Altruists

SOFTWARE REQUIREMENT SPECIFICATION

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1. **INTRODUCTION**

"How can we change the world? One random click of kindness at a time"
This project helps to prove the ideology of providing services and solving problems of an NGO within the minimal efforts of technology. This project develops a platform for both the users and the organization itself to carry on its various functions and desired purpose. Altruists aim at providing a secure future for the kids, several job opportunities for the adults, old home facilities to take care of the elderly and help the needy survive in this world. We, at Altruists, try to bring a ray of hope and sunshine for those who are depraved of the luxuries in life.

EXISTING SYSTEMS:
Here are some of the existing systems Altruists has derived inspiration from.

1.2.1. Manavlok:
MANAVLOK aims to solve the socio-economic problems of the community and to provide a better life to them. Manavlok's philosophy is reflected in its name: MANAVLOK, which is the shortened form of "MArathwada NAVnirman LOKayat", where 'NAVNIRMAN' means "Creation" and 'LOKAYAT', denotes "People's opinion". Manavlok thus symbolizes a new idea or an experiment in rural development, whereby villagers themselves are the focus of action and control.

1.2.2. Shiksha:
Shiksha.com is a one-step solution making course and college selection easy for students looking to pursue undergraduate (UG) and postgraduate (PG) courses in India and abroad. Education seekers get a personalized experience on our site, based on educational background and career interest, enabling them to make well informed course and college decisions. The decision making is empowered with easy access to detailed information on career choices, courses, exams, colleges, admission criteria, eligibility, fees, placement statistics, rankings, reviews, scholarships, latest updates etc.

1.2.3. Udaan:
Mumbai-based Udaan Foundation runs a one-year programme to facilitate school readiness for children from low-income communities aged 4-6 years. The idea is to build a strong foundation in language and social skills in a safe, secure, and happy learning environment. Donations to this programme will cover the cost of teachers' salaries in schools.

OBJECTIVES:
We aim to guide the students to a better and more secured life by helping them get the proper education they deserve. With our unique features such as Old Age Home and Job Seeking Portal, we can help the people in need with an easy and effortless process through our website. Altruists enables people to find the perfect help they require.

PURPOSE, SCOPE AND APPLICABILITY:

1.4.1. Purpose
Altruists is a start-up that helps Indian students by giving them education, adults by providing employment, and the elderly by enabling an old age home. Students who are financially challenged and cannot receive proper education and enrolled in our NGO and are given proper education by qualified teachers for free. Employer Registration Portal will enable qualified people to apply in our NGO and through Job Seeking Portal, people based on their qualifications can apply for different jobs. Along with this, Old Age Home will help the elderly who do not have anyone to take care of them.

1.4.2. Scope

The scope of providing education, employment, and taking care of the elderly has expanded over the years. Thanks to the popularisation of various NGOs, providing help and education for free has become easy and more and more people are willing to donate and fund various NGOs. At our NGO, students can get sufficient education for free, and old people can get taken care of properly. Education is an aspect of life which is still taken for granted by many students and it is our duty to make sure they receive proper guidance without any problems.

1.4.3. Applicability

Anyone and everyone who wishes to pursue higher education but does not have the money can enroll in our NGO. Students can register themselves on the website and start attending classes. Elders can also apply through our website and apply for an old age home. People who are looking for a job, or need employment can also use our Job Seeking Portal and Employer Registration Portal respectively.

OVERVIEW OF THE PROJECT:

This report has given a brief description of our project, Altruists, an up-and-coming NGO to support people and students in need. Not only do we provide education for students in need of financial aid, but also help people for employment and job seeking along with sheltering old people. This website is not just a simple portal for the three categories discussed above, but also has a donation page where anyone can donate to help our NGO. This project is similar to several other NGOs but the main differentiating factor we have is that we have a lot of components all combined together. Most NGOs only focus on one aspect such as; education, job seeking, old age home, etc. but here we have combined all of those into a single organisation. We at, Altruists, want to help students, adults, and the elderly by providing them the support they deserve.

2. SYSTEM ANALYSIS AND REQUIREMENTS

2.1. PROBLEM DEFINITION

Our proposed system has 9 module which are listed below:

1. Teacher Portal
2. Student Module
3. Employer Registration Portal
4. Job Seeking Portal
5. Old Age Home Registration Portal
6. Old Age Home Admission Portal
7. Donation
8. Careers
9. Contact Us

LIMITATIONS OF EXISTING SYSTEM:

- Online education of financially challenged students
- Simple portal for job seeking and registering for employment
- Simple online application of old age home

BENEFITS OF PROPOSED SYSTEM:

- Students will be able to register for an NGO without having to go through a tedious process. Our website will make the process simple, easy and fast. The efficiency which we are bringing is missing in the existing system.
- Teachers and students have a login page where teachers can upload students' marks to see the progress of their academics. This is something which is missing altogether in the current system, no tracking of

progression is done. This way we can not only see the speed at which students improve, but also see how good of a job a teacher is doing.

- People looking for a job can simply use our Job Seeking Portal to see what available jobs they can apply for based on their qualifications.
- Elders can also register for Old Age Home using our website and this also is a much faster and more efficient way which does not exist in the current system.

2.2. REQUIREMENT SPECIFICATION

2.2.1. FUNCTIONAL REQUIREMENTS

2.2.1.1 Chatting Facility

- Customers can chat with us using the chatting option available on the website.
- Customers can explain the changes required overall.
- If the chat bot cannot satisfy their requirements, they can send a mail directly to us.

2.2.1.2 Search Facility

- Job seeking portal can be used to search for Jobs.
- People can shortlist different job which satisfies their qualifications.
- All Jobs which people are not eligible for are not shown in the search results.

2.2.1.3 Donation Points

- People can donate to our NGO using the donation page.
- Donations will enable the person to get CIBIL points.
- These points will help them in their loans in the future

2.2.1.4 Old Age Home Portals

- These portals can be used to see which all Old Age Homes our NGO has partnered up with.
- These portals will also tell us all the Old Age Homes our NGO has been reached out from.
- We can see the data of all the people that have gotten Old Age Homes using our websites Old Age Home.

2.2.1.5 Chatting Facility

- Customers and Sellers can chat with each other using the chatting option available on the website.
- Customers can explain the modifications required in the product.
- It can be used for finalizing the sellers and explaining the requirements.

2.2.2 TECHNICAL REQUIREMENTS

2.2.2.1. Data Privacy

- the data provided by the users will be kept private and will not be shared with everyone.
- the chats done between sellers and buyers will be kept confidential and will be read by anyone else.
- the personal data will be kept private and very important data will be encoded using a hashing function.

2.2.2.2. Performance

- the performance of the project depends on the internet connectivity of the user as the data will be saved on a Server.
- It will be a web application therefore requires a browser as a client which can communicate with the server or host.
- It also depends on the version of the Operating system and hardware in the device.

2.2.2.3. Data Security

- All the information provided by the users will be kept in a most secure manner.
- the site will not be having any loopholes or bugs through which hackers can get access to the database and steal data.
- Confidential information will never be kept on the user's side in the form of cookies to maintain security.

2.2.2.4. Data Transfer

- Data should always be transferred using a secure socket layer.
- the protocol used for transmission should be secure and should follow all the security guidelines.

2.2.2.5. Data Storage

- the data will be stored in a database in the server.

- Users will be able to see data according to their permissions.
- the password will never be echoed and saved in the database after encryption.
- the database can only be accessed directly by the authenticated users such as admin who are a part of the company.

2.2.2.6. Reliability and Maintainability

- the system always maintains a log file to recover from any errors.
- Backup of the database is taken at regular intervals to ensure that the data can be recovered later on.
- the website can be maintained by the development team. They can add new modules and improve existing modules and security of the website at regular intervals for maintaining effectiveness and efficiency.

2.3. SYSTEM REQUIREMENTS

2.3.1. Hardware Requirements

Component	Minimum	Recommended
Processor	1.9 gigahertz (GHz) x86- or x64-bit dual-core processor	3.3 gigahertz (GHz) or faster 64-bit dual-core processor
Memory	2-GB RAM	4-GB RAM or more
Storage	128 GB	512 GB
Display	Super VGA with a resolution of 1024 x 768	Super VGA with a resolution of 1024 x 768 or more

2.3.2. Software Requirements

Component	Minimum	Recommended
Operating System	Windows 7 or Ubuntu 14.04 or OS X El Capitán 10.11	Windows 10 or Ubuntu 18.04 or Catalina 10.15.7
Web Browser	Google Chrome 69.0 or Mozilla Firefox 71.0	Google Chrome 88.0 or Mozilla Firefox 84.0
HTML	HTML 5	HTML 5.2
CSS	CSS3	CSS3
JavaScript	ECMAScript 2016	ECMAScript 2018
PHP	PHP 6	PHP 8
Python	Python 2	Python 3.6
MySQL	Server 5.6	Server 8.0
Server	LAMP 0.0.10 or WAMP 2.5	LAMP 0.0.12 or WAMP 3.0.3

2.3.3. Network Requirements

Component	Minimum	Recommended
Bandwidth	More than 50 KBps	512 KBps
Latency	Latency under 150ms	75ms

2.4. CONCEPTUAL MODELS

2.4.2. ER Diagram
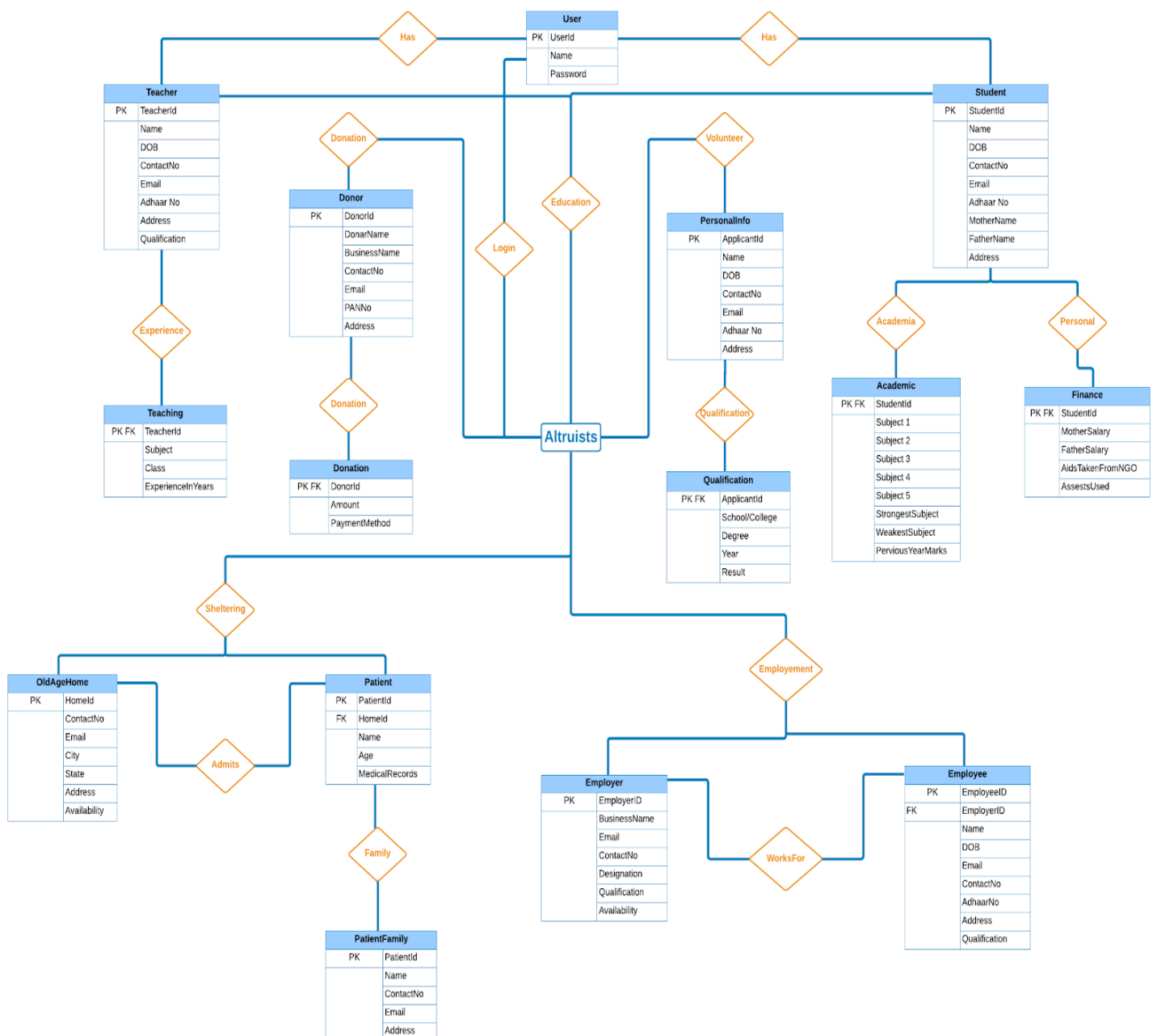
2.5 Project Planning and Scheduling

2.5.1. Gantt Chart

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Project Topic Discussion	■	■														
Flow of the project		■	■													
Analysis of problem statement			■	■												
Designing of Database			■													
Designing of Application Interface				■	■											
Ui building				■	■	■	■									
Database Creation							■	■								
Scripting								■	■	■						
Linking of Code to datbase										■	■	■				
Completing of coding / scripting												■	■	■		
Testing/debugging														■	■	
Final Report															■	■
Presentation Preparation																■

2.5.2. PERT Chart
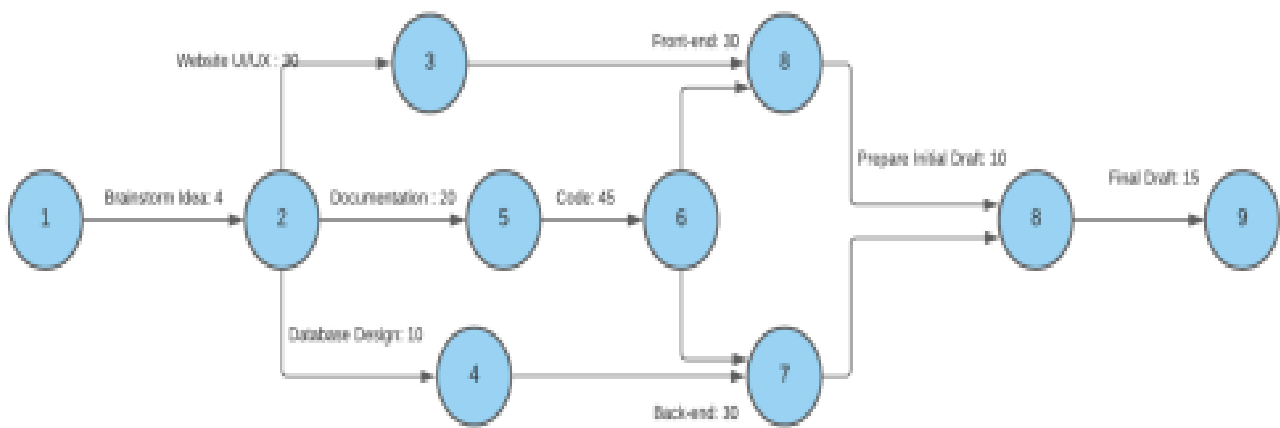
2.6. PROPOSED TOOLS AND PLATFORMS

2.6.1. Windows 10

Microsoft Windows 10 is a personal computer operating system developed and released by Microsoft. All the files containing code and database will be created in the Windows 10 operating system.

2.6.2. Google Chrome

Google Chrome is a cross platform web browser developed and maintained by Google. All the html and php files will be opening using Google Chrome for viewing their functionality and working.

2.6.3. HTML

HTML stands for Hypertext Mark-up Language which is the standard mark-up language for documents designed to be displayed in a web browser. The basic web pages design will be implemented using HTML.

2.6.4. CSS

CSS or Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a mark-up language such as HTML. It will be used for adding more design and improving the look and feel of the website.

2.6.5. Bootstrap

Bootstrap is the most popular free front-end framework for faster and easier web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. It is used to make the website responsive so it can be used on both desktop and mobile devices.

2.6.6. JavaScript

JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. It is high-level, often just-in-time compiled, and multi-paradigm. It will be used to make the website responsive and dynamic.

2.6.7. PHP

PHP is a general-purpose scripting language especially suited for web development. It will be used to write the codes for the server side and connect to the database.

2.6.8. Python

Python is an interpreted, high-level and general-purpose programming language. It will be used for creating a recommendation system. The machine will be stored on the server for continuous working.

2.6.9. MySQL
MySQL is an open-source relational database management system. The data will be stored in a database inside MySQL while following maximum normal forms.

2.6.10. Server

WAMP or LAMP will be used as temporary servers for checking the website before deploying it on the server. WampServer refers to a solution stack for the Microsoft Windows operating system, consisting of the Apache web server, OpenSSL for SSL support, MySQL database and PHP programming language.

2.6.11. Adobe Illustrator

Adobe Illustrator is a vector graphics editor and design program developed and marketed by Adobe Inc. It is used to design the website and its logo for checking its look and feel. The design then can be implemented through coding.

2.6.12 Adobe Photoshop

Adobe Photoshop is a photo editing, image creation and graphic design software developed and marketed by Adobe Inc. It is used to fulfil all the graphical needs of the website.

3. Module Description

3.1 Teacher Portal

This module implements different functionalities related to the teacher, including teacher registration, managing her profile and updating student records. Firstly, she will login with her account by entering id and password if she is not new to our website. Otherwise, she will be prompted to sign up by completing a teacher profile. This is open up to a teacher dashboard.

3.2 Student Portal

This module will be an implementation of a student dashboard, which can be registered into by completing a student profile which can be later logged in to view academic records and update personal records.

3.3 Employer Registration Portal

This module will be a medium for potential employers to connect to Altruists in order to find employees for their business. This module will open up a form for them where they can give information about their business and specify what minimum qualifications they are looking for in their employees. The module will also keep a track of the number of available jobs for particular business.

3.4 Job Seeking Portal

This module will help filter out jobs according to the user's qualifications and domain. The user is prompted with an input field to fill her academic qualifications and in return is provided with a list of jobs suiting her qualification. Once the user finds a suitable job she can apply for it by filling up an application form which will include her personal and academic details.

3.5 Old Age Home Registration Portal

This module will allow old age homes all across the country to associate with Altruists. The main aim of this module is to enable them to offer their services efficiently. The module simply collects all the details of the old age home including but not limited to location and accommodation availability of that particular home and stores it in the respective database.

3.6 Old Age Home Admission Portal

The main aim of this module is to provide a single platform for the people in need. The module facilitates the users to view available old age homes in accordance to their preferences. Once the user selects her

preferred home, she is directed to an application form wherein she can give the personal and medical details of the elderly and their family members.

3.7 Donation

This module is aimed at collecting donations from our patron.The module not only collects the benefactor details but also acts as a payment gateway for them while giving them points in CIBIL(Credit Information Bureau (India) Limited) for upgrades in any future loans they take.

3.8 Careers

This module provides the users with an opportunity to do some community work by collaborating with us as volunteers. The module prompts the user with a form which takes up their personal and academic details.

3.9 Contact Us

This module will implement the contact functionality, which will help the user to get in touch with the NGO. This will be done by the means of a chat bot. This chat option will also help the user in navigating the website and answer basic queries put up by the user.

4. PROPOSED DATABASE:

Table Name	Attribute 1 (PK, FK)	Attribute 2	Attribute 3	Attribute 4	Attribute 5	Attribute 6	Attribute 7	Attribute 8	Attribute 9
Teacher	TeacherId	Name	DOB	Email	ContactNo	AdhaarNo	Address	Qualification	
Teaching	TeacherId	Subject	Class	ExperienceIn Years					
Student	StudentId	Name	DOB	Email	MotherName	FatherName	AdhaarNo	Address	
Academic	StudentId	Subject1	Subject2	Subject3	Subject4	Subject5	StrongestSubject	WeakestSubject	PerviousYear Marks
Financial	StudentId	MotherSalary	FatherSalary	AidsTaken FromNGO	AssestsUsed				
Employer	EmployerId	BusinessName	Email	ContactNo	Qualification	Designation	Availability		
Employee	EmployeeId	Name	DOB	Email	ContactNo	AdhaarNo	Address	Qualification	
OldAgeHome	HomeId	Name	Email	ContactNo	City	State	Address	Availability	
Patient	HomeId	PatientId	HomeId	Name	Age	MedicalRecords			
PatientFamily	PatientId	Name	ContactNo	Email	Address				
Donor	DonorId	BusinessName	DonorName	Email	ContactNo	PANNo	Address		
Donation	DonorId	Amount	PaymentMethod						
PersonalInfo	ApplicantId	Name	DOB	Email	ContactNo	AdhaarNo	Address		
Qualification	ApplicantId	School/College	Degree	Year	Result				
User	UserId	UserName	Password						

5. PROPOSED PROCESS LOGIC OF MODULES

Altruists is an NGI which is different from other NGOs because it combines multiple aspects of different NGOs into a single one. Not only does it have multiple social services, but it also makes user sign up using our efficient website. Students can easily apply to study in our NGO if they are in need of financial aid, adults can easily search for Job and achieve employment using our Job Seeking Portal and Employer Registration Portal, and lastly, elders can apply for sheltering using our Old Age Home Portal through our website. Donations can also be made easily using our website's Donation Portal. Anyone having queries or doubts can use our Chat Bot which comes under the contact us section, and if the bot is unable to solve their query, an email will be given through which they can contact us more elaborately.

6. REPORTS GENERATED:

6.1 Number of connected Employers

6.2 Number of connected Old Age Homes

6.3 Number of Teachers

6.4 Number of Volunteers

6.5 Number of Students

6.6 Number of People Employed Through NGO

6.7 Number of People Admitted to Old Age Homes through our NGO