Project Report On Good2Give

Submitted in partial fulfillment for the award of

Post Graduate Diploma in Advanced Computing (PG-DAC) from C-DAC, ACTS (Pune)



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1. Introduction of project

1.1 Overview

The project entitled "Good2Give" is a web-based donation management system. This platform connects people to nearby donation centers like temples, churches, NGO etc. where they can donate clothes, books and other things according to the requirement generated by donation centers.

The donation centers can upload there requirements on this portal, and when the donors with specific donations matching requirement comes it will notify organization to approve that request for donation.

1.2 Purpose

Poverty and hunger are the main problem of our country. There are many NGO's or Organizations that are working to minimize poverty and hunger in society. These organizations take donations for this purpose and arrange fund raising events/ processes so that everyone can donate anything. This project will build an efficient management system for such organizations to manage their resources and donations

Project helps in connecting NGOs, Temples, Churches etc. with the donors and help each of them to share common platform. This project target needy to get his needs fulfilled with the help of organizations working for the cause of helping people in need.

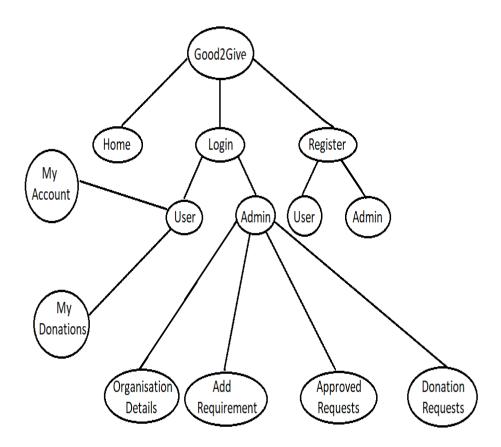
1.3 Scope

Scope of this project is very wide because there are very less project as such which are helping Organizations to connect with donor on one to one basis, this project will also prove very helpful in contribution to eradicate poverty and hunger from our nation, and will help in serving humanity.

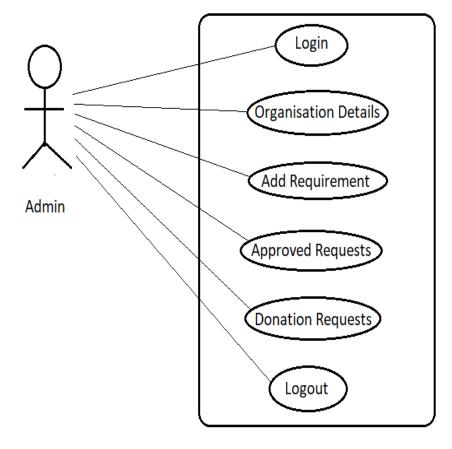
2. Requirements

2.1 Functional requirements

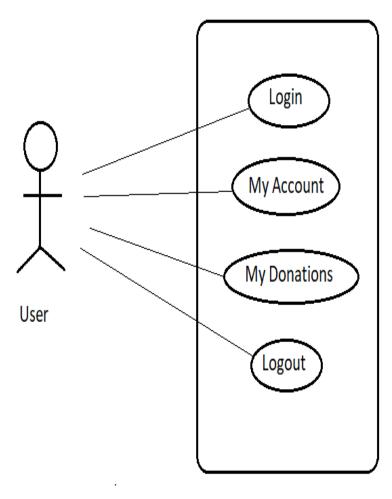
2.1.1 Complete system



2.1.2 Administrator task



2.1.3 User task



2.2 System requirements

2.2.1 Hardware requirements

Processor : Pentium 2.4 GHz or above

Memory : 256 MB RAM or above

Cache memory : 128 KB or above

Hard disk : 10 GB or above (at least 3 MB free space required)

2.2.2 Software requirements

Operating system: Ubuntu / Windows-10

Front-End Tool : Angular 11 using bootstrap

Back-End Tool : Java (Spring boot)

Database : MySql

3. Design

3.1 System design

What is a Methodology?

Software engineering is carried out by using preferred procedure techniques to progress the quality of a software development effort. A methodology is defined as a collection of procedures, techniques, tools, and documentation aids which will help developers in their efforts (both product and process related activities) to implement а new system. For implementation, a well-organized and systematic approach is crucial. Therefore, several methodologies were developed to encourage the planning, analysis, systematic approach to desian, testina implementation. Methodologies offer various tools and techniques to assist in analysis, design and testing in terms of detailed design of software, data flowcharts and database design.

Why Methodology?

To complete a project within time and budget with the expected scope and quality we need methodologies which provide for a framework.

Most methodologies have a general planning, developing and managing stages in common. They suggest the development team the ways of thinking, learning and arriving at a regular feasible solution.

To select an ideal methodology was based on project requirements and goals.

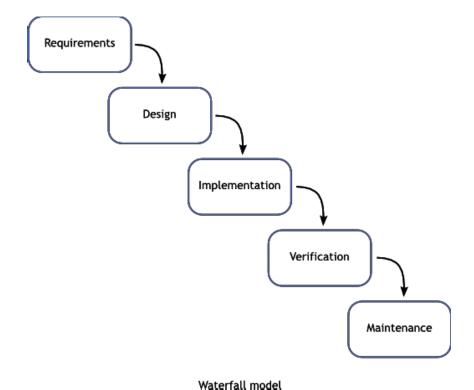
- **Functional Decomposition**: The methodology should have stages according to the interrelated activities which can be grouped into different functional areas.
- **Requirement Changes**: If required, methodology provides scope to change the requirement.
- **Manage Risks**: Determined the risk is an important activity to develop a project.

- **Iterative approach**: Iteration allows refinement of requirement as well as design.
- **Documentation**: Methodology provides support for large documentation.
- **Analysis and Design Support**: A well-defined structure of the methodology helps for analysis and designing to development process.
- **Implementation**: The system should be implemented as per plan.
- **Testing Support**: More testing, more reliable the product is.
- **Object Oriented Approach**: Object oriented concepts will be used in developing the project as it supports component reusability.

Suitable Methodologies:

Waterfall Methodology

All projects can be managed better when segmented into a hierarchy of chunks such as phases, stages, activities, tasks and steps. It follows a linear structure starting from requirement analysis, through design, implementation and maintenance. Most widely accepted methodology for student projects, this model has been well tried and tested. Each phase of it has sub phases which produce deliverables. Requirements are fixed at initial stages before proceeding with development plans in system development projects; the simplest rendition of this is called the "waterfall" methodology, as shown in the following figure:

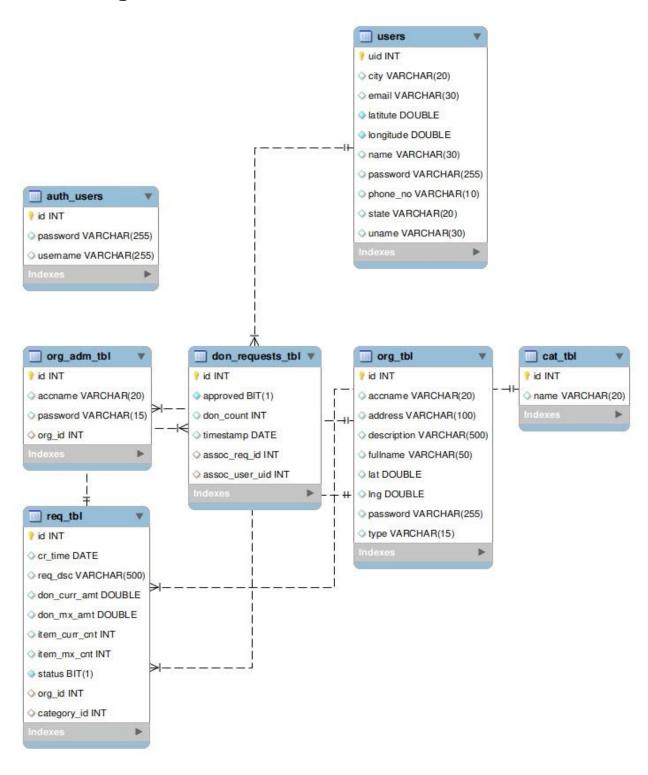


The graphic illustrates a few critical principles of a good methodology:

- Work is done in stages,
- Content reviews are conducted between stages, and
- Reviews represent quality gates and decision points for continuing.

The waterfall provides an orderly sequence of development steps and helps ensure the adequacy of documentation and design reviews to ensure the quality, reliability, and maintainability of the developed software. While almost everyone these days disparages the "waterfall methodology" as being needlessly slow and cumbersome, it does illustrate

3.2 ER diagram



3.3 Database design

Users Table:-

| mysql> desc users; + | | | | | | | | |
|--|-------------------------------------|--|--|--|--|--|--|--|
| Field | Type Null Key Default Extra | | | | | | | |
| city email latitute longitude name password | int | | | | | | | |
| uname | varchar(20) | | | | | | | |

Organization Table:-

| mysql> desc org_tbl; | | | | | | | | | |
|---|--|---|------------------------------------|---|--|--|--|--|--|
| Field | Туре | Null | Key | Default | Extra | | | | |
| id accname address description fullname lat lng password type | int varchar(20) varchar(100) varchar(500) varchar(50) double double varchar(255) varchar(15) | NO YES YES YES YES YES YES YES | PRI | NULL NULL NULL NULL NULL NULL NULL NULL | auto_increment | | | | |
| + | | | | | | | | | |

Category Table:-

Requirement Table:-

```
mysql> desc req_tbl;
                              | Null | Key | Default | Extra
 Field
               Type
 id
                int
                                     | PRI | NULL
                                                     auto_increment
                               YES
 cr time
               | date
                                            NULL
               | varchar(500) | YES
 req_dsc
                                            NULL
 don_curr_amt
               | double
                               YES
                                            NULL
 don mx amt
               | double
                               YES
                                            NULL
 item_curr_cnt | int
                               YES
                                            NULL
 item_mx_cnt
                               YES
                                            NULL
                 bit(1)
 status
                                            NULL
                               YES
 org_id
                 int
                                      MUL | NULL
 category_id
                               YES
                                      MUL
                int
                                          NULL
```

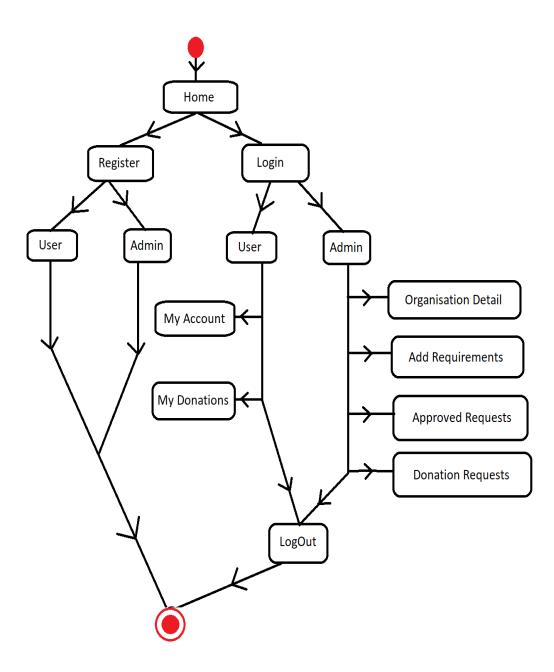
Donation requests Table:-

```
mysql> desc don_requests_tbl;
 Field
                Type
                         | Null | Key | Default | Extra
 id
                                                 auto_increment
                  int
                           NO
                                  PRI | NULL
 approved
                  bit(1)
                           NO
                                        NULL
 don count
                 int
                           YES
                                       NULL
                  date
                           YES
 timestamp
                                        NULL
 assoc_req_id
                | int
                           YES
                                  MUL | NULL
 assoc_user_uid | int
                           YES
                                  MUL | NULL
```

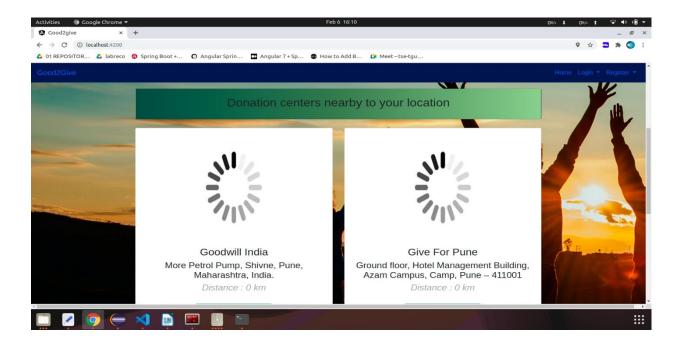
Organization images Table:-

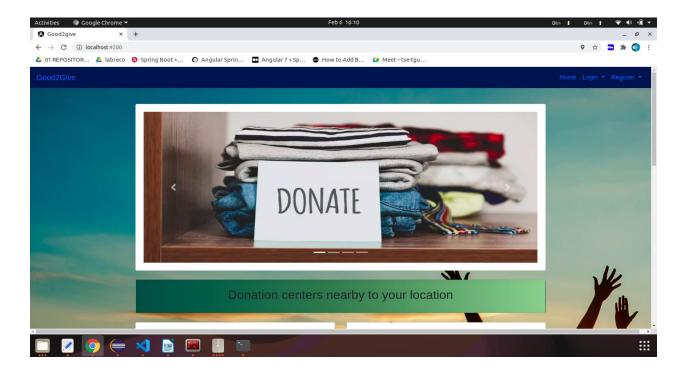
```
mysql> desc org_images;
 Field
                    Type
                                  | Null | Key | Default | Extra
 id
                     int
                                   NO
                                          PRI | NULL
 image
                     longblob
                                  YES
                                                NULL
 image_content_type | varchar(30) | YES
                                                NULL
 assoc_org_id
                                   YES
                                          MUL
```

3.4 Activity diagram

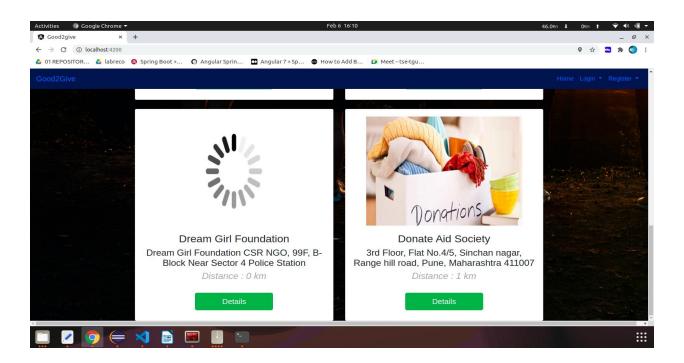


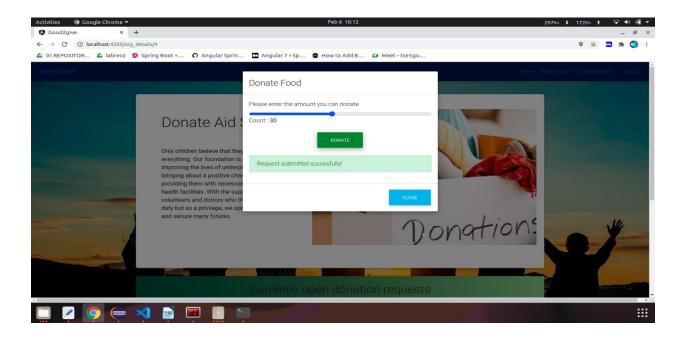
4. Interface

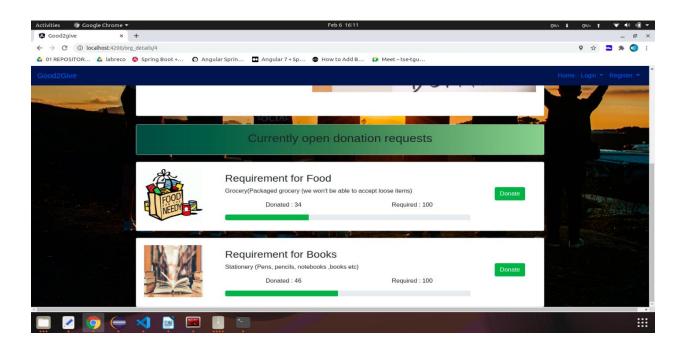


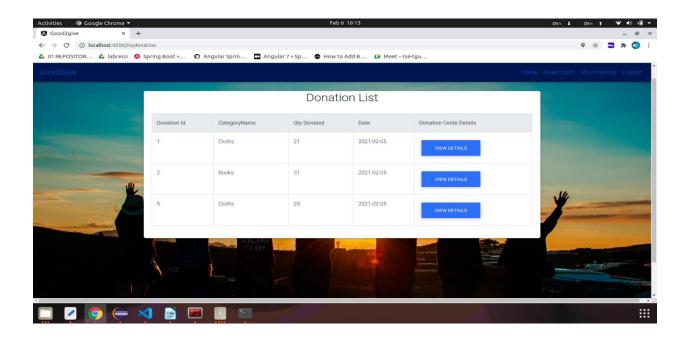


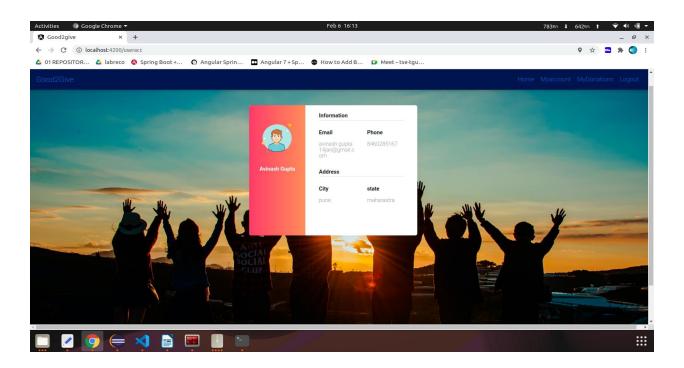


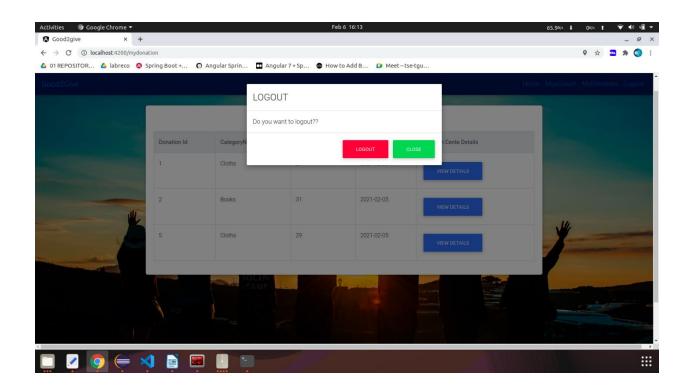


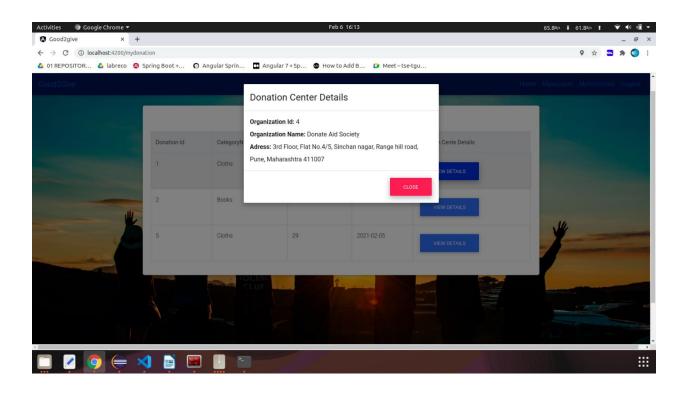


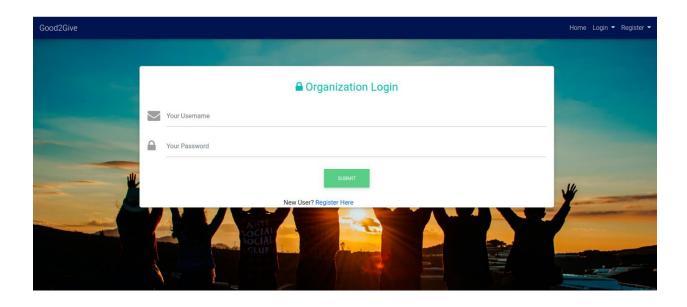


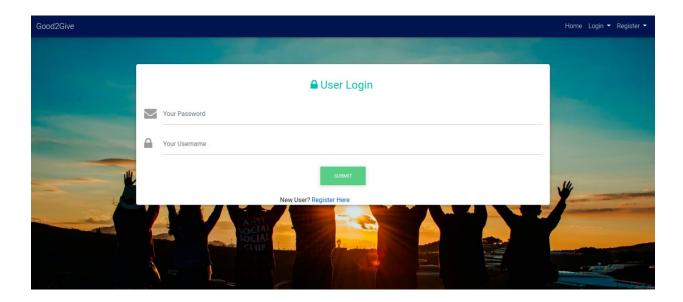


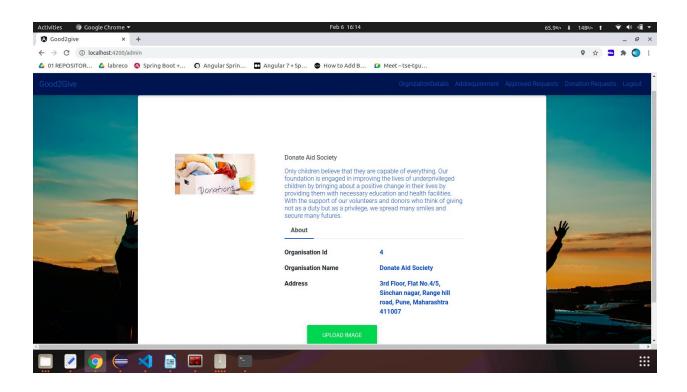


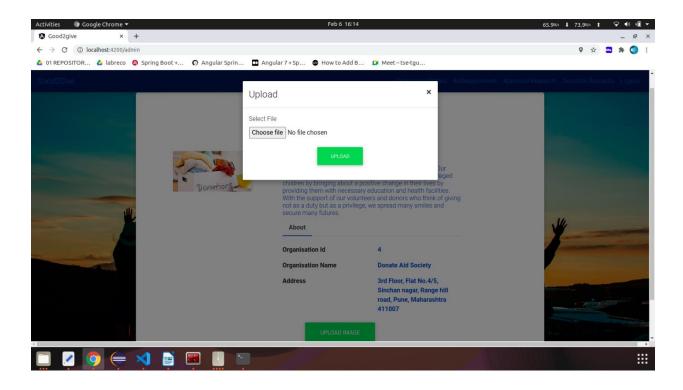


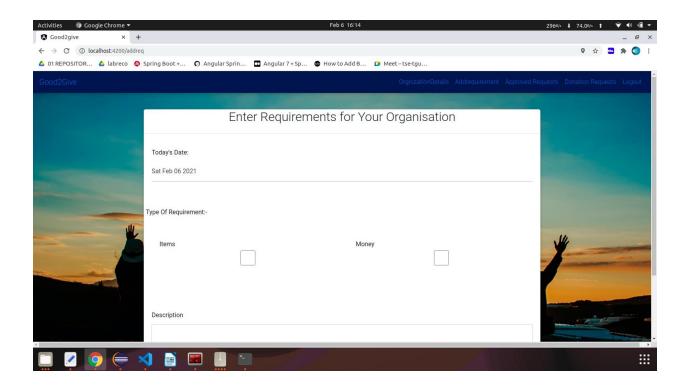


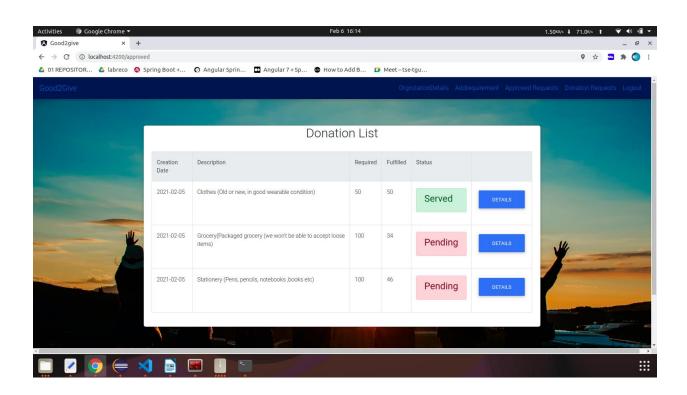


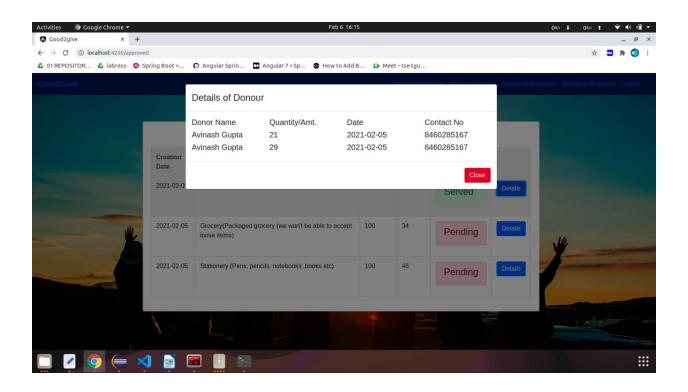


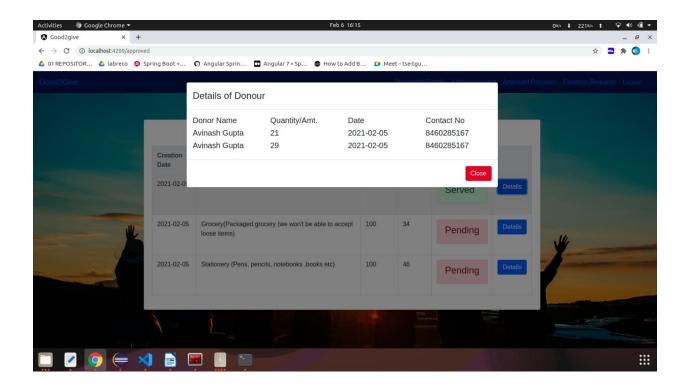


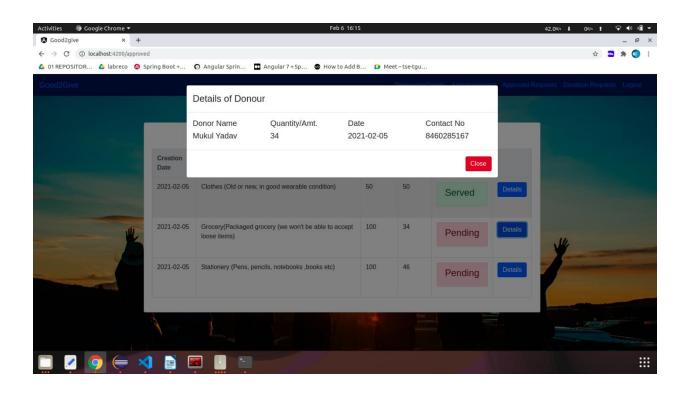


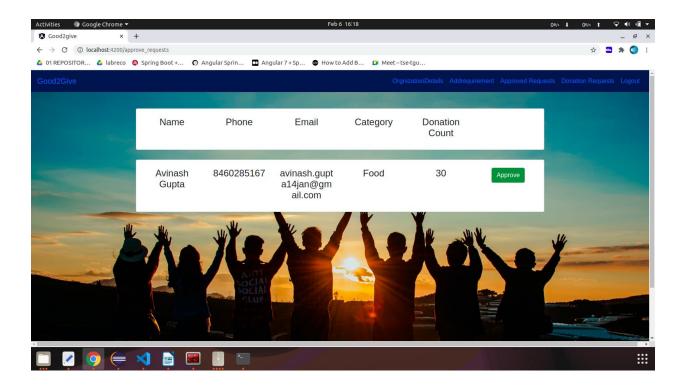


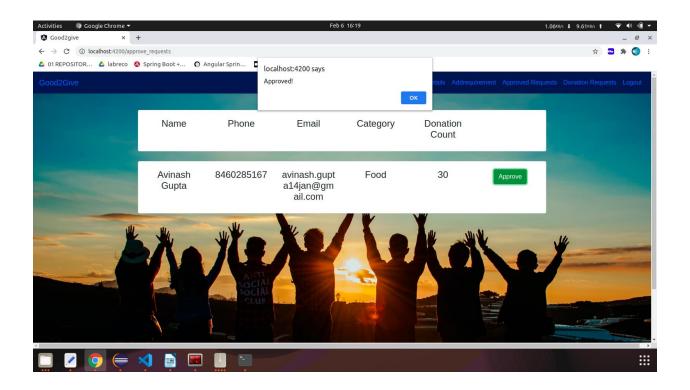












5. Test report

One of the purposes of the testing is to validate and verify the system. Verification means checking the system to ensure that it is doing what the function is supposed to do and Validation means checking to ensure that system is doing what the user wants it to do.

No program or system design is perfect; communication between the user and the designer is not always complete or clear, and time is usually short. The result is errors and more errors. Theoretically, a newly designed system should have all the pieces in working order, but in reality, each piece works independently. Now is the time to put all the pieces into one system and test it to determine whether it meets the user's requirements. This is the best chance to detect and correct errors before the system is implemented. The purpose of system testing is to consider all the likely variations to which it will be subjected and then push the system to its limits. If we implement the system without proper testing then it might cause the problems.

The report of the testing is given here under:

| Sr. No | Test Case Title | Description | Expected Outcome | Error Message | Result |
|-----------|--------------------------------------|---|--|--------------------------------------|--------|
| 1 | Login Page- Admin | If Username=user id, Password= Admin Password | If Validated allow for Admin Page If not redirect to same page | Username and password required | Passed |
| 2 | Login Page – User | If Username=user id, Password= User Password | If Validated allow for User Home Page If not redirect to same page | Username and password required | Passed |
| 3 | Home page Displayed | Homepage display for every successful log in. | Home Page Displayed | No Error | Passed |
| 4 | Show Requirement List | Admin can see status of Requirements created by him. | Requirement List | No Error | Passed |
| 5 | New Admin registration | Should not allow any control to be empty if not null | Successful message and redirect to login page. | No Error | passed |
| 6 | Send email During registration | Successful email send after registration to users email | If valid email | No Error | Passed |
| 7 | New user registration | Should not allow any control to be empty if not null | If validated Allow to go to login page | Validation Error | Passed |
| 8 | Log out | User / Admin can logout by using Logout link | Successfully logout message | No Error | Passed |

6. Future scope

- System can be expanded with availability over worldwide
- Reaching as close as possible of the donor from emergency zone
- A smart phone application of the system can be mode
- Monetary Donation with payment gateway integration can be implemented in future

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