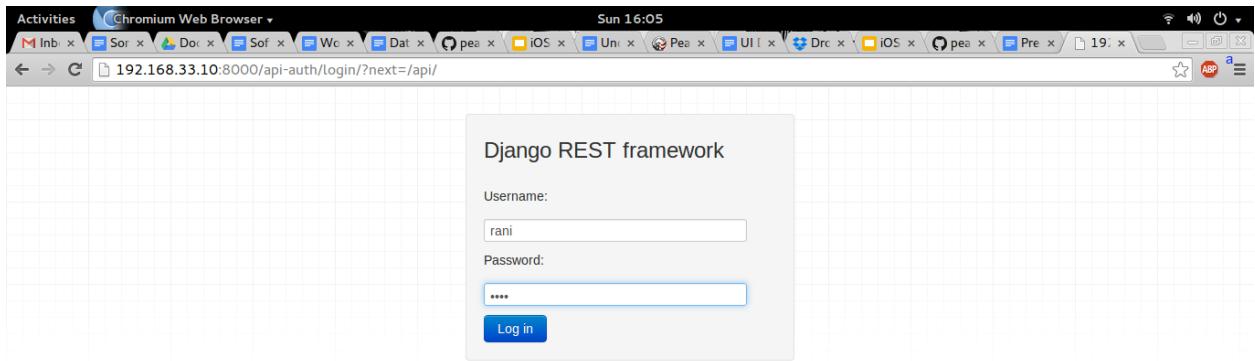
192.168.33.10:8000/api-auth/login/?next=/api/

## 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

Activities Chromium Web Browser Sat 12:51

DA-IIIC x How A x Watch x Watch x Inbox x Docum x Work x Softw x API D x GSOC x YouTube x app-w x Peace x

sysertspcweb.herokuapp.com/peacetrack/



# Mobile App Control Center

Summary  
Volunteer  
Graph

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops  
Return to Top

Activities Chromium Web Browser Sat 12:51

DA-IIIC x How A x Watch x Watch x Inbox x Docum x Work x Softw x API D x GSOC x YouTube x app-w x Peace x

sysertspcweb.herokuapp.com/summary/



# Mobile App Control Center

Welcome, vaibhavi ! | LogOut

## PeaceTrack : Summary

**Details by Post**

Name of the post : post 1  
Region : region1  
Sector : sector 2

**Details by Sector**

Name of the sector : sector 1  
Description of the sector : description  
Code : code  
Name of the sector : sector 2  
Description of the sector : description  
Code : code

**Details by Project**

Name of the project : project 1  
Purpose : purpose of project1  
Sector : sector 1  
Name of the project : project 2  
Purpose : purpose of project2  
Sector : sector 2

Activities Chromium Web Browser Sat 12:51

DA-IIIC x F How A x Watch x Watch x Inbox x Docum x Work x Softw x API D x GSOC x YouTube x app-w x Peace x

sysertspcweb.herokuapp.com/summary/

Welcome, vaibhavi ! LogOut

## Mobile App Control Center

**Details by Volunteer**

Name of volunteer : volunteer 1  
Sector : sector 1  
Post : post 1  
Activity : activity 2  
Measurement : measurement 1  
Cohort : cohort 1 cohort 2

Name of volunteer : volunteer 2  
Sector : sector 1  
Post : post 1  
Activity : activity 1 activity 2  
Measurement : measurement 2  
Cohort : cohort 1

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top

Activities Chromium Web Browser Sat 12:51

DA-IIIC x F How A x Watch x Watch x Inbox x Docum x Work x Softw x API D x GSOC x YouTube x app-w x Peace x

sysertspcweb.herokuapp.com/volunteer/

Welcome, vaibhavi ! LogOut

## Mobile App Control Center

### PeaceTrack : Volunteer details

**Name of volunteer :** volunteer 1  
Sector : sector 1  
Post : post 1  
Activity : activity 2  
Measurement : measurement 1  
Cohort : cohort 1 cohort 2

**Name of volunteer :** volunteer 2  
Sector : sector 1  
Post : post 1  
Activity : activity 1 activity 2  
Measurement : measurement 2  
Cohort : cohort 1

About Peace Corps | Policies | Important Details | Help

©2014 PeaceCrops

Return to Top