Software requirement specification document for Advanced Software(CSE232) project

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1   Introduction

1.1   Purpose of this document

This Software Requirements Specification (SRS) is a guide for building a website for a charity orgnization named Basmah. It outlines what the website needs to do and how it should work. This helps everyone involved in the project stay on the same page and makes sure the website meets the charity's needs.

1.2   Scope of this document

The project aims to establish Basmah's online presence, facilitate secure online donations, disseminate information about its initiatives, and enhance user engagement. Key stakeholders include the charity organization, donors, web developers, and system engineers. Constraints encompass predefined schedules, budget limitations, adherence to software engineering standards, and regulatory compliance. This document serves as a comprehensive guide to align project participants, ensuring a shared understanding of objectives and requirements, subject to periodic review for updates.

1.3   Overview

The product defined as a result of the outlined vision and mission is a comprehensive educational and ethical development program aimed at children. This program seeks to address the challenges of corruption and the lack of education, fostering a new generation with a strong moral compass and a deep sense of responsibility towards their community.

1.4   Business Context

The program is designed to provide children with the necessary tools to overcome the barriers imposed by corruption and incomplete education, enabling them to pursue their dreams with confidence and determination. It includes elements such as mentorship, skill development, and character-building activities to shape well-rounded individuals.elicitation process.

2   General Description

2.1   Product Functions

the product should let a user apply for one of the 4 different paths provided, book appointment for an interview, and donate for his desired path, choose the type of donation, register an account, sing in to an account. It should let the admin add a user, delete a user, add an admin, view all users, confirm appointments, view all appointments.

2.2   Similar System Information

The system would in concept be similar to any other charitable organization
eg:- resala but smaller in size compared to them as the system will be tailored for
the needs of Basmah.

2.3   User Characteristics

The system's intended users are all people interested in donating to a charitable
cause. Users need the most basic knowledge in using a website application.

2.4   User Problem Statement

The Basmah charity organization currently faces challenges in effectively reaching
out to potential supporters, donors, and individuals interested in participating in
their educational and ethical development program. The existing methods of com-
munication may be limited, hindering the organization's ability to attract a diverse
audience and garner support. Additionally, the lack of an online platform for appli-
cations, appointment bookings, and donations poses a barrier to efficient and secure
engagement with users.

2.5   User Objectives

1.User Engagement: Enable users to easily navigate the website, understand Bas-
mah's mission, and engage with the educational and ethical development program.
2.Application Process: Simplify the application process for users to apply for one of
the four different paths offered by Basmah's program.
3.Appointment Booking: Provide a seamless system for users to schedule appoint-
ments for interviews related to their chosen paths.
4.Secure Donations: Facilitate secure online donation mechanisms, allowing users to
contribute funds to support their desired paths within the program

3 Functional Requirements

Basmah Charity Organization

List Paths

Alert System Failure

<<include>>

Select volunteering Path

List Donation Causes

Delete User

<<include>>

List Appointment Days

Select Donation Cause

<<include>>

Book Appointment

Confirm Volunteer Appointment

<<extends>>

List Donation Types

Manage Appointment

Add User

<<include>>

Calculate Total Donations

Select Donation Type

<<include>>

Add Admin

<<extends>>

Choose Payment Method

List Payment Method

View Appointments

Restrict User Personal Info Access

<<extends>>

Sign in

Confirm Payment

<<extends>>

Register

Confirm Physical Donation

User

Admin

Table 1: Restrict User Personal Info Access Function Description

Function Name	restrictUserPersonalInfoAccess
Description	The function restrictUserPersonalInfoAccess is designed to enhance user privacy and security within a system. Its primary purpose is to control and limit access to sensitive personal information, the function checks the user's access level, each level is able to view certain information.
Inputs	User credentials (AccessLevel).
Source	User try to access another user information.
Outputs	Alert message.
Destination	User interface.
Action	Verify user credentials against stored data.
Requirements	Multiple access levels, Each user must have only one level.
Criticality	Essential for system security and data integrity.
Side effects	None
Risks	User authentication failures, potential security breaches.
Pre-Condition	Low level user attempting to access high level information.
Post-Condition	User granted access or denied with appropriate feedback.

Table 2: Alert System Failure Function Description

Function Name	AlertSystemFailure
Description	This function is a way for the system to achieve availability. the function is called upon failure of the website to respond, a message is then sent to the system admins to alert them about this failure, and a message to users.
Inputs	System failure (responseError).
Source	System is unresponsive.
Outputs	Alert message.
Destination	Admin contact.
Action	Alert admins of system failure, and inform users of downtime.
Requirements	Tracking system response.
Criticality	Essential for system availability.
Side effects	None
Risks	Response tracking failure, failure to send message to admins.
Pre-Condition	System response failure.
Post-Condition	Alert message to admins and downtime message

Table 3: List all donation causes Function description

Function Name	ListDonationCauses
Description	The function shows all the available causes of donation. It exists at the Donations page. the causes listed are (Janeen, Bareeq, Elaf, Marsah)
Inputs	Event Listener for Donations button
Source	User presses on donate button.
Outputs	View donation causes
Destination	User interface.
Action	Open Donations page
Requirements	None
Criticality	High
Side effects	None
Risks	failure to open donations page
Pre-Condition	user at home page.
Post-Condition	User at Donations page.

Table 4: Select donation cause Function description

Function Name	selectDonationCause
Description	The function takes the choice of the user on which cause he wants to donate to and sends them to the donation types section.
Inputs	Event Listener for Donation cause button
Source	User presses on one of the donation cause buttons.
Outputs	View donation types section
Destination	User interface.
Action	Open donation types section
Requirements	None
Criticality	High
Side effects	None
Risks	failure to open donation types section
Pre-Condition	user at donations page.
Post-Condition	user at donation types section section.

Table 5: List all donation types Function description

Function Name	ListDonationTypes
Description	The function shows all the available types of donation. It exists at the Donations page. The types of donations are (money, clothes, food)
Inputs	Event Listener for Donations button
Source	User presses on donate button.
Outputs	View donation type
Destination	User interface.
Action	Open Donations page
Requirements	None
Criticality	High
Side effects	None
Risks	failure to open donations page
Pre-Condition	user at home page.
Post-Condition	User at Donations page.

Table 6: Select donation type Function description

Function Name	selectDonationType
Description	The function takes the choice of the user on what he wants to donate. if it is money, send them to the payment section.
Inputs	Event Listener for Donation type button
Source	User presses on one of the donation type buttons.
Outputs	View payment section or send email to admin about type of donation
Destination	User interface.
Action	Open payment section if the chosen type of donation is money. if the type of donation is something else then an email is sent to the admin informing them that a person is donating a physical thing.
Requirements	None
Criticality	High
Side effects	None
Risks	failure to open payment section, failure to send email
Pre-Condition	user at donations page.
Post-Condition	appearance of payment section.

Table 7: System Calculates Money Function Description

Function Name	calcualateTotalDonations
Description	The function calcualateTotalDonations takes the donation cause and amount to be donated ,and calculates the total. It will display the totals in the payment page.
Inputs	Donation Information (DonationCause , Donation amount).
Source	User donates money through the payment section.
Outputs	Total amount of money donated
Destination	User interface.
Action	Calculate the total amount of money donated till last transaction.
Requirements	None
Criticality	High.
Side effects	None
Risks	Wrong amount calculated .
Pre-Condition	User chooses donation cause and amount they want to donate.
Post-Condition	Calculated amount is displayed.

Table 8: List Payment Method Function Description

Function Name	listPaymentMethod
Description	The function listPaymentMethod shows the different payment methods.
Inputs	Event Listener for method button.
Source	User presses on payment methods button.
Outputs	List of payment methods.
Destination	User interface.
Action	Display all available payment methodes
Requirements	amount of total donations is not smaller than 10L.E
Criticality	High
Side effects	None
Risks	No payment method is available
Pre-Condition	payment section without list of payment methods
Post-Condition	appearance of payment methods.

Table 9: Choose Payment Method Function Description

Function Name	choosePaymentMethod
Description	The function choosePaymentMethod takes the payment method chosen by the user.
Inputs	Event Listener for methodType button, donation amount
Source	User presses on a method button.
Outputs	payment information dialog.
Destination	User interface.
Action	Display a dialog to display the instapay address, bank and account for the instapay method. Display dialog with vodafone cash payment information for the vodaphone cash method. Display a dialog to enter card information for the Card method.
Requirements	Service for the chosen payment method is available
Criticality	High
Side effects	None
Risks	No payment method is available
Pre-Condition	Donation amount entered
Post-Condition	appearance of the dialog

Table 10: Confirm Payment Function Description

Function Name	confirmPayment
Description	The function confirmPaymen displays a popup for the user to confirm the amount of money donated.
Inputs	Event Listener for Confirmation button
Source	user enters card information and presses the confirmation button
Outputs	popup alerting the success of the transaction.
Destination	User interface.
Action	the user enters his card information which is followed by a popup asking for the confirmation of the user to this transaction. upon pressing the confirmation button a new popup appears alerting of the success or failure of the transaction
Requirements	card information is entered
Criticality	High
Side effects	None
Risks	wrong card information, failure of transaction, popup does not appear
Pre-Condition	payment information dialog
Post-Condition	success or failure of transaction

Table 11: List Available volunteering paths Function description

Function Name	ListPaths
Description	This function shows the user the different paths offered for volunteering by Basmah. .
Inputs	Event Listener for ViewPaths button
Source	User presses on view paths button.
Outputs	View Paths Page.
Destination	User interface.
Action	Open view paths page
Requirements	existence of volunteering paths.
Criticality	High
Side effects	None
Risks	failure to open view paths page.
Pre-Condition	user at home page.
Post-Condition	User at volunteering page.

Table 12: Select volunteering path Function description

Function Name	selectVolunteeringPath
Description	The function takes the choice of the user on which path he wants to volunteer to and sends them to the appointments section.
Inputs	Event Listener for volunteering path button
Source	User presses on one of the volunteering path buttons.
Outputs	View appointments section
Destination	User interface.
Action	Open appointment section
Requirements	None
Criticality	High
Side effects	None
Risks	failure to open appointment section
Pre-Condition	user at volunteering page.
Post-Condition	User at appointment section.

Table 13: List all appointment days Function Description

Function Name	listAppointmentDays
Description	The function shows a list of available days for an appointment for the chosen volunteering path.
Inputs	user's volunteering choice
Source	appointment section is opened
Outputs	list of all available days for appointments
Destination	User interface.
Action	the function takes the user's choice on which path he wants to volunteer to and shows a list of all available days for an appointment to this path.
Requirements	volunteering path has appointment days
Criticality	High
Side effects	None
Risks	wrong list of days.
Pre-Condition	empty appointment section
Post-Condition	appointment section with list of days

Table 14: Book appointment Function Description

Function Name	bookAppoointment
Description	The function takes the day chosen by the user for an appointment.
Inputs	Event Listener for appointment day button
Source	user presses a day button
Outputs	popup alerting the user of his chosen day with a confirmation button.
Destination	User interface.
Action	the user chooses a day from the list of appointment days, upon choosing a popup appears with the chosen day and a confirmation button
Requirements	a day is chosen from the list
Criticality	High
Side effects	None
Risks	None
Pre-Condition	a day is chosen
Post-Condition	appearance of popup

Table 15: Confirm appointment Function Description

Function Name	confirmAppointment
Description	The function confirmAppointment takes the chosen day by the user and sends it to the admin.
Inputs	Event Listener for Confirmation button
Source	user presses on confirmation button
Outputs	popup alerting the user that his appointment is being reviewed by an admin, email to admin about the appointment information
Destination	User interface.
Action	the user presses on the confirmation button. upon pressing the function sends an email to the admin about the appointment and a popup for the user alerting him that his appointment is being reviewed by an admin
Requirements	None
Criticality	High
Side effects	None
Risks	popup doesn't appear. email is not sent to admin.
Pre-Condition	popup of appointment confirmation
Post-Condition	popup of appointment being reviewed by admin

Table 16: Cancel appointment Function Description

Function Name	cancelAppointment
Description	The function cancelAppointment sends an email to the admin informing him of the cancelation of the appointment.
Inputs	Event Listener for Cancel button
Source	user presses on cancel button
Outputs	popup alerting the user that his appointment is canceled
Destination	User interface.
Action	the user presses on the cancel button. upon pressing the function sends an email to the admin about the appointment being canceled and a popup for the user alerting him that his appointment is canceled
Requirements	None
Criticality	High
Side effects	None
Risks	popup doesn't appear. email is not sent to admin.
Pre-Condition	cancel button at appointment page
Post-Condition	popup of appointment cancelation

Table 17: Add user Function Description

Function Name	addUser
Description	The admin is able to add a user from the admin page.
Inputs	user information(Name,Age,Number.Email)
Source	admin adds a user through admin page
Outputs	A new user add to database
Destination	Users database.
Action	the admin enters the user information then presses on add user button. then a new user is add to the users database and a popup appears confirming that the user has been added.
Requirements	applicable user information
Criticality	medium
Side effects	None
Risks	user is not add to database
Pre-Condition	add user page
Post-Condition	popup confirming user is added successfully

Table 18: Delete user Function Description

Function Name	DeleteUser
Description	The admin is able to delete a user from the admin page.
Inputs	user information(Name,Age,Number.Email)
Source	admin deletes a user through admin page
Outputs	A user is deleted from database
Destination	Users database.
Action	the admin enters the user information then presses on delete user button. then the user is deleted from the users database if he exists and a popup appears confirming that the user has been deleted. if the user is not in the users database, a popup appears alerting the admin that the user does not exist
Requirements	user exists in database
Criticality	medium
Side effects	None
Risks	user is not deleted from database
Pre-Condition	delete user page
Post-Condition	popup confirming user is deleted successfully or does not exist

Table 19: Confirm volunteer appointment Function Description

Function Name	confirmVolunteerAppointment
Description	The admin confirms the volunteer's appointment after receiving the appointment email and an email is sent to the volunteer automatically and adds the appointment to the appointments database.
Inputs	volunteer information (Name, Age, Number, Email)
Source	admin recives an appointment email
Outputs	email sent to volunteer confirming his appointment and appointment add to database
Destination	volunteer's email
Action	the admin receives a volunteer's appointment email, the admin then confirms the appointment which calls this function sending an email automatically to the volunteer informing him that the appointment is confirmed and adds the appointment to the appointments database.
Requirements	Admin receives an appointment email
Criticality	High
Side effects	None
Risks	confirmation Eamil is not sent, appointment is not add to database
Pre-Condition	appointment email
Post-Condition	Confirmation email

Table 20: Add Admin Function Description

Function Name	addAdmin
Description	The admin is able to add an admin from the admin page.
Inputs	Admin information(Name,Age,Number.Email)
Source	admin adds an admin through admin page
Outputs	A new admin add to database
Destination	Admins database.
Action	the admin enters the new admins information then presses on add admin button. then a new admin is add to the admins database and a popup appears confirming that the admin has been added.
Requirements	applicable admin information
Criticality	medium
Side effects	None
Risks	admin is not add to database
Pre-Condition	add admin page
Post-Condition	popup confirming admin is added successfully

Table 21: View all appointments Function Description

Function Name	viewAppointments
Description	The function shows a all appointments confirmed by the admin through the view appointments page open only for admins.
Inputs	None
Source	view appointments page
Outputs	list of all appointments confirmed by the admin
Destination	admin page.
Action	the function takes all appointments inside the appointmsnts database and shows them to the admin through the view appointments page.
Requirements	None
Criticality	Medium
Side effects	None
Risks	appointments do not appear.
Pre-Condition	empty view appointments page
Post-Condition	appointments page with list of all appointments confirmed

Table 22: View all users Function Description

Function Name	viewUsers
Description	The function shows a all users registered through view users page open only for admins.
Inputs	None
Source	view users page
Outputs	list of all users registered
Destination	admin page.
Action	the function takes all users inside the users database and shows them to the admin through the view users page.
Requirements	None
Criticality	Medium
Side effects	None
Risks	Users do not appear.
Pre-Condition	empty view users page
Post-Condition	Users page with list of all users registered

Table 23: Confirm physical donation Function Description

Function Name	confirmPhysicalDonation
Description	The admin confirms the physical donation (clothes,food) after receiving the donation email and an email is sent to the user automatically informing them that they will receive the donation.
Inputs	donation email
Source	admin receives a donation email
Outputs	email sent to user confirming his donation is appreciated and will be received
Destination	user's email
Action	the admin receives a donation email, the admin then confirms the donation which calls this function sending an email automatically to the user informing him that the donation is appreciated and will be received.
Requirements	Admin receives a donation email
Criticality	High
Side effects	None
Risks	confirmation Eamil is not sent.
Pre-Condition	donation email
Post-Condition	Confirmation email

Table 24: Register Function Description

Function Name	Register
Description	The function allows a user to register to the system.
Inputs	user information (Name,Age,Number.Email,Password)
Source	Sign in page
Outputs	A new user is add to the users database, a popup confirming success or failure of registration.
Destination	sign in page.
Action	the function takes the information entered by the user. if the information is applicable, a new user is add to the users database then a popup appears confirming a successful registration and redirects the user to sign in page, and if information is not applicable then a popup appears informing of the failure of registration.
Requirements	user enters information
Criticality	Low
Side effects	None
Risks	User is not add to Users database, popup doesn't appear.
Pre-Condition	user registers his account
Post-Condition	user redirected to sign in page if successful registration.

Table 25: SignIn Function Description

Function Name	SignIn
Description	The function signs in a user or an admin if they exist.
Inputs	information (Email,Password)
Source	Sign in page
Outputs	success or failure of signing in.
Destination	sign in page.
Action	the function takes the information entered by the user or admin. if they exist then sign in is successful if not then a popup appears informing them that they need to register first.
Requirements	information is entered
Criticality	Low
Side effects	None
Risks	Unable to sing in.
Pre-Condition	User or admin enters his account
Post-Condition	user redirected to home page if successful signin.

4 Interface Requirements

This section describes how the software interfaces with other software products or users for input or output. Examples of such interfaces include library routines, token streams, shared memory, data streams, and so forth.

4.1 User Interfaces

Use some software for primitive plan of your project. Describes how this product interfaces with the user.

4.1.1 GUI
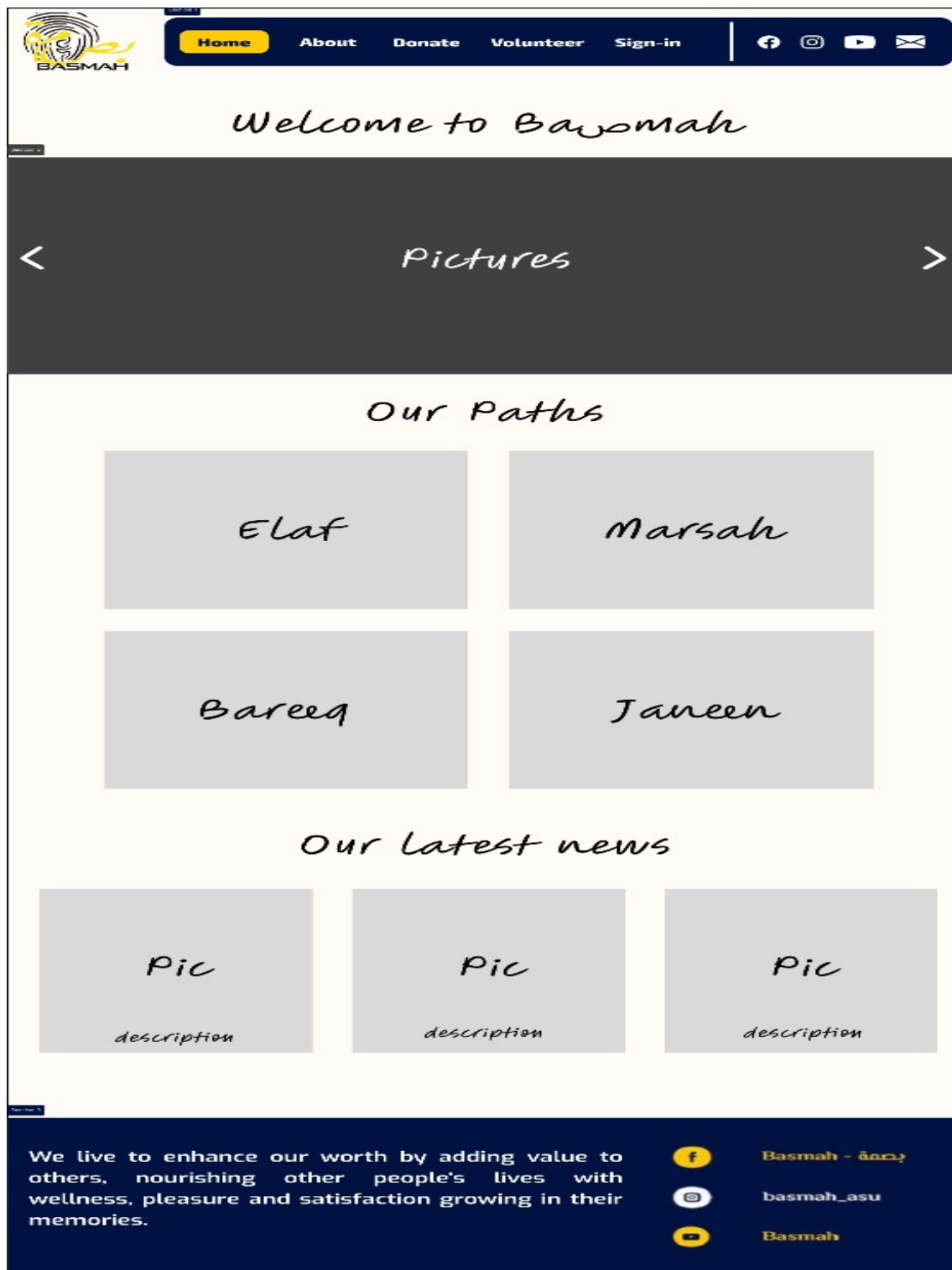
Home **About** **Donate** **Volunteer** **Sign-in**

Basmah was founded in 2015 by an eager group of engineering students in Ain Shams University and after 9 years of hard work and reformation, Basmah is defined as a community development student activity that aims to create a difference in the underprivileged children's lives through education.

We have our educational system that works on (Self-awareness, influence of surroundings - self-esteem - learning - acceptance - expression - giving - security and Health - good manners).
We work with children through weekly sessions. The categories that we reached in Basmah are:
 1. Refugee Children.
 2. Disadvantaged children.
 3. Orphanage children.
 4. Children with visual impairments.

We live to enhance our worth by adding value to others, nourishing other people's lives with wellness, pleasure and satisfaction growing in their memories.

Basmah - بصمة

basmah_asu

Basmah

Choose Path

Elaf	Marsah
Bareeq	Janeen

Choose interview date

Calendar

Choose timeslot

Available timeslots ⌄

Confirm

We live to enhance our worth by adding value to others, nourishing other people's lives with wellness, pleasure and satisfaction growing in their memories.

Basmah - بصمة

basmah_asu

Basmah

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Home   **About**   **Donate**   **Volunteer**   **Sign-in**

Choose Path

Elaf	Marsah
Bareeq	Janeen

Choose Payment Type

Money	Physical*
	^Anything that is not money like clothes, blankets , etc.

Confirm

We live to enhance our worth by adding value to others, nourishing other people's lives with wellness, pleasure and satisfaction growing in their memories.

Basmah – بصمة

basmah_asu

Basmah

5 Non-functional Requirements

5.1 Security

In order to uphold the highest standards of privacy and data security, access to personal information of individual users is restricted to designated administrators only. Users are expressly prohibited from viewing or accessing personal details of fellow users. This measure ensures the confidentiality and integrity of sensitive information. A functional requirement named restrictUserPersonalInfoAccess(accessLevel) that will check the user's access level to either hide other users' information or not.

5.2 Compatibility

The system should be compatible with different devices(mobile phone, computers, tablets). This will be implemented by insuring that bootstrap is used in all pages.

5.3 Accessibility

System should comply with disability regulations. This will be applied by integrating "text-to-speech".

5.4 Availability

The system should be accessible for as long as possible and upon failure messages should be sent ensuring that the staff are aware of this failure and measures are taken. This will be implemented by using the functional requirement alertSystemFailure(responseError).

6 Preliminary Object-Oriented Domain Analysis
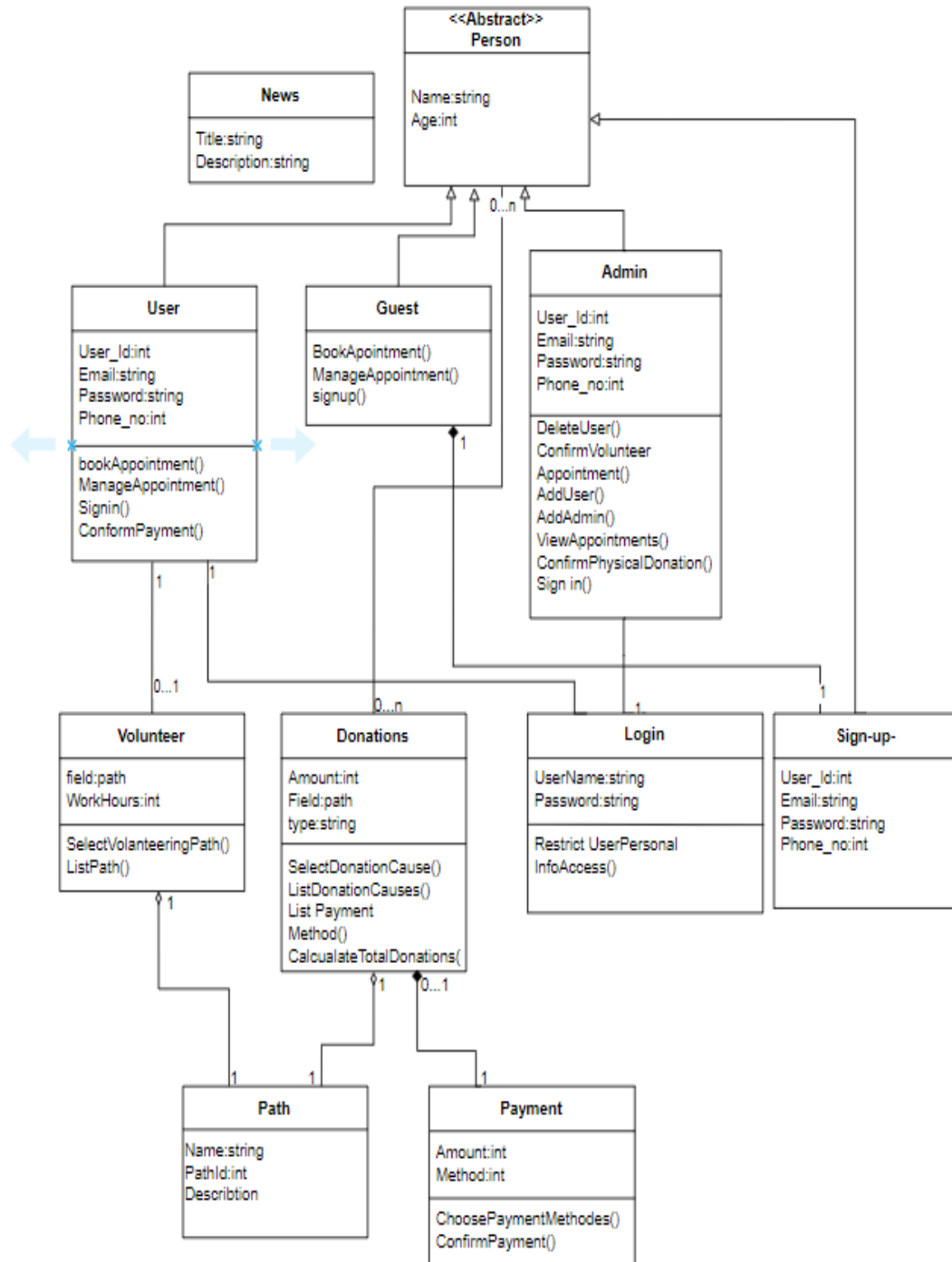
7 References

Basamah Facebook page
Basmah Asu