# Testing

The process finding out the system is performing well or not is known as testing. In computer software, testing is used to find the key points in overall process which determines whether the function are working or not. Before finding the functionality performance of the system, developer will look into system to know the objectives are being met or not. And this all process is done through testing. When the design is complete and after that coding is performed and completed coding then testing will started in where the overall performance of the system is looked.

# Importance of testing

* Software testing is used find the customer satisfaction and reliability in the application.
* Testing also ensure the quality of the product. Quality product supplied to client supports in achievement their self-confidence.
* Testing is essential for an actual performance of software application.
* Its main importance is that software should not produce any failures result because it can be very costly future.

# Types of testing

**Functional testing types include:**

* Unit testing
* Integration testing
* System testing
* Sanity testing
* Smoke testing
* Interface testing
* Regression testing
* Beta/Acceptance testing

**Non-functional testing types include:**

* Performance Testing
* Load testing
* Stress testing
* Volume testing
* Security testing
* Compatibility testing
* Install testing
* Recovery testing
* Reliability testing
* Usability testing
* Compliance testing
* Localization testing

Among these testing I have chosen only following testing

**Black box testing:**

In this design, the internal system is not consider to test but the tests are based on the requirements and functionality of the system.

**For User Black Box Texting:**

**Test Name: Registering Donor Form**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 1 | To check the inserted value is working | First Name: Sabin  Last Name: Gautam  Blood Group:  B+  Address: Kalanki, Kathmandu  Age: 20  Contact Number: 9860560109  Gender: Male  Email Id:  Sabingautam05@gmail.com | The data should be inserted into donor table in database and redirect to the become donor page. | Successfully new donor information is inserted. | Pass |

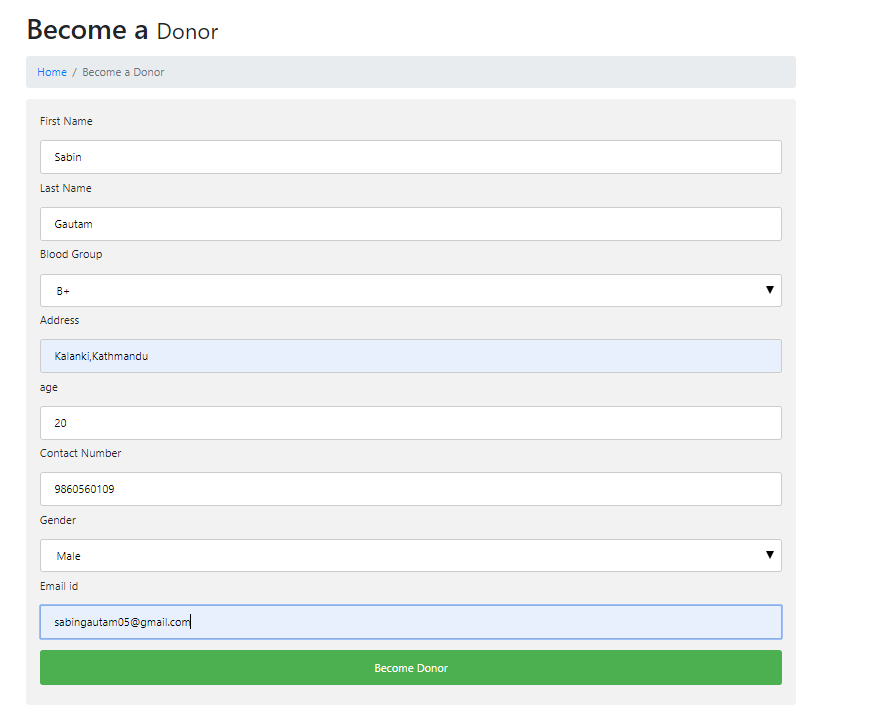
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Figure 1: Inserting donor Information

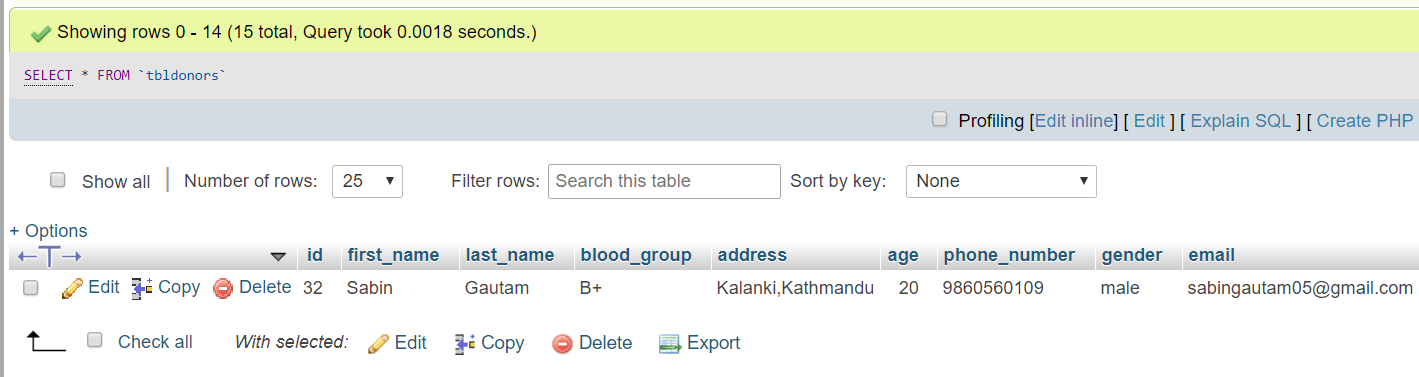
****

Figure 2: database after inserting donor information

**Test Name: Searching Found**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 2 | To check search is working | Blood Group: B+  Location: Kalanki, Kathmandu | Blood group and location  Are filled in text box and search the donor information | Successfully found the result. | Pass |



Figure 3: Searching for result

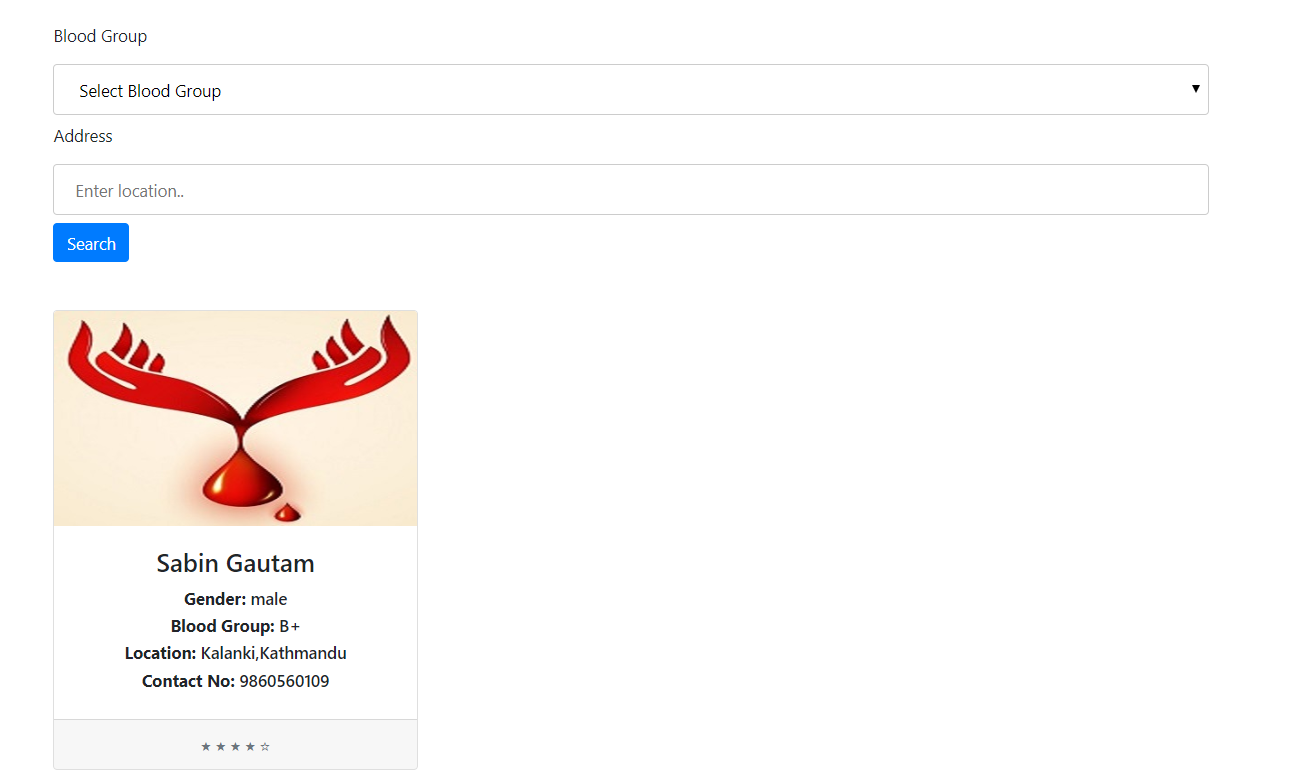


Figure 4: Result found

**Test Name: Searching not found**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 3 | To check Searching result is not found | Blood Group: A+  Location: Kalanki, Kathmandu | After entering blood group and location text box and result is not found | Successfully result is not found | Pass |

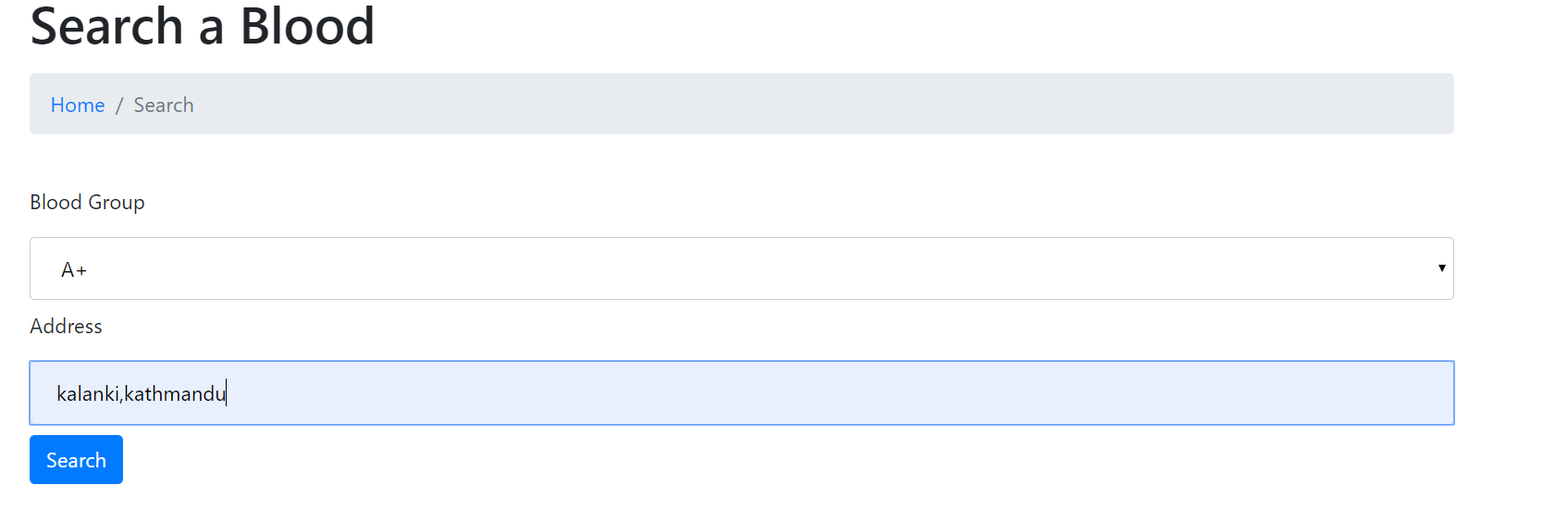


Figure 5: Entering input searching for result

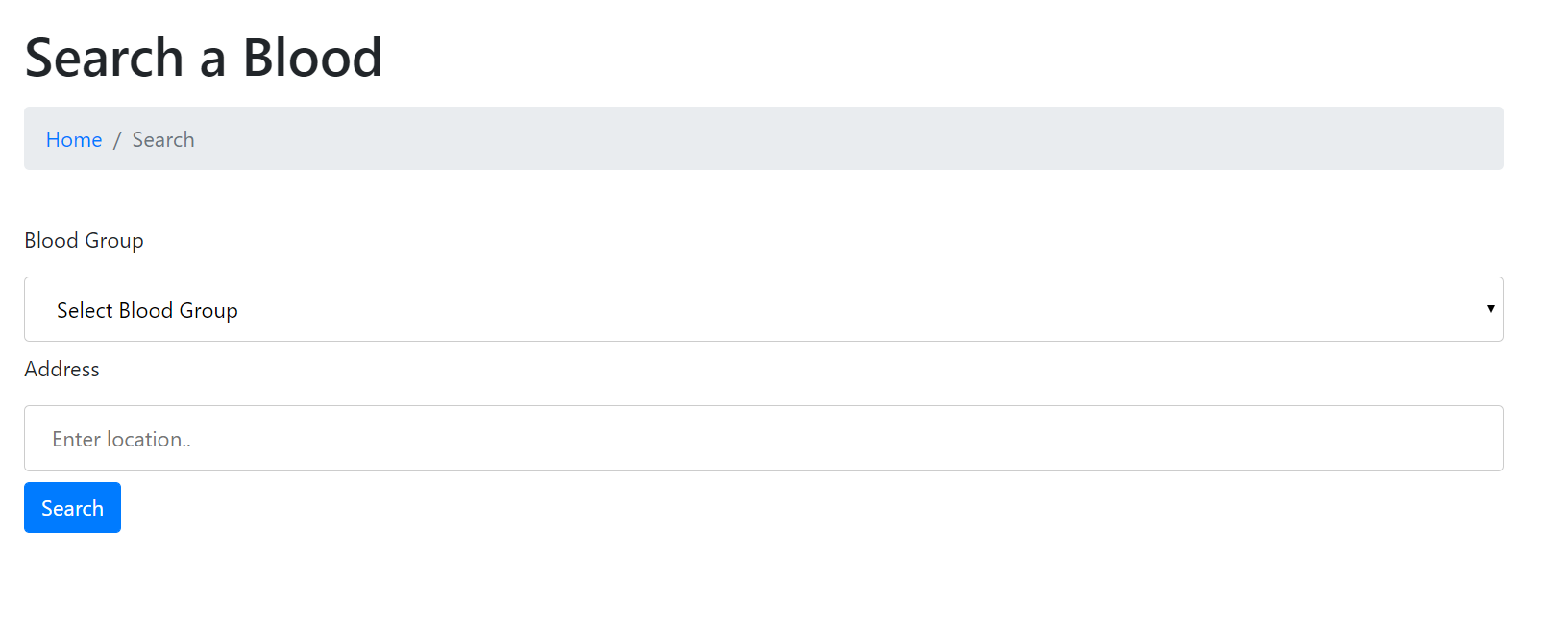


Figure 6: Result not found

**Test Name: Sending Message**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 4 | Sending message for information | Full Name: Sabin Gautam  Email: [sabingautam05@gmail.com](mailto:sabingautam05@gmail.com)  Phone Number: 9865320123  Message: Is there O neagtive is available or not. | Filling all text box and inserting data in database and redirecting to contact page | Successfully inserted the input and successfully direct to contact page | Pass |

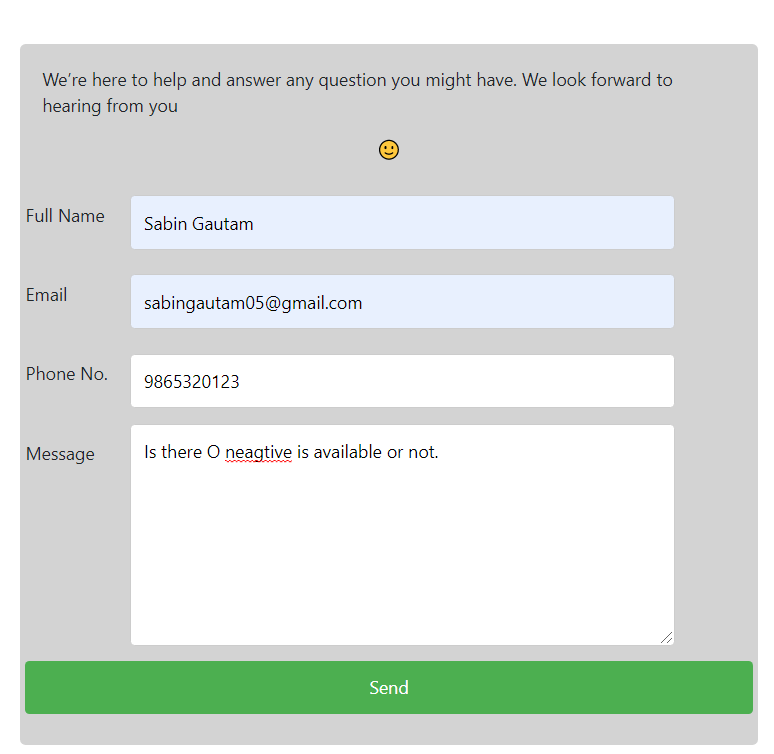
****

Figure 7: Entering Input for sending Message

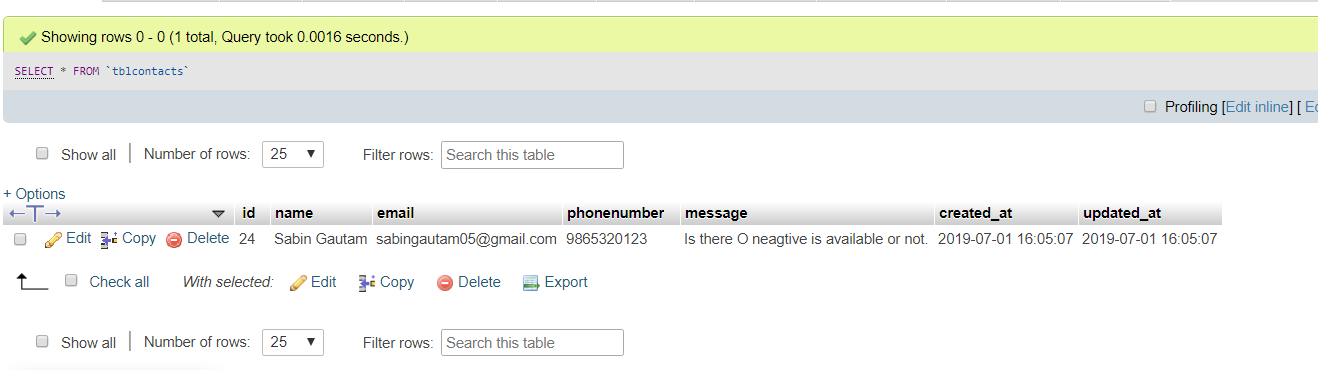
****

Figure 8: database of send message

**Black Box testing For Admin**

**Test Name: Deleting Register Donor Information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 5 | Delete donor information | First Name: Sabin  Last Name: Gautam  Blood Group:  B+  Address: Kalanki, Kathmandu  Age: 20  Contact Number: 9860560109  Gender: Male  Email Id:  Sabingautam05@gmail.com | Donor information should deleted from database after clicking on delete button and directed to donor information page | Successfully deleted clicked data | Pass |

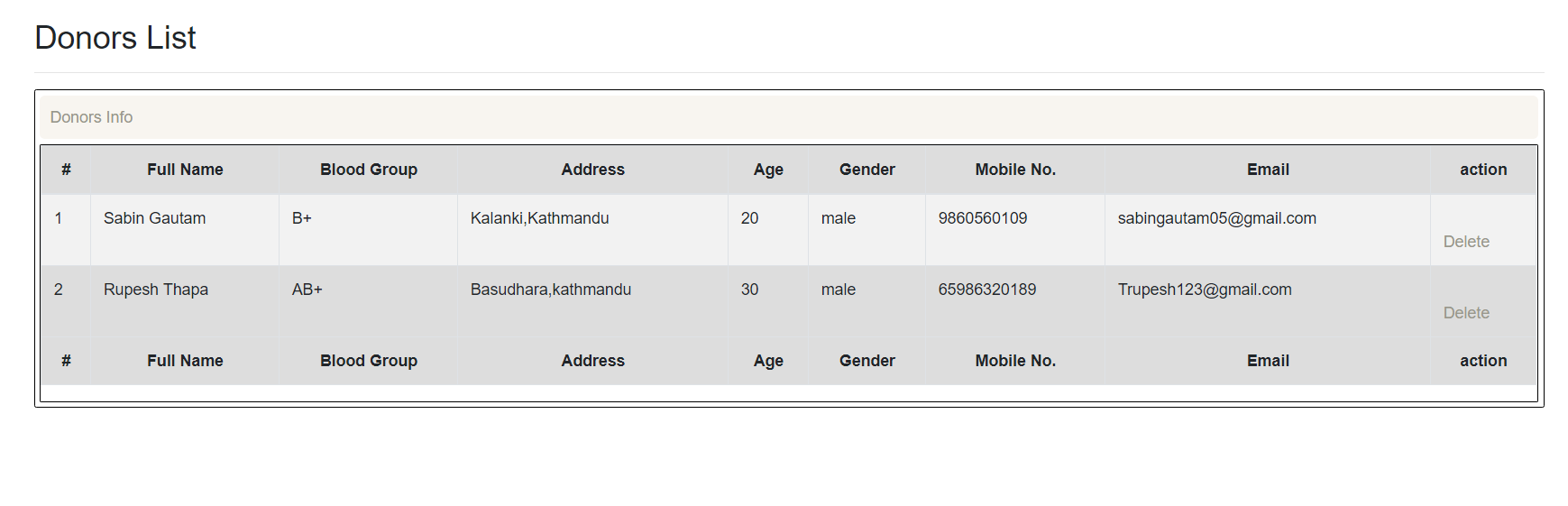


Figure 9: Donor information before delete

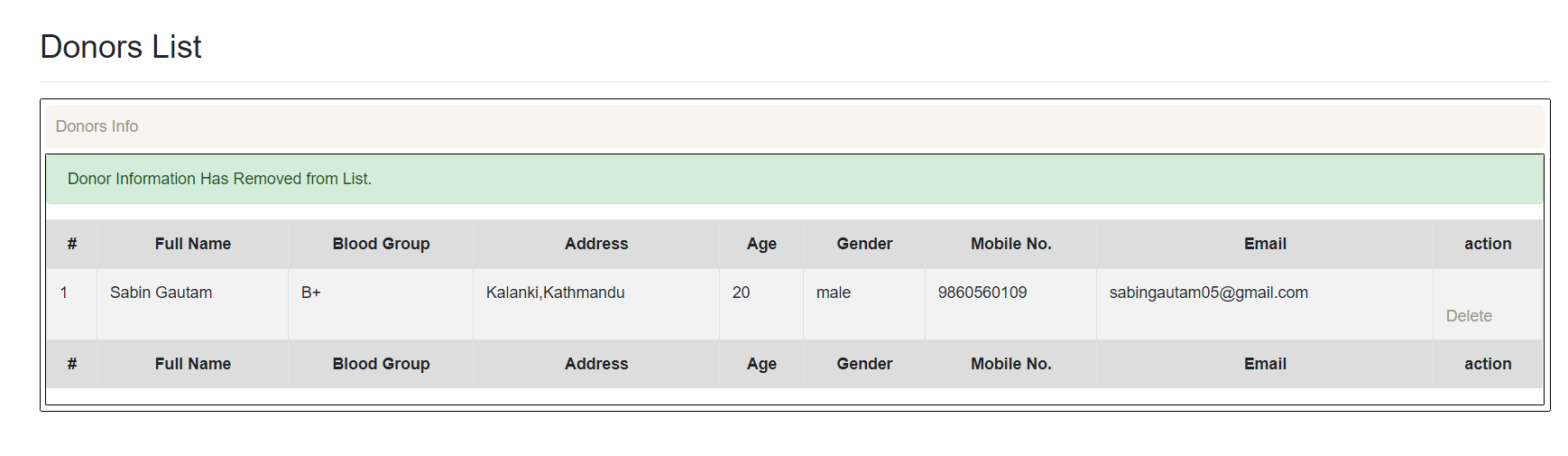


Figure 10: Donor information after delete

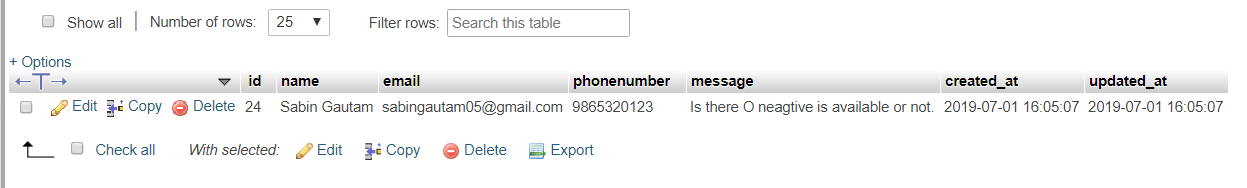


Figure 11: database record after delete

**Test Name: Deleting Record Blood Group**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 6 | Deleting blood group | Blood Group: A+ | Data should deleted from database after clicking on delete button | Successfully deleted blood group from recorded | Pass |

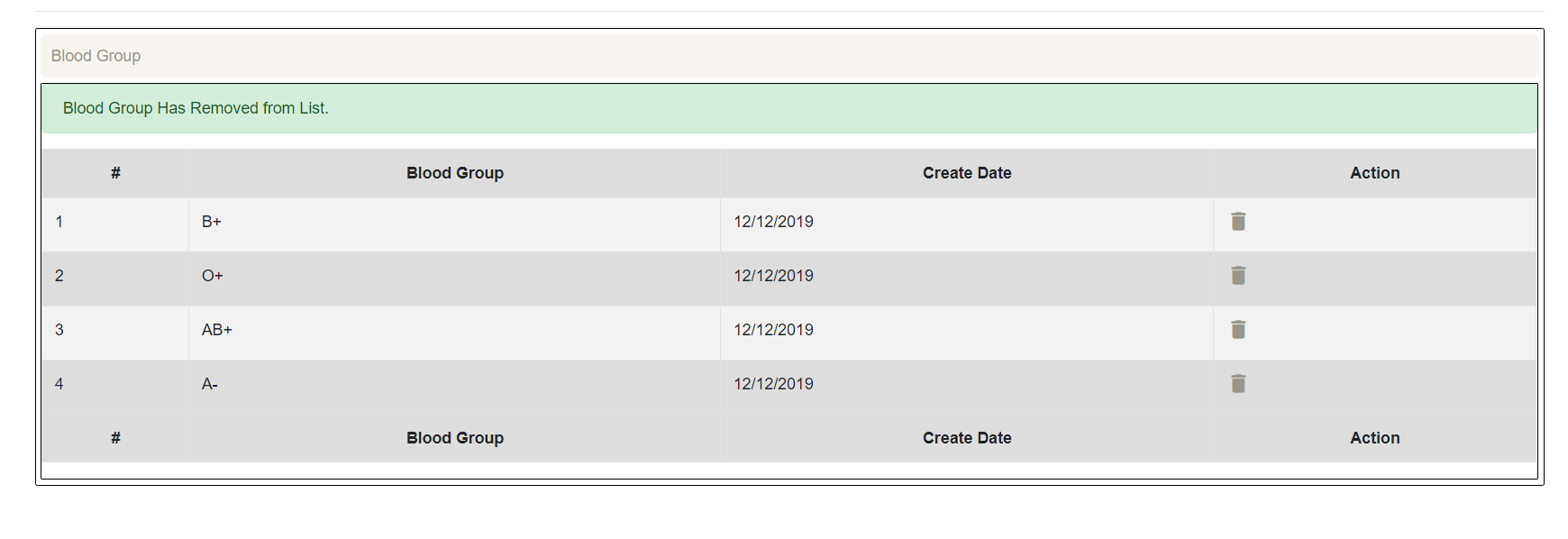


Figure 12: Deleting blood group Record

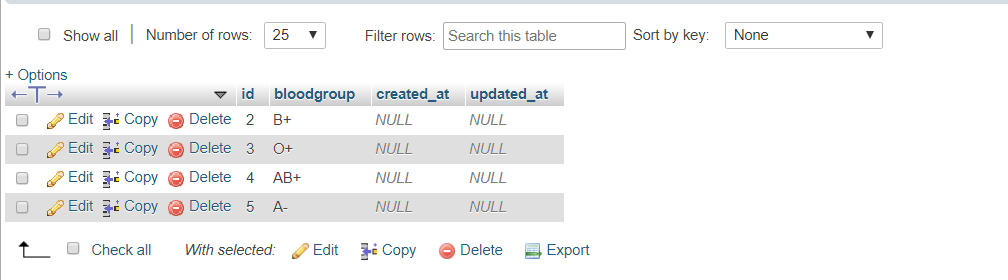
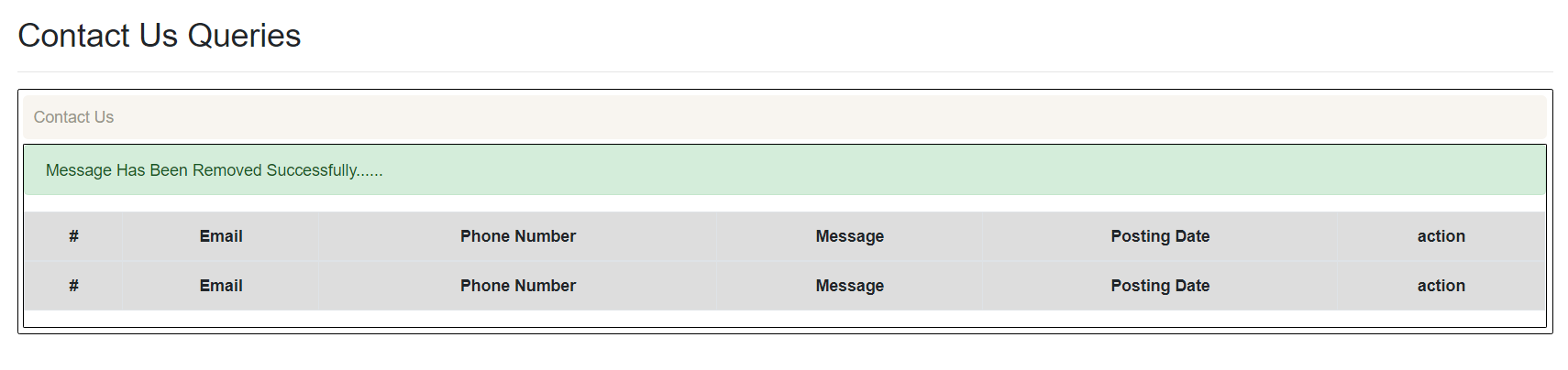


Figure 13: database of record blood group after record

**Test Name: Deleting Contact us Queries**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 7 | Deleting send message from user | Full Name: Sabin Gautam  Email: [sabingautam05@gmail.com](mailto:sabingautam05@gmail.com)  Phone Number: 9865320123  Message: is there O negative is available or not. | Send queries should deleted from record system | Successfully delete data | Pass |

****Figure 14: deleting send message

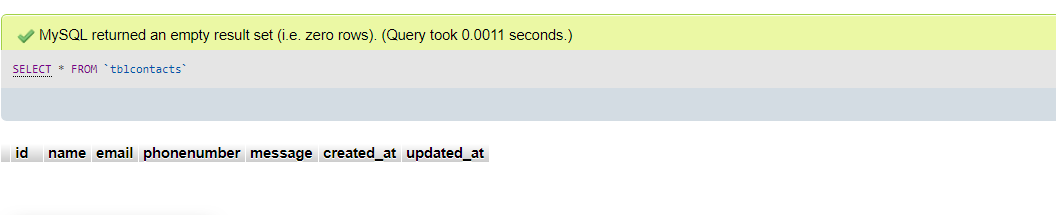
****

Figure 15: database of deleted message

**Test Name: Updating Contact Information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 8 | Changing the contact us information | Address : Syuchatar, Kathmandu  Email: [DBMS@gmail.com](mailto:DBMS@gmail.com)  Phone: 014034273 | The contact information should be updated and redirect to database | Successfully updated data | Pass |

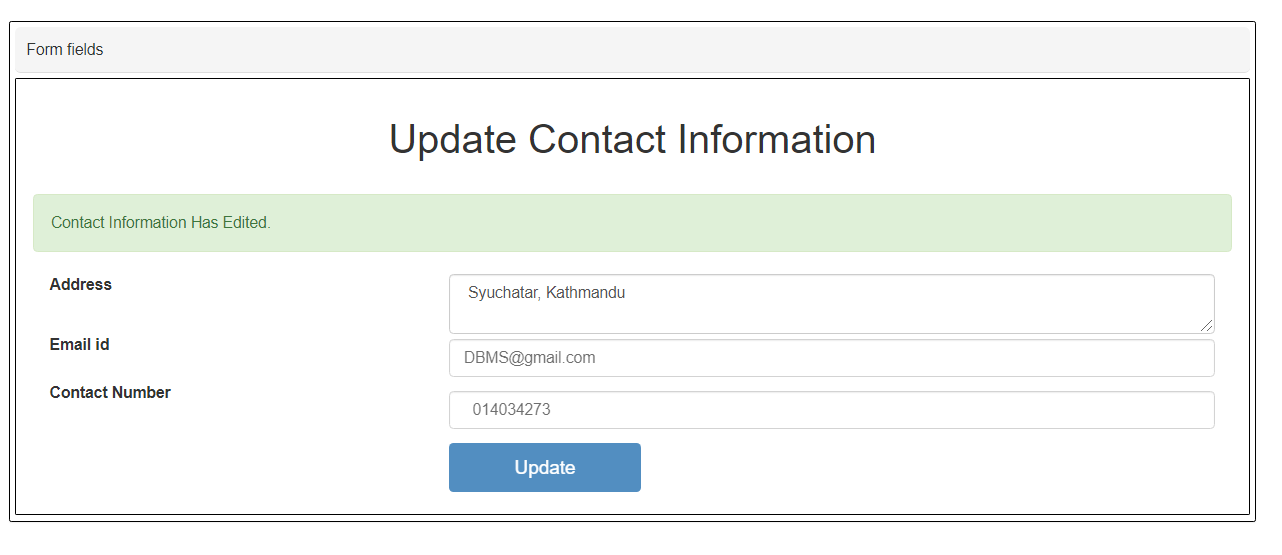
****

Figure 16: entering input to update contact info

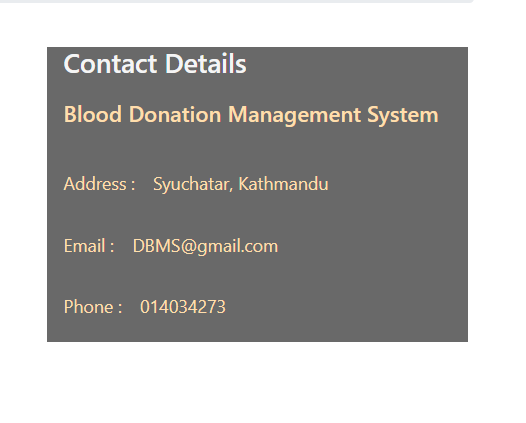
****

Figure 17: displaying update information

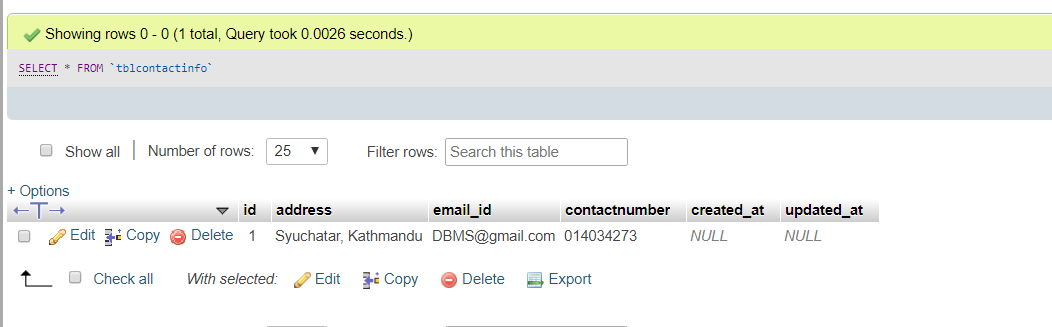
****

Figure 18: database contact information for user

**Test Name: Updating About Us Page Information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 9 | Changing the pages information | Page: About Us  Contents:  This information page for about page. | Pages information should be updated from database page table and redirect to manage page section | Successfully updated the page information and redirect to manage page section. | Pass |

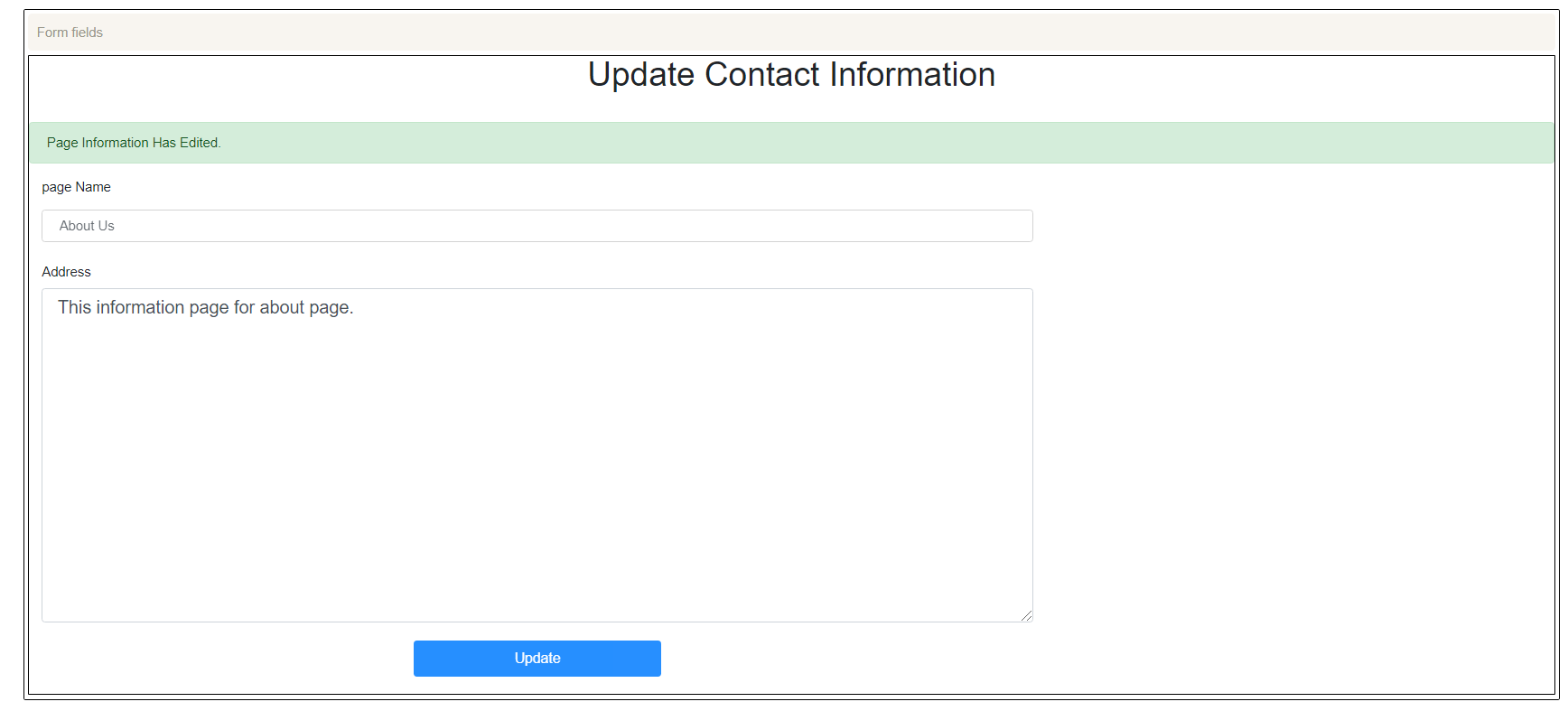


Figure 19: Updating about us page information



Figure 20: Displaying information after update

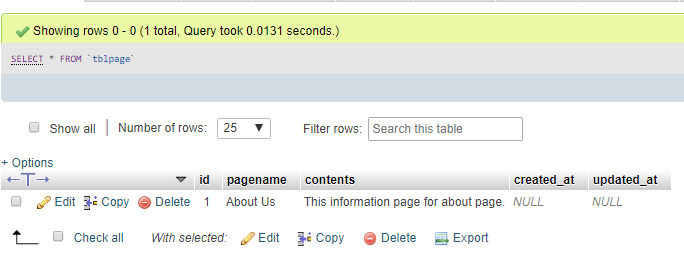


Figure 21: database of Updated information in page

**Test Name: Changing Password for Admin**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No. | Test Scenarios | Test Input Data | Expected Result | Actual Result | Results  (Pass/Fail) |
| 10 | Changing password for admin | Password: Admin@12345  Conform Password: Admin@12345 | Admin login page password should be changed and redirect to login page | Successfully password has been change and redirect to login page with password changed message. | Pass |

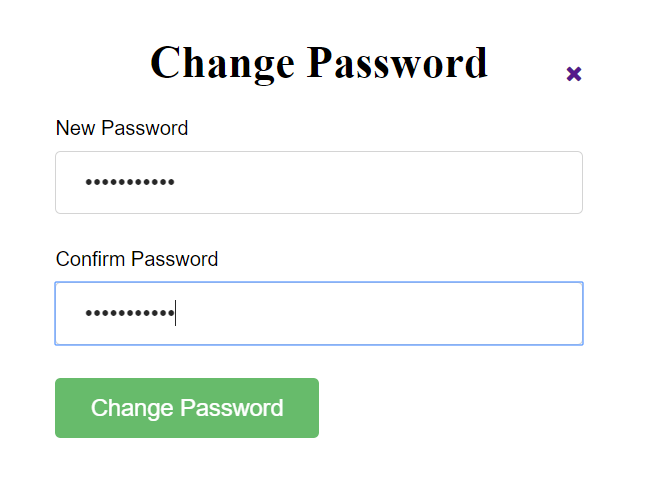


Figure 22: Layout for changing password

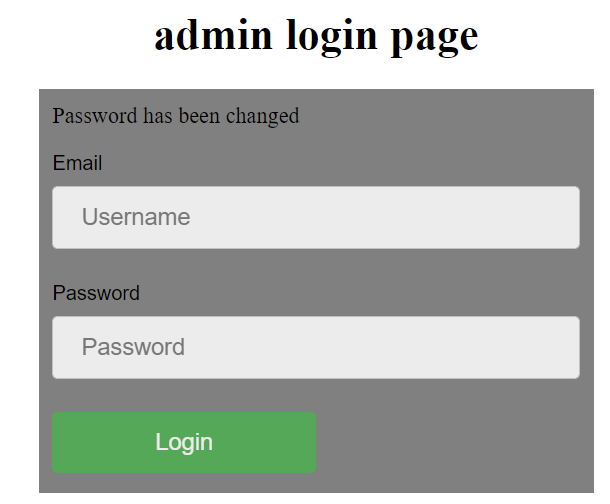


Figure 23: Redirect to login after password change

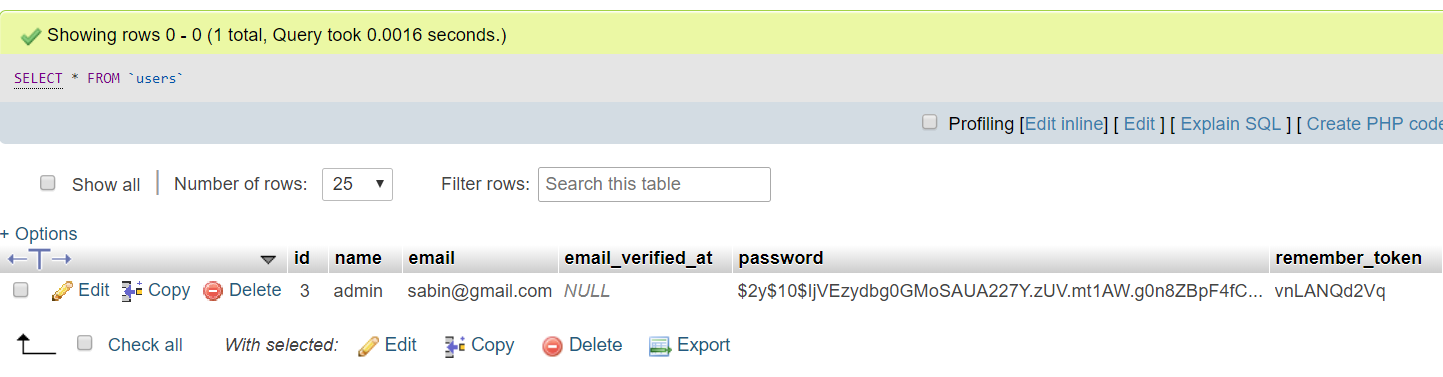


Figure 24: database after password change

## Unit Testing:

UNIT TESTING is a process of software testing where single units/ components of a software are tested. A unit is the smallest testable part of any software. It usually has one or a few inputs and usually a single output.

**Test Name: Admin Login**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 1 | Admin Login | Email: [sabin@gmail.com](mailto:sabin@gmail.com)  Password:Admin@12345 | After clicking on login the page should be redirect to dashboard | Successfully into dashboard | Pass |

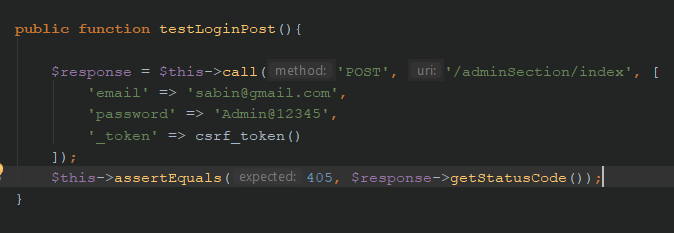


Figure 25: Testing login for admin

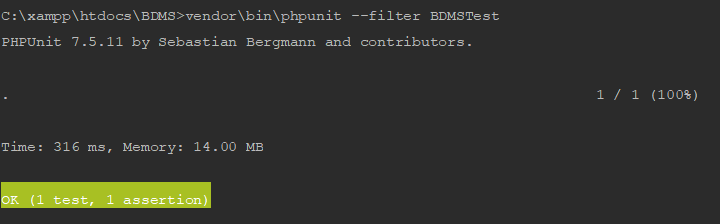


Figure 26: Result of admin login test case

**Test Name: Inserting Donor information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 2 | Register donor details | First Name: Sabin  Last Name: Gautam  Blood Group:  B+  Address: Kalanki, Kathmandu  Age: 20  Contact Number: 9860560109  Gender: Male  Email Id:  Sabingautam05@gmail.com | The should be insert into database and redirect to become donor page | Successfully inserted data and successfully redirect to become donor page with message | Pass |

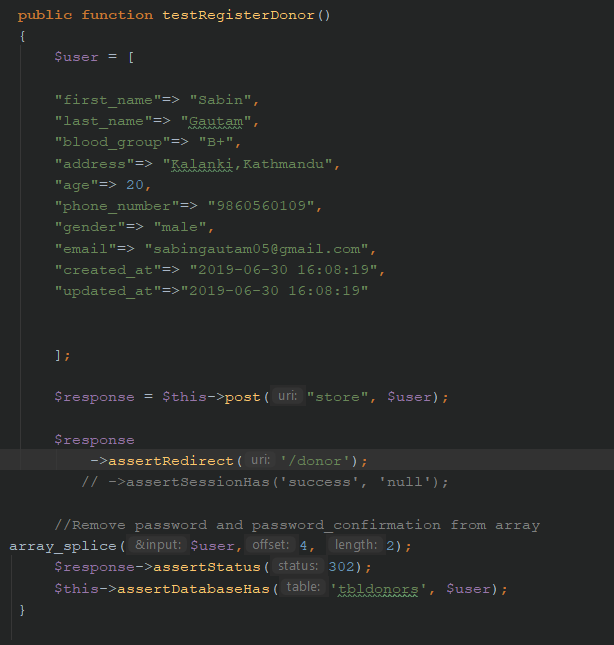


Figure 27: Registering donor info

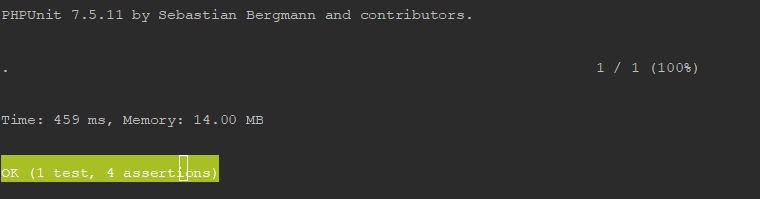


Figure 28: result of register donor after testing

**Test Name: deleting blood group**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 3 | Blood group delete | Blood group : B+ | Blood group recorded should be deleted | Successfully deleted recorded blood group | Pass |

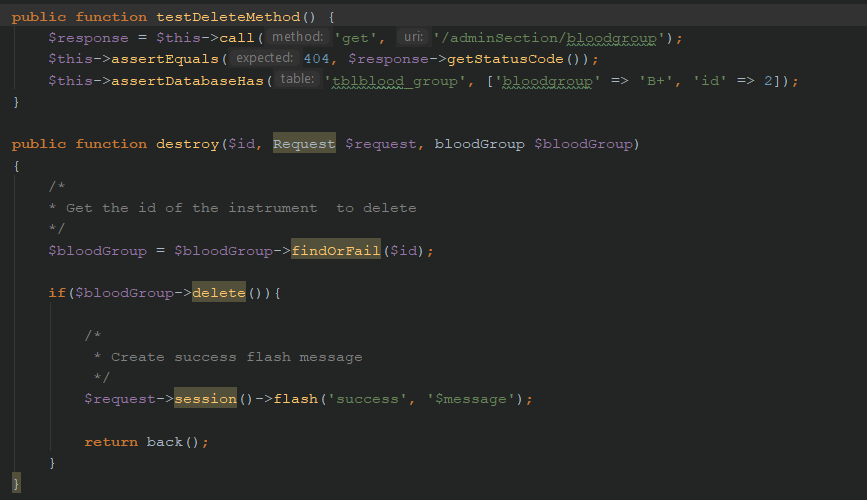


Figure 29: unit testing for deleting blood group record

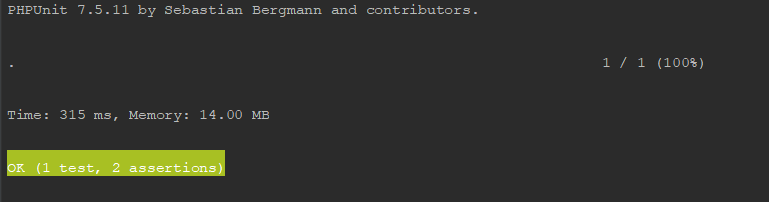


Figure 30: result after deleting blood group record in unit testing

**Test Name: deleting donor info**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 4 | Donor information deleting | First Name: Sabin  Last Name: Gautam  Blood Group:  B+  Address: Kalanki, Kathmandu  Age: 20  Contact Number: 9860560109  Gender: Male  Email Id:  Sabingautam05@gmail.com | Donor information should be deleted from database | Successfully deleted data and redirect to donor list page | Pass |
|  |  |  |  |  |  |

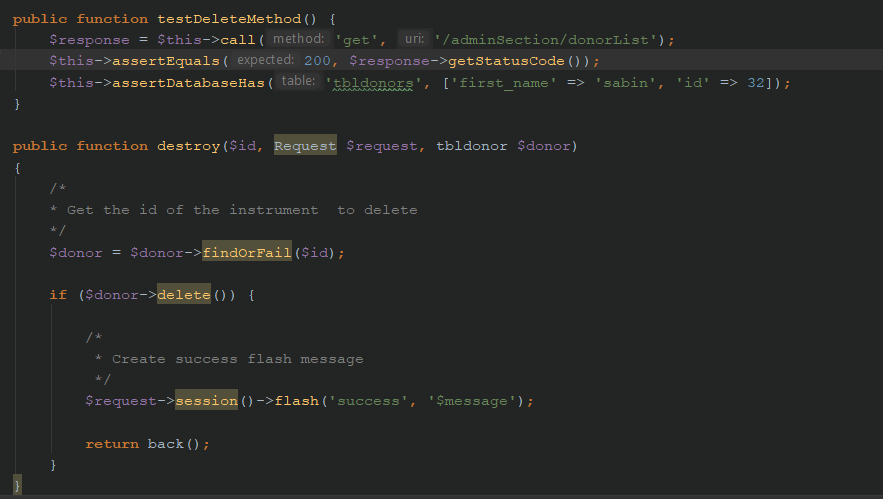


Figure 31: unit testing for deleting donor info

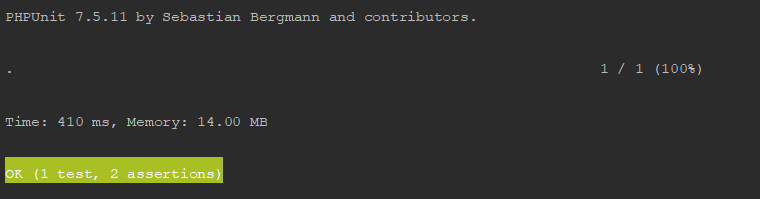


Figure 32: result after deleting donor info record in unit testing

**Test Name: Displaying Donor Information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 5 | Displaying donor information fetched from database | Displaying all record donor information from database | All recorded data should visual in donor list in table form | Successfully displayed data in donor list page | Pass |

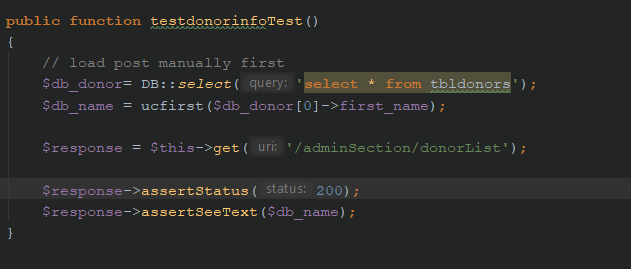


Figure 33: displaying recorded donor information

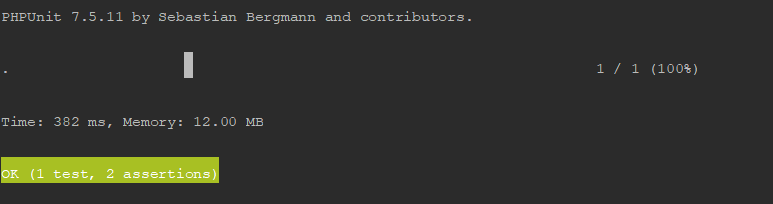


Figure 34: unit testing result to show recorded data of donor

**Test Name: displaying recorded blood group**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 6 | Fetching all recorded blood group in blood group list page | Displaying all record blood group from database | All record should be displayed in blood group list page | Successfully displayed recorded blood group | Pass |

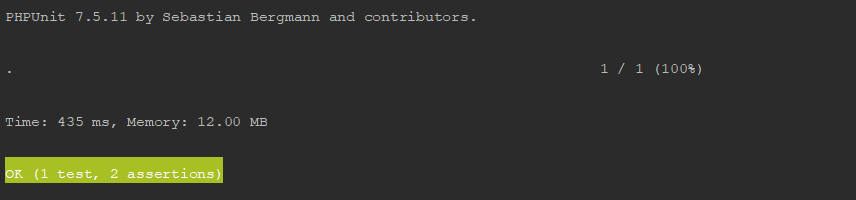


Figure 35: Unit testing to show recorded blood group

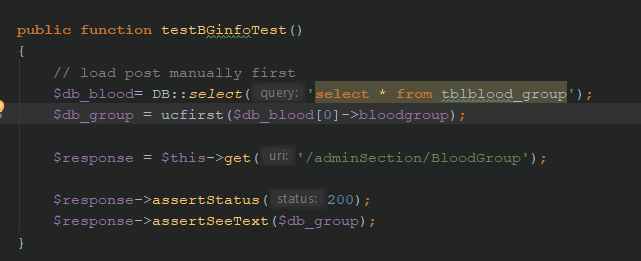


Figure 36: Result of unit testing for blood group

**Test Name: Sending Message**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 7 | Sending Message to admin for queries | Name: Sabin Gautam  Email: Sabingautam05gmail.com  Phone number: 9860560109  Message: this is message | Data should to send to admin for queries with user details | Successfully input has been send to admin | Pass |

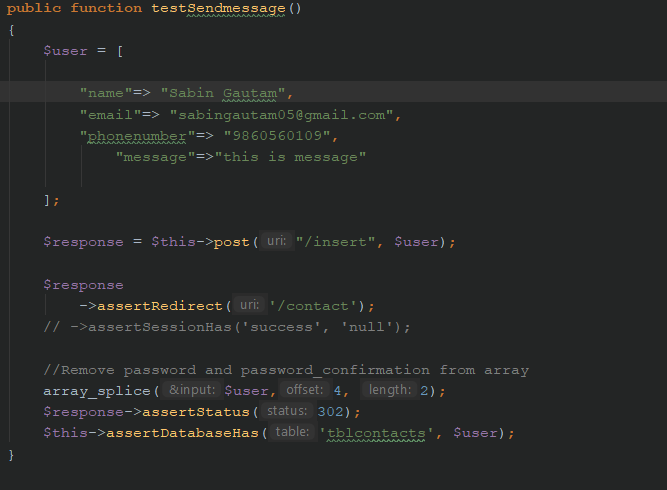


Figure 37: Unit test for sending message

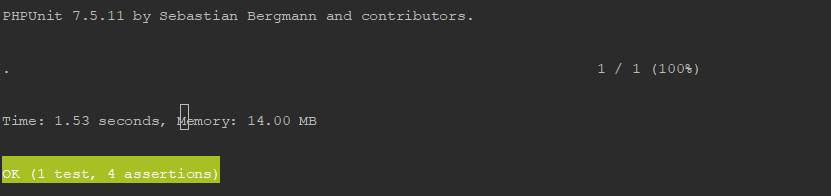


Figure 38: results of unit testing for sending message

**Test Name: Checking Link to become a donor Page**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 8 | Checking become a donor page link | Click on become a donor page | After clicking on become a donor links then it should be redirect to that page | Successfully redirect to become a donor page | Pass |

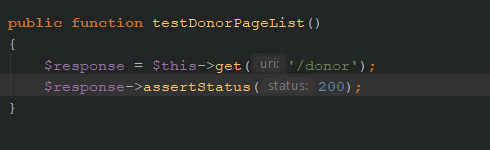


Figure 39: Unit testing for become a donor page link

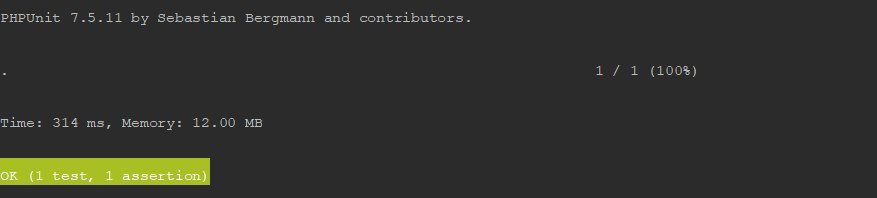


Figure 40: Result of unit testing after clicking on become a donor

**Test Name: Checking search links**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 9 | Checking search link | Click on search links | After clicking on search links then it should be redirect to search | Successfully redirect to search page | Pass |

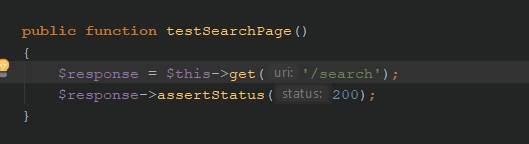


Figure 41: Unit testing for Search page link

### 

Figure 42: Result of unit testing after clicking on Search page

**Test Name: Checking About Us page**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Id | Test Scenarios | Test Input Data | Expected Data | Actual Data | Result |
| 10 | Checking about us page link is working or not | Click on about us page | After click on about us it should redirect to about us page | About us page links successfully work after click on it | Pass |

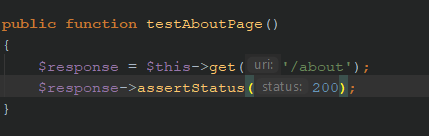


Figure 43: Unit testing for About us page link

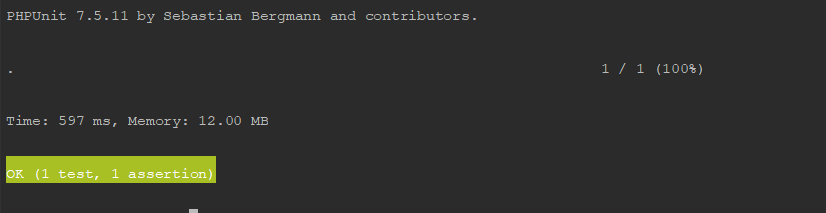


Figure 44: Result of unit testing after clicking on About us page