

**DEPARTMENT OF COMPUTER ENGINEERING
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**PROJECT REPORT
ON
DEMOGRAPHIC DATABASE AND DATA ANALYSIS**

Submitted by

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CERTIFICATE

This is to certify that the project entitled **DEMOGRAPHIC DATABASE AND ANALYSIS** has been carried out by the following students in partial fulfilment of the degree of Bachelor of Engineering in Computer Engineering of Savitribai Phule Pune University, Pune during the academic year 2016-2017.

Team:

- SANIKA SINALKAR
- AKSHAY SHINDE
- SHAHID KHAN

Date:

Signature:

ABSTRACT

We have designed a DEMOGRAPHIC DATABASE AND DATA ANALYSIS Project to uniquely identify the personnel and hold their information with regards to vehicle records, crime records, banking information, and annual income and analyze it using GOOGLE Application Inter like Scattered Charts, Pie Charts, Geographical Distribution Maps, to help the user study the demographic distribution.

This report summarizes the project in terms of its design and functionalities.

Contents

1 CHAPTER 1: INTRODUCTION	1
1.1 OBJECTIVE	1
1.2 METHODOLOGY	1
1.3 THREE TIER ARCHITECTURE	2
2 CHAPTER 2: TOOL DESCRIPTION	3
2.1 FRONT END	3
2.1.1 HYPERTEXT MARKUP LANGUAGE (HTML)	3
2.1.2 CASCADING STYLE SHEET (CSS)	3
2.2 MIDDLE WARE	3
2.3 BACK END	4
3 CHAPTER 3: SYSTEM REQUIREMENTS SPECIFICATIONS	5
3.1 HARDWARE REQUIREMENTS	5
3.2 SOFTWARE REQUIREMENTS	5
4 CHAPTER 4: SYSTEM ANALYSIS AND DESIGN	6
5 CHAPTER 5: PROJECT PLANNING	8
6 CHAPTER 6: IMPLEMENTATION	10

List of figures

1.1 THREE TIER ARCHITECTURE	2
2.1 WEB APPLICATION ARCHITECTURE	4
4.1 SYSTEM ANALYSIS PROCEDURES	6
5.1 WATERFALL MODEL	8
6.1 PHP-MYSQL CONNECTIVITY.....	10
6.2 MAIN PAGE.....	11
6.3 REGISRTAION	12
6.5 PERSONAL INFORMATION	16
6.6 DELETION OF PROFILE	17
6.7 STATISTICAL ANALYSIS MENU.....	18
6.13 SEX RATIO	19
6.14 CRIME STATISTICS	20
6.15 POVERTY LINE	21
6.16 EDUCATIONAL QUALIFICATION STATISTICS	22
6.17 POPULATION DISTRIBUTION	23
6.18 UPDATION OF PASSWORD	24
6.19 ADMIN LOGIN	25
6.20 LIST OF USERS	26

1 CHAPTER 1: INTRODUCTION

1.1 OBJECTIVE

A customer wants to run unique-identity project for the residents bearing its nationality as national-resident, NRI, NRE and migrated along with personal information, gender information with crime records, earning methods, Bank Accounts, marital status, Medical Insurance details, Driving license for self owned Vehicles. The customer wants to find and monitor using reports the status of ethical values in the society, growth in wealth, poverty line issues, health issues, increase/decrease in crimes and family issues and such more issues.

1.2 METHODOLOGY

To implement the above goals, the following methodology needs to be followed :

1. Specifying the application and various components of the architecture.
2. Specifying the bindings between the tasks and the resources either manually or by the design tools.
3. Specifying the program connectivities for smooth functioning of the project.
4. Extracting the data required for analysis and then doing the analysis.

1.3 THREE TIER ARCHITECTURE

A three tier architecture separates its tiers from each other based on their function. Such an architecture is highly modifiable, as almost all its components can be changed independently.

1. **Data Tier:** This tier holds the database along with data definition and constraints.
2. **Application Tier:** At this tier, the application server and the programs that access the database. It presents an abstracted view of the database.
3. **Presentation Tier:** End-users operate on this tier. Multiple, highly abstracted views of the database are provided by this layer.

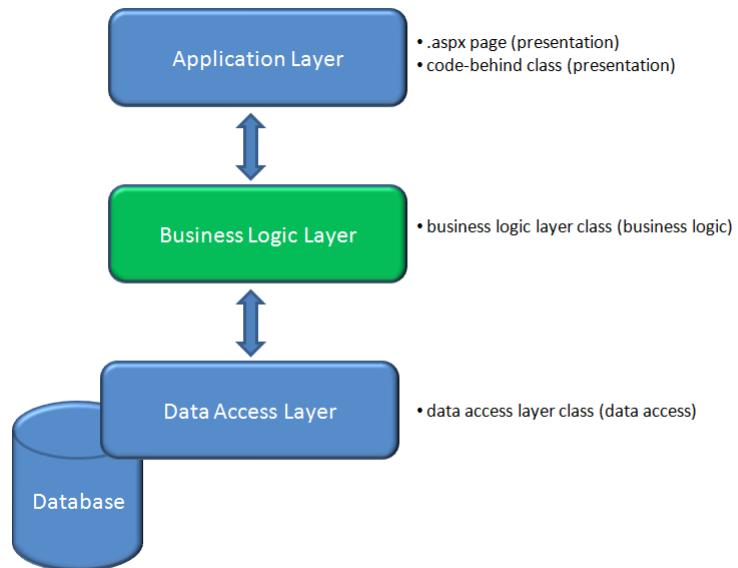


Figure 1.1: Three Tier Architecture

2 CHAPTER 2: TOOL DESCRIPTION

2.1 FRONT END

The front end of the project is a combination of *HyperText Markup Language (HTML) 5* and *Cascading Style Sheet (CSS)* that reduces the number of lines to code in each program by referencing HTML elements by a unique identifier that can be formatted in CSS scripts.

2.1.1 HYPERTEXT MARKUP LANGUAGE (HTML)

Our project uses backwards compatible, browser-independent format of HTML to create electronic documents (called pages) that are displayed on a web browser. Each page contains a series of connections to other pages called hyperlinks.

2.1.2 CASCADING STYLE SHEET (CSS)

CSS scripts comprise of style rules for HTML elements like 'div' and 'span', identified by 'ids' and/or 'classes'. This allows us to apply the same formatting to elements that occur in multiple pages.

2.2 MIDDLE WARE

The middle layer of our project comprises of *PHP: Hypertext Pre-processor (PHP)* scripts. PHP is a server-side scripting language used for abstracting the database. PHP runs *mysqli* queries to query a SQL database and sends the obtained results to be displayed on HTML pages. While HTML creates static web pages, PHP is used to display queried data dynamically.

2.3 BACK END

At the back end, we have implemented a database in *My Structured Query Language (MySQL)* with primary key constraints and an auto-incrementing Unique Identifier for each registered user. SQL is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS). It provides ease of use and consistency in transactions.

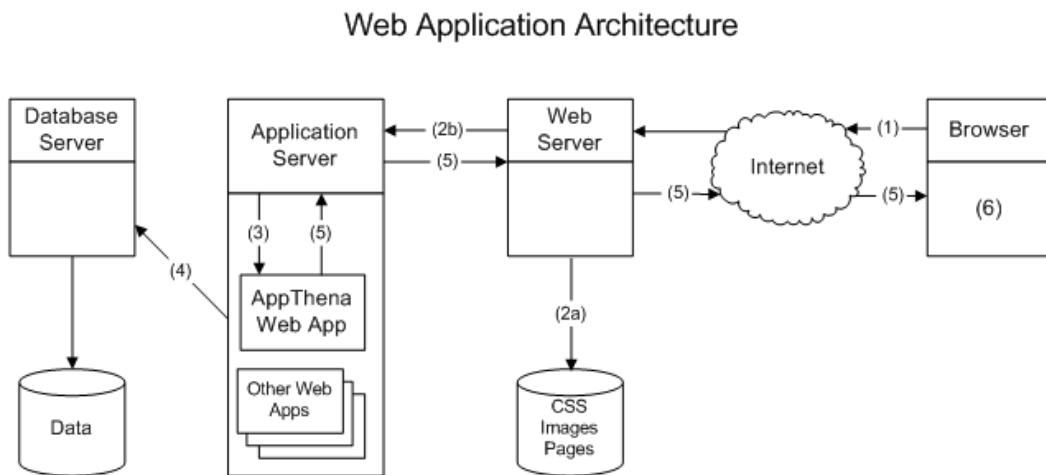


Figure 2.1: WEB APPLICATION ARCHITECTURE

3 CHAPTER 3: SYSTEM REQUIREMENTS SPECIFICATIONS

3.1 HARDWARE REQUIREMENTS

The following hardware interfaces are required for our Unique Identification System to run successfully:

1. Intel core i3 Processor or above
2. RAM 512 MB or above

3.2 SOFTWARE REQUIREMENTS

1. Operating system (Linux)

2. Web server (Apache 2.0)

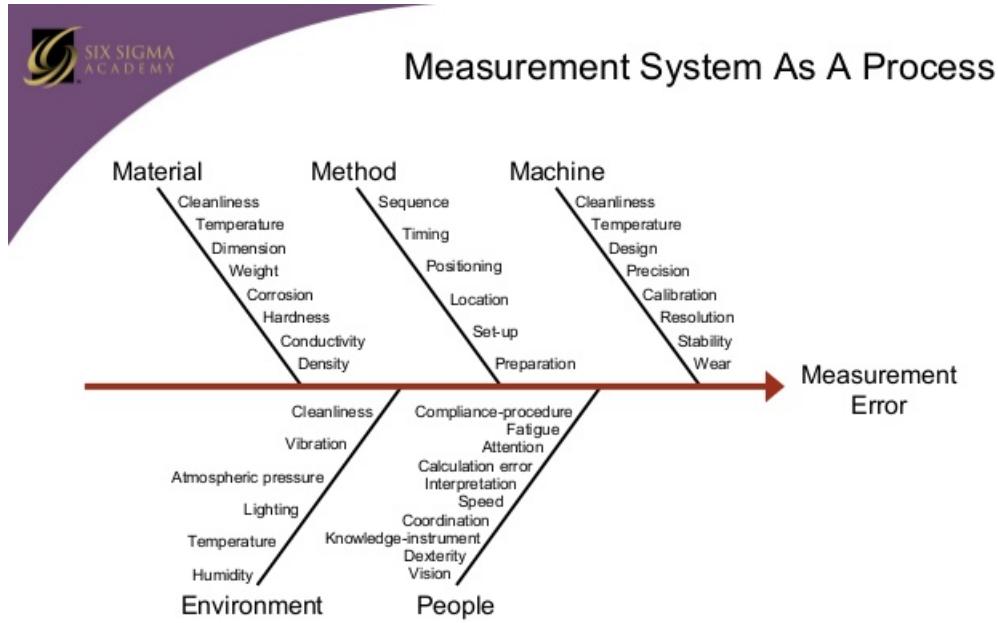
3. PHP 5

4. HTML 5

5. CSS

6. Database Server (MySQL)

4 CHAPTER 4: SYSTEM ANALYSIS AND DESIGN



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3

Figure 4.1: SYSTEM ANALYSIS PROCEDURES

System Analysis: It is the understanding and specifying in detail what a system should do.

The Unique Identification System holds personal, medical, financial information about personnel along with their profile picture. It presents this data to an administrator in summarized views through tables and charts.

The database has 2 tables: userinfo and adminlogin. The table userinfo holds the following attributes:

1. Name
2. Date of Birth
3. Contact Number
4. Email Address
5. Password
6. Residential Address
7. Gender
8. Marital Status
9. Nationality
10. Blood Group
11. Physical Disability
12. Qualification
13. Vehicle Records
14. Medical Records
15. Criminal History

The table userinfo holds the following attributes:

1. Username
2. Password

5 CHAPTER 5: PROJECT PLANNING

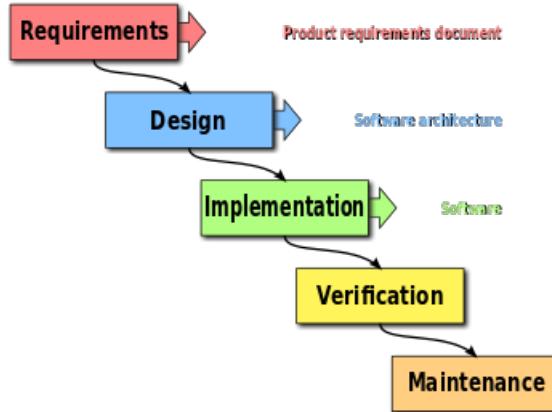


Figure 5.1: Waterfall Model

We are using the waterfall model of Software Development Life Cycle (SDLC) which is a sequential design process in which progress is seen as flowing steadily downwards (like a waterfall).

It has the following phases:

1. Conception: The idea behind the project was to develop a three-tier web application for personnel.
2. Initiation: The project was begun by mapping out the functionalities that the project was supposed to provide, and developing an Entity-Relationship model of the same. Conventions to be followed by all team members were also set out.

3. Analysis: This stage involved estimating performance statistics of the project, and modifying the design accordingly.
4. Design: The development was divided among the team members according to the layers in the three-tier architecture.
5. Integration: This stage involved integrating all modules from all tiers to create one single application.
6. Testing: The web application was tested against varying inputs and user requirements, and modified accordingly.
7. Maintenance: Timely modifications were made to the project as and when flaws were observed, or a need for additional features arose.

6 CHAPTER 6: IMPLEMENTATION

The project requires connectivity of the PHP scripts to the MySQL database as follows:

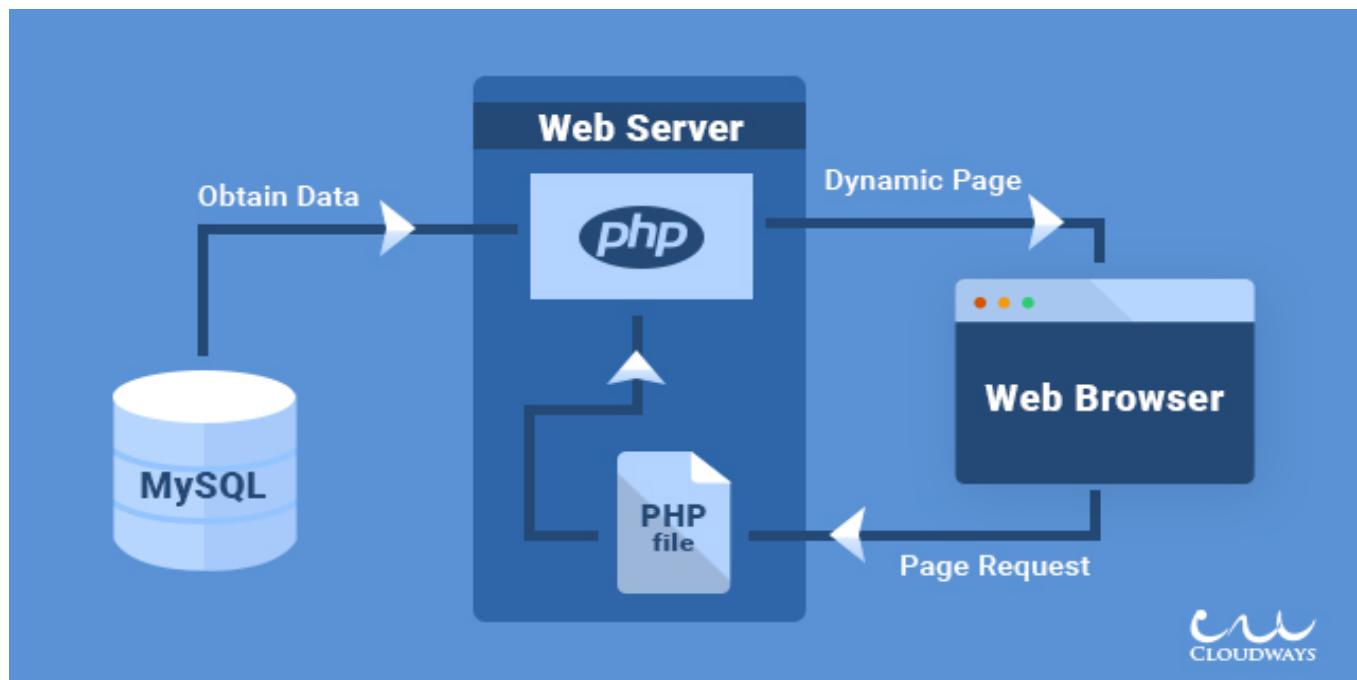


Figure 6.1: PHP-MySQL Connectivity

PROJECT SCREENSHOTS

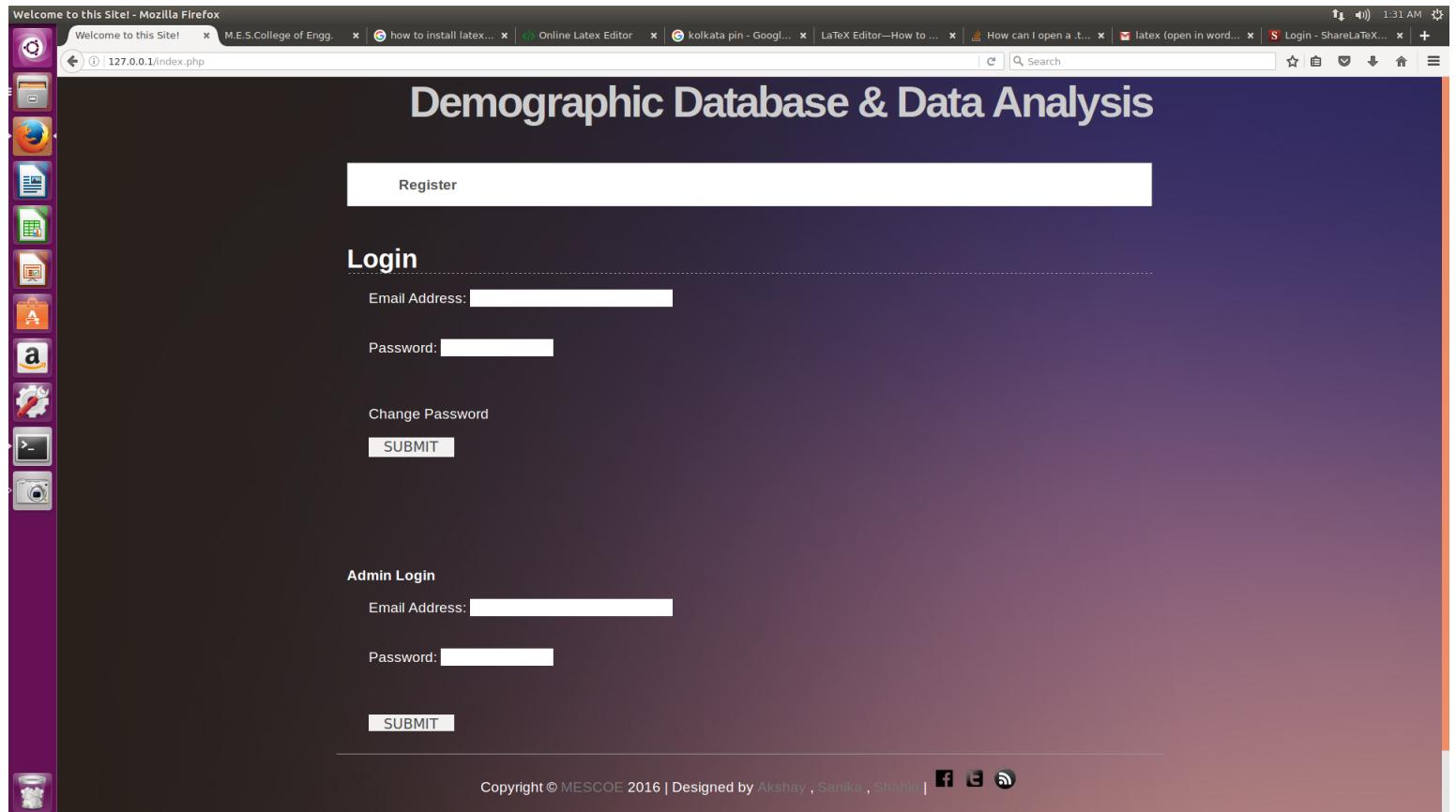


Figure 6.2: Main Page

Register - Mozilla Firefox History Bookmarks Tools Help

Register M.E.S College of Engg. +

127.0.0.1/register.php

Search

Demographic Database & Data Analysis

Login

Register

Personal Details

FIRST NAME: SANIKA

LAST NAME: SINALKAR

DATE OF BIRTH: 26 Oct 1996

EMAIL ID: sanikasinalkar96@gmail.com

PASSWORD: *****

CONFIRM PASSWORD: *****

MOBILE NUMBER: 9860276627

GENDER: Male Female

The screenshot shows a registration page for a demographic database. The page has a dark purple header with the title 'Demographic Database & Data Analysis'. Below the header, there's a 'Login' button and a 'Register' link. The main content area is titled 'Personal Details' and contains fields for personal information. The fields and their values are:

- FIRST NAME: SANIKA
- LAST NAME: SINALKAR
- DATE OF BIRTH: 26 Oct 1996
- EMAIL ID: sanikasinalkar96@gmail.com
- PASSWORD: *****
- CONFIRM PASSWORD: *****
- MOBILE NUMBER: 9860276627
- GENDER: Male Female

The browser window is titled 'Register - Mozilla Firefox' and shows two tabs: 'Register' and 'M.E.S College of Engg.'. The address bar indicates the URL is 127.0.0.1/register.php. The status bar at the bottom right shows the time as 1:39 AM.

Figure 6.3: Registration

Register File Edit View History Bookmarks Tools Help

Register M.E.S.College of Engg. +

127.0.0.1/register.php

Search

GENDER: Male Female

MARITAL STATUS: Single Married

ADDRESS: 301, ~~chhajed glory~~, Viman nagar

CITY: Pune

STATE: Maharashtra

PINCODE: 411014

NATIONALITY: Indian

Medical Records

BLOOD GROUP: B+

PHYSICALLY DISABLED: Yes No

MEDICAL INSURANCE No.: 4545555

Enter The Vehicle Records Below:

VEHICLE NUMBER: MH15678

Earning and Bank Details

QUALIFICATION: Graduation/Equivalent certified Graduation

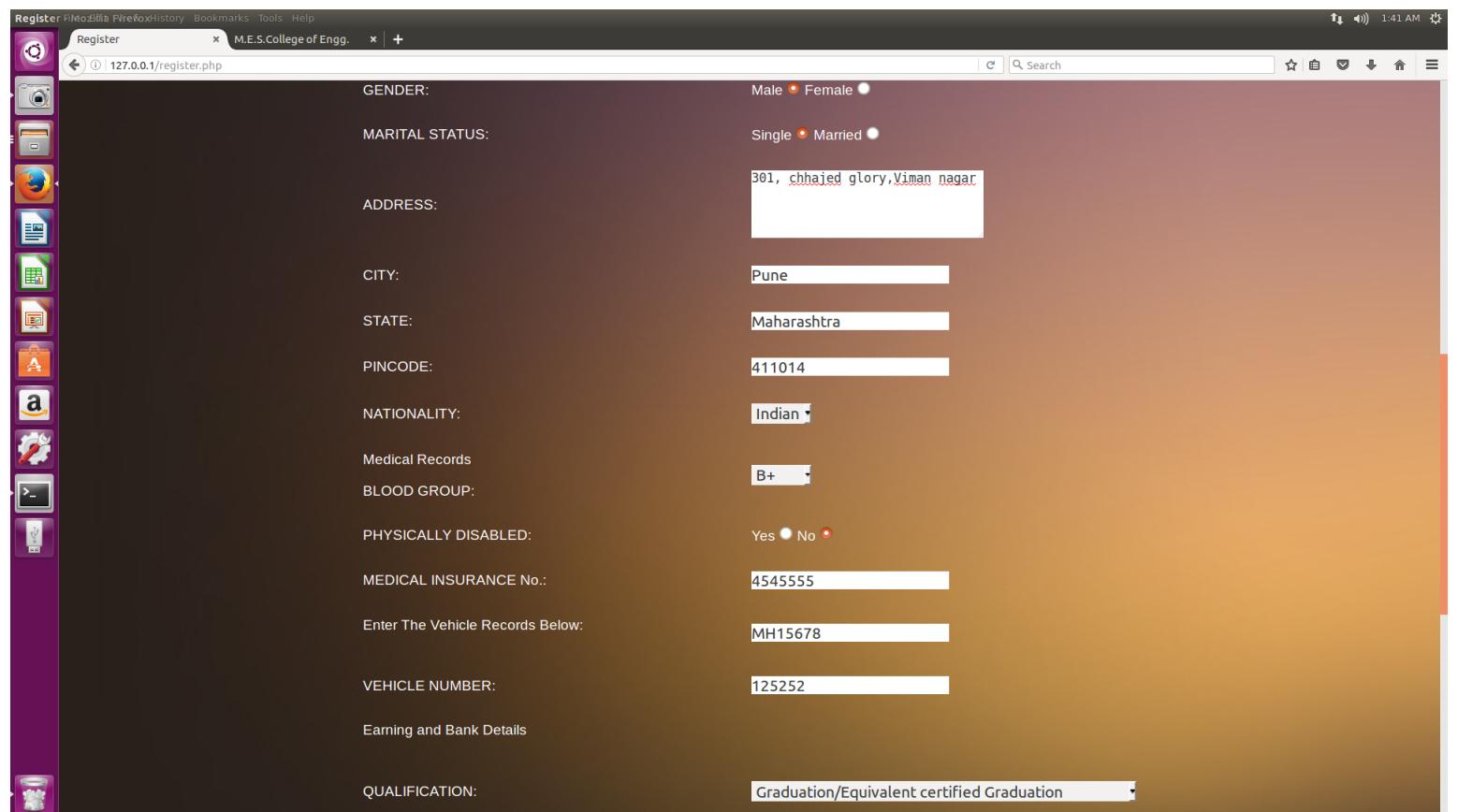


Figure 6.4: Registration

Register - Mozilla Firefox

Register M.E.S.College of Engg. 127.0.0.1/register.php 1:42 AM

Enter The Vehicle Records Below:

VEHICLE NUMBER: MH15678

Earning and Bank Details

QUALIFICATION: Graduation/Equivalent certified Graduation

OCCUPATION: Service Business Other None

ANNUAL INCOME: 600000

BANK NAME: State Bank of India

ACCOUNT NUMBER: 5000000

Criminal Records (if any, type - if none) CRIMINAL HISTORY: Yes No

CRIME DETAILS: NONE

Submit Reset

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This screenshot shows a Mozilla Firefox browser window titled 'Register'. The address bar displays '127.0.0.1/register.php'. The main content area contains a form for entering vehicle records. It includes fields for 'VEHICLE NUMBER' (MH15678), 'QUALIFICATION' (Graduation/Equivalent certified Graduation), 'OCCUPATION' (Business, selected), 'ANNUAL INCOME' (600000), 'BANK NAME' (State Bank of India), 'ACCOUNT NUMBER' (5000000), and 'CRIMINAL HISTORY' (No, selected). There is also a 'CRIME DETAILS' field containing the text 'NONE'. At the bottom of the form are 'Submit' and 'Reset' buttons, along with copyright information for 'MESCOE 2016' and links to social media platforms.

Figure 6.5: Registration

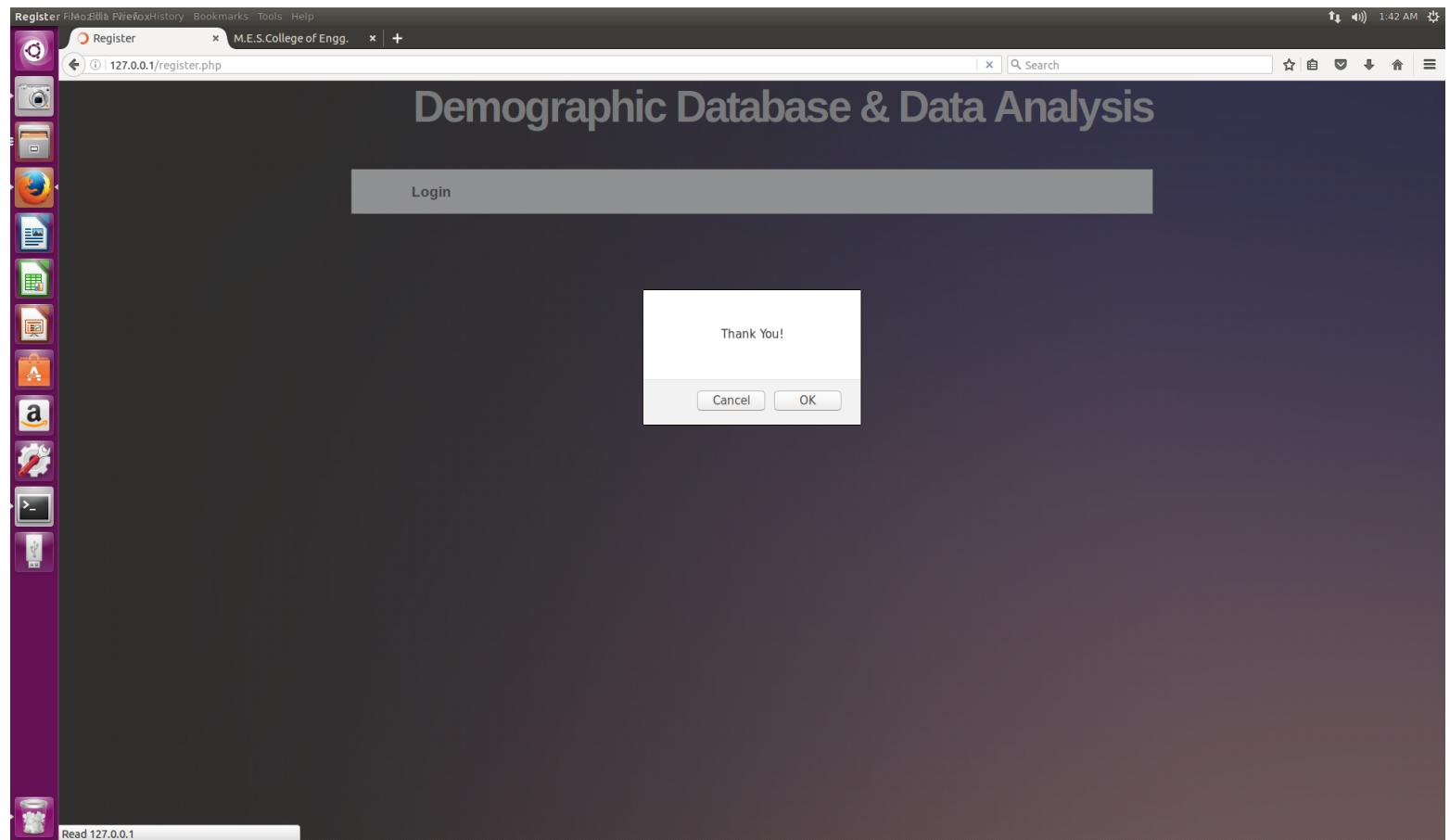


Figure 6.6: Successfully Registered

The screenshot shows a web browser window titled "View your Information" with the URL "127.0.0.1/user_information.php". The page header reads "Demographic Database & Data Analysis". A navigation bar at the top includes links for "Edit Profile", "Delete Profile", "Statistical Analysis", and "Logout". The main content area is titled "Your Information" and displays the following user details:

You have been assigned the UID: **SINA19960012**

Name: SANIKA SINALKAR
Birth Date: 26 October 1996
Email address: sanikasinalkar96@gmail.com
Mobile Number: 9860276627
Gender: Male
Marital Status: Single
Address: 301, chhajed glory,Viman nagar
City: Pune
State: Maharashtra
Pin Code: 411014
Nationality: Indian
Blood Group: B+
Physical Disability: No
Insurance Number: 4545555
Driving Licence Number: MH15678
Vehicle Plate Number: 125252
Qualifications: Graduation/Equivalent certified Graduation
Occupations: Business
Annual Income: 600000
Bank Name: State Bank of India
Account Number: 5000000
Criminal Record: No
Crime Details: NONE

Figure 6.7:User Information

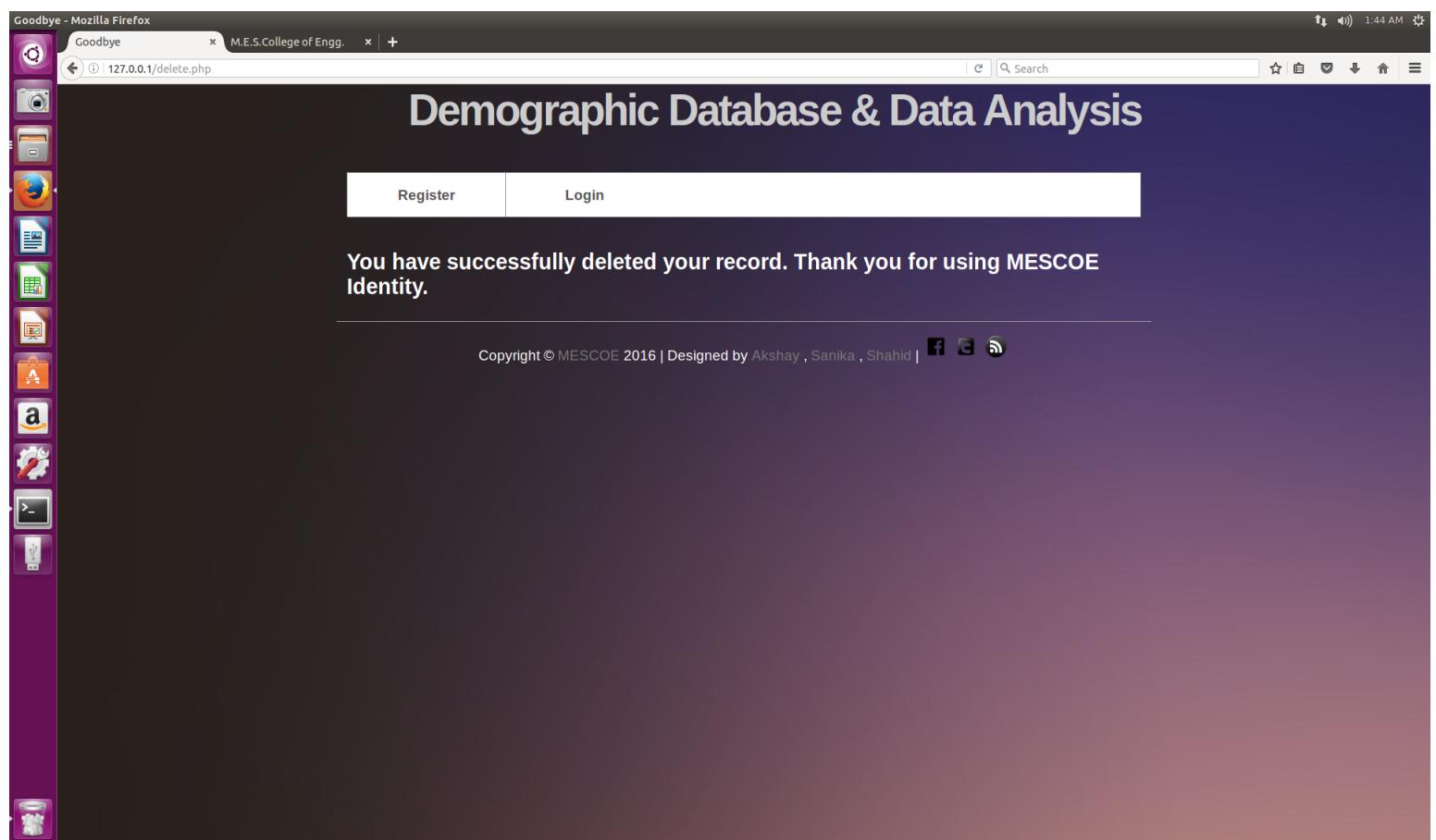


Figure 6.8: Deletion Of Profile

A screenshot of a web browser window titled "Demographic Database & Data Analysis". The browser's address bar shows the URL "127.0.0.1/chart.php". The main content area displays a list of chart categories for study, including Sex Ratio, Crime Statistics, Poverty Line, Educational Qualification Demo, and Population Distribution. At the top of the content area are two buttons: "View Information" and "Logout". Below the list of charts is a copyright notice: "Copyright © MESCOE 2016 | Designed by Akshay , Sanika , Shahie | [Facebook](#) [Twitter](#) [RSS](#)". The browser interface includes a toolbar on the left with various icons and a menu bar at the top.

Figure 6.9: Statistical Analysis Of Data

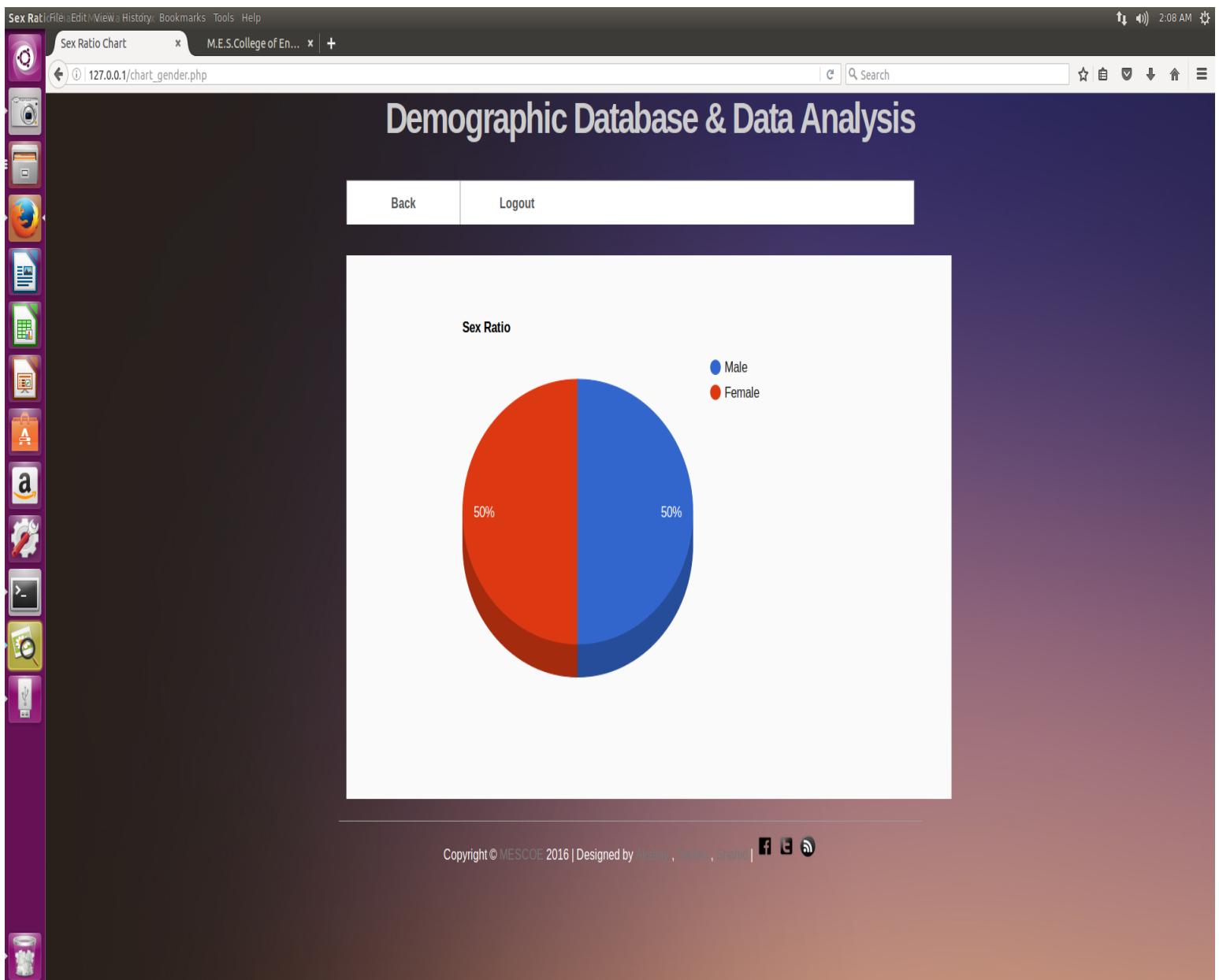


Figure 6.10: Sex Ratio

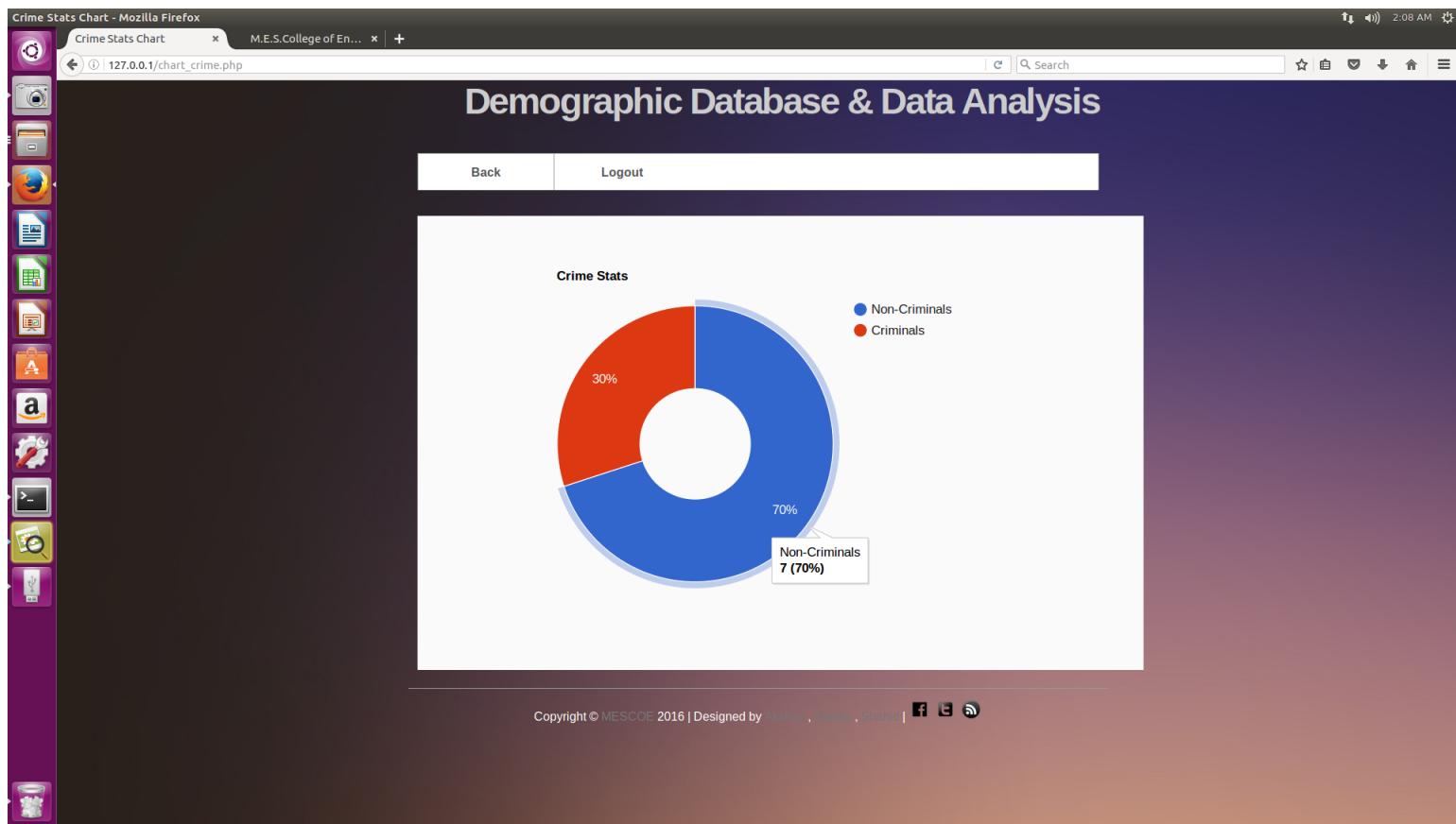


Figure 6.11: Crime Details

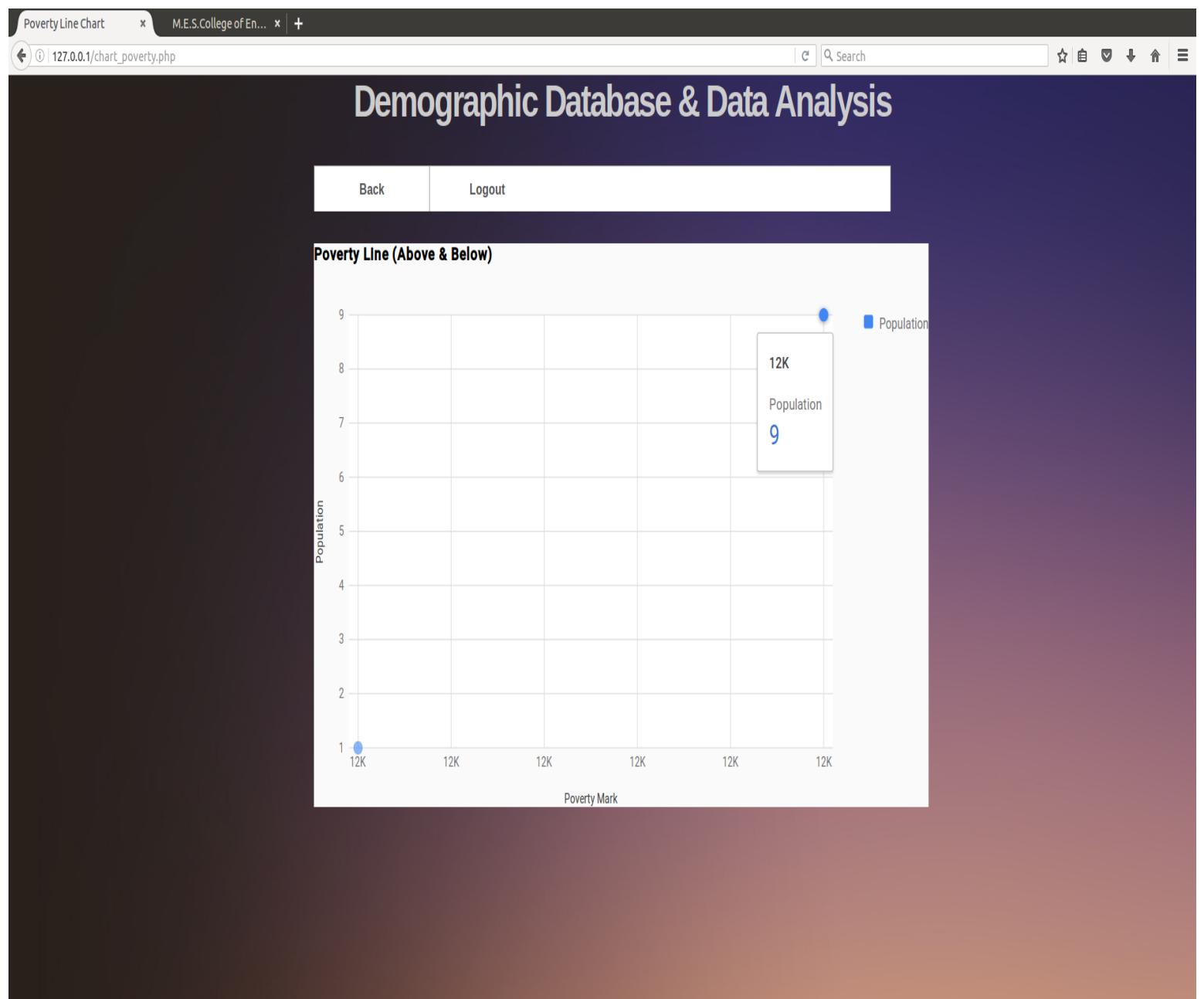


Figure 6.12: Poverty Analysis

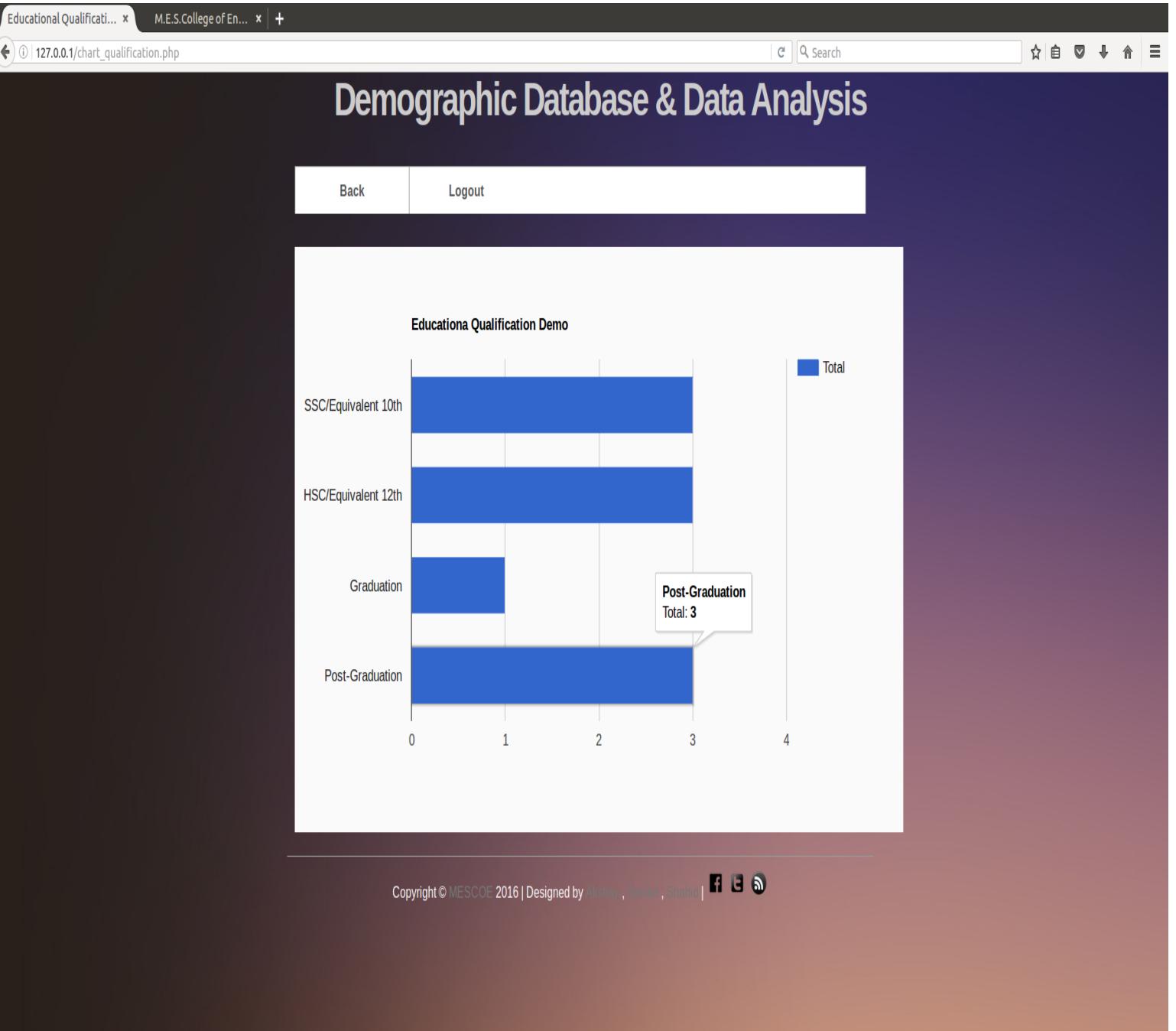


Figure 6.13: Educational Analysis

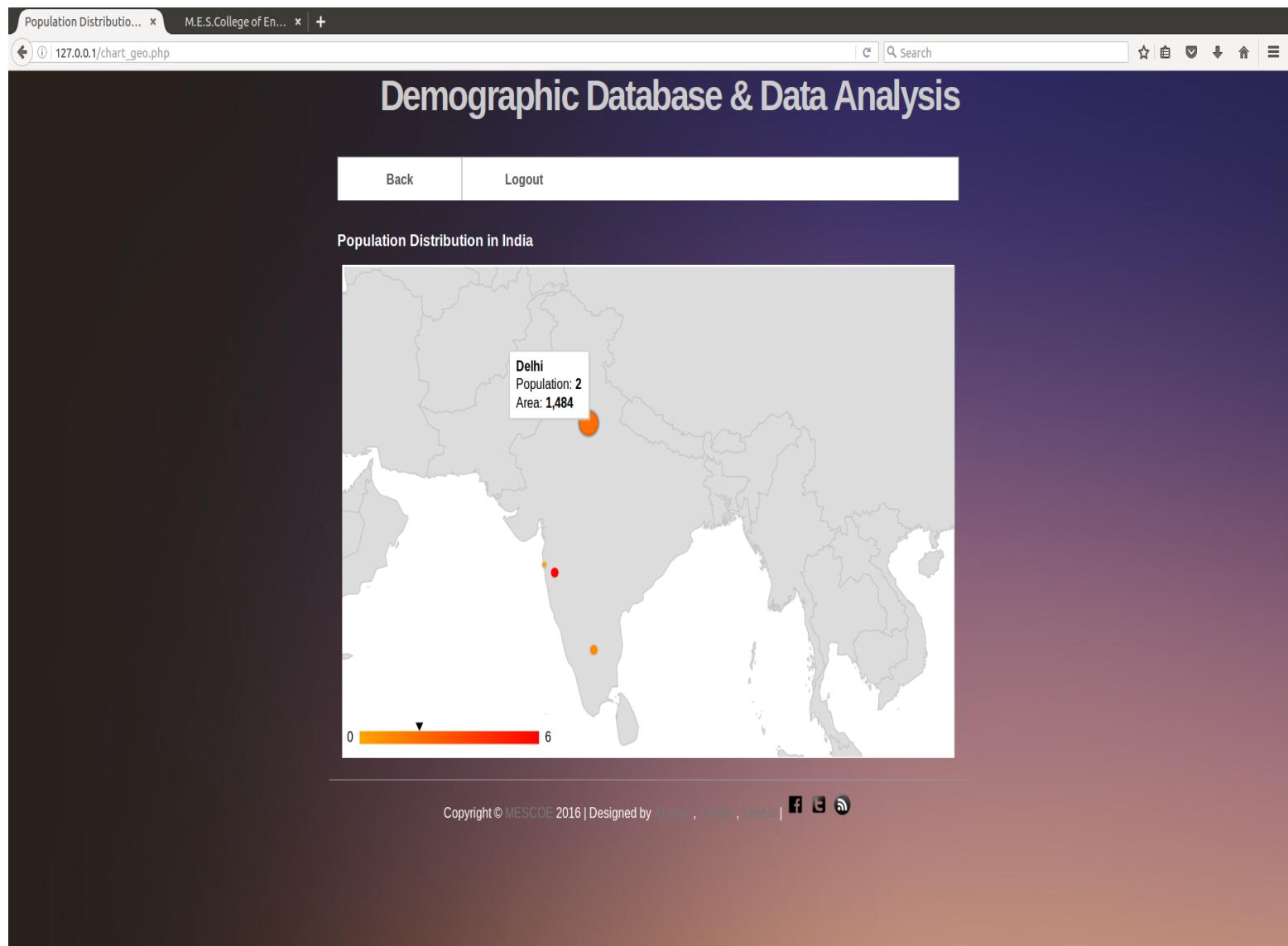


Figure 6.14: Population Analysis

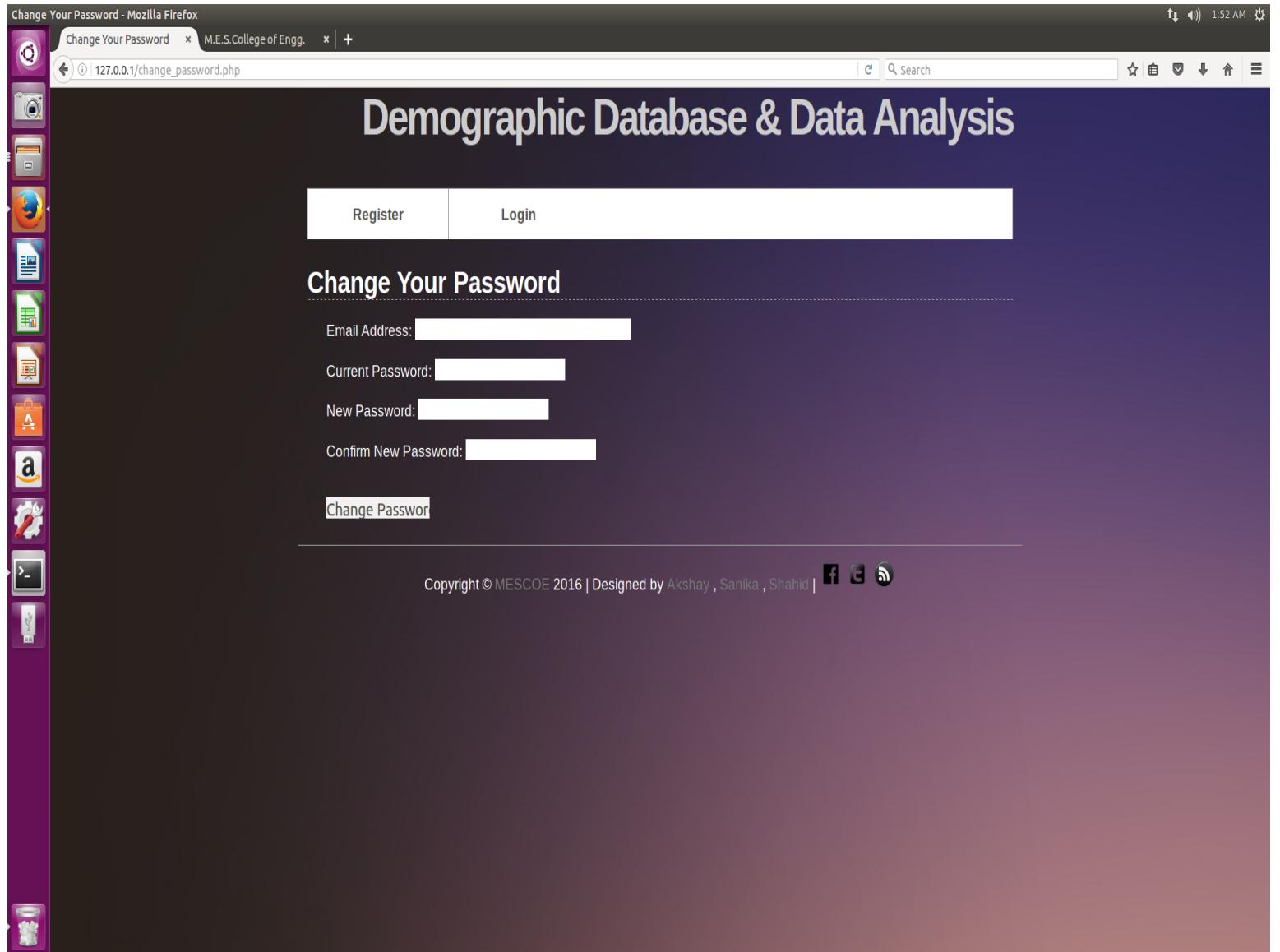


Figure 6.15: Updation Of Password

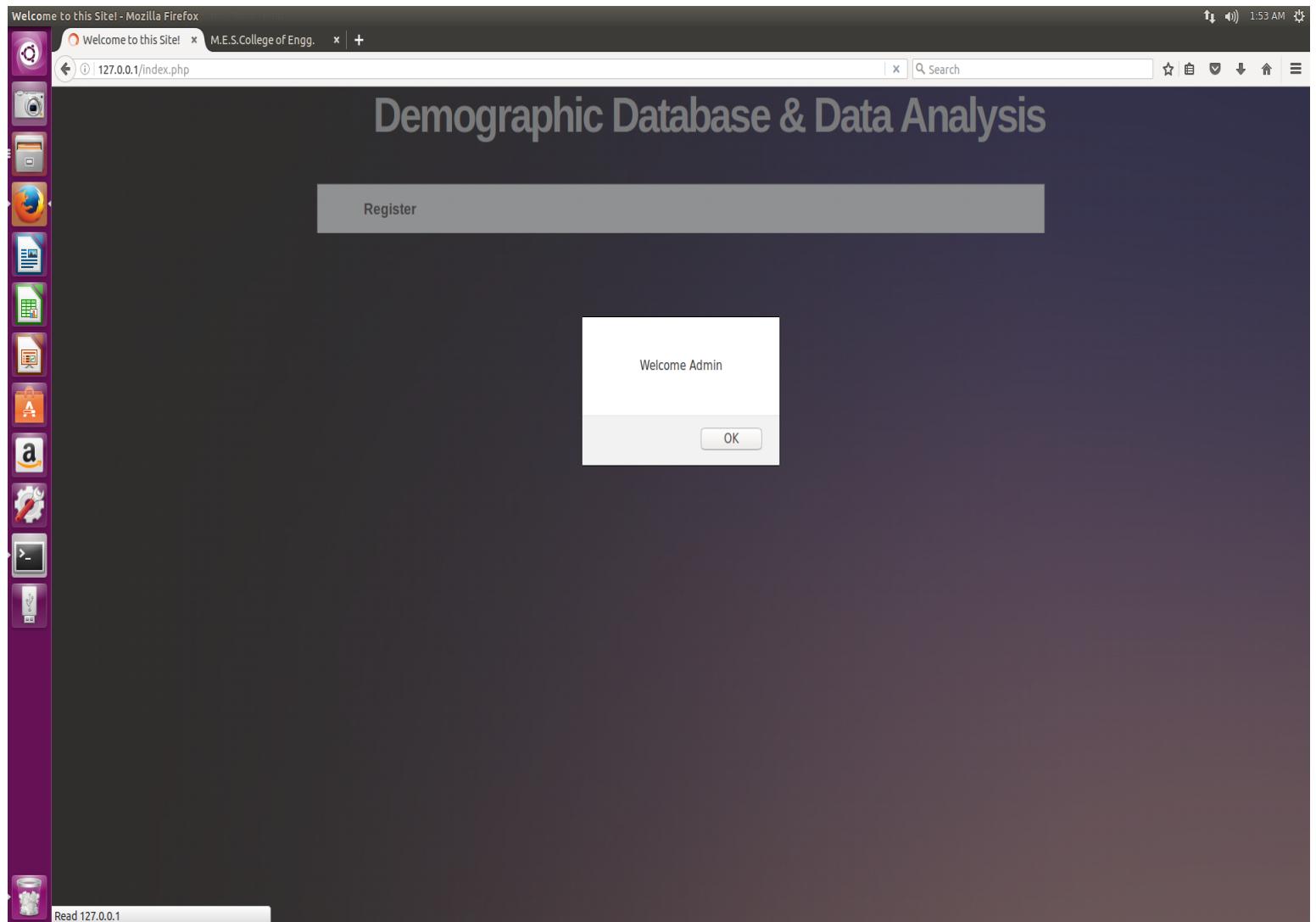


Figure 6.16: Admin Login

The screenshot shows a web browser window with the following details:

- Address Bar:** 127.0.0.1/view_users.php
- Title Bar:** View the Current Users | M.E.S.College of En... | +
- Header:** Demographic Database & Data Analysis
- Navigation:** Register | Logout
- Section Title:** Registered Users
- Text:** There are currently 10 registered users.
- Data Table:** A table listing 10 registered users with columns: uid, fname, lname, email, and pass.
- Footer:** Copyright © MESCOE 2016 | Designed by Akshay, Sanket, Shohid | [Facebook](#) [Twitter](#) [RSS](#)
- Bottom Left:** https://www.facebook.com

uid	fname	lname	email	pass
0002	SAURABH	SINALKAR	saurabhsinalkar@gmail.com	saurabh25
0003	DIVYA	RAUT	divyaraut11@gmail.com	divya
0004	SIMRANJEET	KAUR	simi.sk88@gmail.com	simi96
0005	yash	daudani	yashasdflghjk@gmail.com	yash1234567890
0006	Rafique	Mulla	rafiquemulla123@gmail.com	rafique123
0007	PRANAV	THANEDAR	pranavthandedar@gmail.com	pranav96
0008	Sanket	Ambre	ambresanket@gmail.com	sanket123
0009	Tina	Sajwan	tinasajwan@gmail.com	tina123
0010	Anagha	SHELKE	anaghashelke@gmail.com	anagha
0011	Prachiti	Shinde	prachitishinde@gmail.com	prachiti96

Figure 6.17: List Of Users

CONCLUSION

We have successfully created a Unique Identification Project . It uniquely identifies personnel and holds their information with regards to their biodata, medical history, vehicle records, crime records, banking information, and annual income.

This project emphasizes on all the basic necessities of a database system like creation of a user, deletion, insertion and modification of data fields, also it helps the customer to find and monitor the status of ethical values in the society, growth in wealth, poverty line issues, health issues, increase/decrease in crimes and family issues and such more issues.

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