Pakistan Hajj Volunteer Group(PHVG) Saudi Arabia is the non-ethnic and non-political based volunteer organization to help out the guests of Almighty Allah during the Hajj in Mina and surroundings each year. This has started since long, however, it has been documented as an organization since 2011. Now the group works under the Pakistan Hajj Mission and the under the umbrella of Pakistan Embassy. The main theme behind the group activity is to register volunteers who are Pakistani national and are working/settled in the Kingdom and are willing to serve in what so ever capacity to guide the Hujjaj to their camps/buildings or help them to find their beloved ones etc.

The Functional Requirements:

The group is divided into various regions, like e.g. Riyadh, Dammam, Jeddah, Jazan etc. Each region has core committee comprising of all dedicated volunteers and the whole group contains selected members of the regional core committees. Volunteers from various regions are registered. Teams are formed from the volunteers who are working in various companies, have different education level and skills set. Each team has team leader and assistant team leader(s) who are selected based on certain criteria. The rest of the team is also formed based on certain known criteria like E.g. Each team has x number of volunteers who have past year(s) experience with PHVG, y number of volunteers who are good at map reading, and z number of volunteers who are good in health and can do the labor work like driving wheel chairs etc. The number of team members in each team is already known and can vary e.g. a team which overlooks the field work in Mina of various teams may comprise of 3-4 members while field teams may have 20/25/30 or 36 members. So All teams are assigned tasks which they perform in the Hajj Operation, like Call Center Management, Field Work to Guide Hajis, Building management, Supervision, etc. For the volunteers there are various Events and Training sessions through out the year like e.g. After Hajj get together/Dinner, Feedback Meeting, and before hajj Training sessions (at various locations and times conducted by the core committee members of that region). Volunteers have attendance for the event/session. Transportation and stay arrangements are also made. Volunteers are allotted the Vehicle numbers (e.g. Bus number and Seat number). Volunteers can also be shuffled/dropped/added from/to (a) team and (b) vehicles through the system.

Timeline of events should also be added, like the Activities Planned and Activities conducted, Monthly and weekly basis.

The core committee members should have an emergency/last moment quota of volunteers which should last say until 2 weeks before the Hajj.

The Core Committee members should have their own consoles on which they can view the Job assigned to them, the priorities of task(s) and Percentage completion etc.

Description

The portal system not only records the volunteer information, but also guides them about the whole process of the Hajj Operation and activities being arranged for their participation and knowledge.

E.g. The volunteers are asked to register on the portal. They enter their information, recent snap and soft copy of their Residence Card. They can then see on the system that what are the next steps. The steps are

1. Registration

2. Training (Eligible to attend) should be able to view that when and where he attended the training session(s), if attended. And what are the upcoming ones. (Volunteers may go for quizzes or Practice if they have attended the training)

3. Selected for the team formation (or not)

4. Team # allocated, Team leader details and Highlighted post in Mina

5. Bus/Vehicle number (To and From Makkah)

6. Final Departure date/time, place to gather, Volunteer kit and card collection time/place/person etc.

There should also be a picture gallery where all the old snaps are available. A volunteer could also upload images but must be approved by Admin before showing them up.

The Registration For each volunteer should be in the form of short forms with save and next options so that if their internet connection gets disturbed they should not rewrite all information. The registration form should also allow them to add any kind of image (jpg, png, tiff etc) and should also provide the preview and cropping facility if possible. In the backend system should save all images in a uniform extension.

Development Tools

We have selected MS. ASP.NET 2015 for the Application Front End Development and MS. SQL Server 2014 for the System Database.

Database Tables

Following are the database tables designed in the MS. SQL Server 2014, The Abstract Entity Relationship Diagram is also attached for the review.

Volunteers

Column Name	Data Type	Allow Nulls
VolunteerID	bigint	☐
IqamaNo	nvarchar(10)	☐
Name	nvarchar(300)	☑
IqamaExpiryDate	nvarchar(50)	☑
DoB	date	☑
MobileNo	nvarchar(10)	☑
PastExperience	int	☑
Education	nvarchar(100)	☑
CompanyName	nvarchar(200)	☑
Profession	nvarchar(200)	☑
Skills	nvarchar(100)	☑
Allergies	nvarchar(MAX)	☑
PrefferedJob	nvarchar(100)	☑
EmergencyContactPerson	nvarchar(200)	☑
ECPRelation	nvarchar(200)	☑
ECPMobile	nvarchar(15)	☑
RegionID	int	☑
PicturePath	nvarchar(200)	☑
IqamaPath	nvarchar(200)	☑
		☐

YearlyRegistration

Column Name	Data Type	Allow Nulls
RegistrationID	bigint	☐
Name	nvarchar(MAX)	☑
HijriYear	nvarchar(50)	☑
GregorianYear	nvarchar(50)	☑
		☐

VolunteerRegistration

Column Name	Data Type	Allow Nulls
🔑 RegistrationID	bigint	☐
🔑 VolunteerID	bigint	☐
AvailableFrom	nvarchar(20)	☑
AvailableTo	nvarchar(20)	☑
RegionID	bigint	☑
VehicleIDTo	bigint	☑
VehicleIDFrom	bigint	☑
		☐

BlackListed

Column Name	Data Type	Allow Nulls
🔑 BListID	bigint	☐
VolunteerID	bigint	☑
Remarks	nvarchar(MAX)	☑
		☐

Login

Column Name	Data Type	Allow Nulls
🔑 LoginID	bigint	☐
UserName	nvarchar(50)	☑
Password	nvarchar(100)	☑
RoleID	bigint	☑
VolunteerID	bigint	☑
		☐

Roles

Column Name	Data Type	Allow Nulls
RoleID	bigint	☐
RoleName	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
		☐

Languages

Column Name	Data Type	Allow Nulls
LanguageID	bigint	☐
Name	nvarchar(100)	☑
		☐

VolunteerLanguages

Column Name	Data Type	Allow Nulls
VolunteerID	bigint	☐
LanguageID	bigint	☐
Profficiency	nvarchar(100)	☑
		☐

Regions

Column Name	Data Type	Allow Nulls
RegionID	int	☐
Name	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
		☐

City

Column Name	Data Type	Allow Nulls
CityID	bigint	☐
Name	nvarchar(100)	☑
Description	nvarchar(300)	☑
		☐

Suburb

Column Name	Data Type	Allow Nulls
SuburbID	bigint	☐
Name	nvarchar(100)	☑
Description	nvarchar(300)	☑
		☐

CoreCommittee

Column Name	Data Type	Allow Nulls
CommitteeID	bigint	☐
Title	nvarchar(200)	☑
Description	nvarchar(MAX)	☑
RegionID	int	☑
		☐

CoreCommitteeVolunteers

Column Name	Data Type	Allow Nulls
CommitteeID	bigint	☐
VolunteerID	bigint	☐
Description	nvarchar(MAX)	☑
		☐

CoreTeams

Column Name	Data Type	Allow Nulls
CoreTeamID	bigint	☐
Name	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
TeamLead	bigint	☑
		☐

CoreTeamMembers

Column Name	Data Type	Allow Nulls
🔑 CoreTeamID	bigint	☐
🔑 MemberID	bigint	☐
Remarks	nvarchar(MAX)	☑
▶		☐

CoreTasks

Column Name	Data Type	Allow Nulls
🔑 CoreTaskID	bigint	☐
Name	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
▶		☐

CoreTeamTasks

Column Name	Data Type	Allow Nulls
🔑 CoreTeamID	bigint	☐
🔑 CoreTaskID	bigint	☐
▶		☐

Meeting

Column Name	Data Type	Allow Nulls
🔑 MeetingID	bigint	☐
CommitteeID	bigint	☑
MeetingDate	date	☑
Agenda	nvarchar(MAX)	☑
Remarks	nvarchar(MAX)	☑
Decisions	nvarchar(MAX)	☑
Venue	nvarchar(MAX)	☑
▶		☐

MeetingAttendance

	Column Name	Data Type	Allow Nulls
🔑	AttendanceID	bigint	☐
	MeetingID	bigint	☑
	MemberID	bigint	☑
	AttendanceStatus	nvarchar(100)	☑
▶			☐

Message

	Column Name	Data Type	Allow Nulls
▶🔑	MessageID	bigint	☐
	Message	nvarchar(MAX)	☑
	GeneratedBy	bigint	☑
			☐

VolunteerMessage

	Column Name	Data Type	Allow Nulls
▶🔑	MessageID	bigint	☐
🔑	VolunteerID	bigint	☐
	MsgDate	date	☑
			☐

Team

	Column Name	Data Type	Allow Nulls
▶🔑	TeamID	bigint	☐
	TeamName	nvarchar(100)	☑
	TotalVolunteers	int	☑
	TeamLead	bigint	☑
	AssistantTeamLead	bigint	☑
	DeploymentID	bigint	☑
			☐

TeamMembers

Column Name	Data Type	Allow Nulls
🔑 TeamID	bigint	☐
🔑 VolunteerID	bigint	☐
		☐

Tasks

Column Name	Data Type	Allow Nulls
🔑 TaskID	bigint	☐
Title	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
Remarks	nvarchar(300)	☑
		☐

TeamTasks

Column Name	Data Type	Allow Nulls
🔑 TeamID	bigint	☐
🔑 TasksID	bigint	☐
Comments	nvarchar(MAX)	☑
		☐

Deplyoment

Column Name	Data Type	Allow Nulls
DeploymentID	bigint	☐
Name	nvarchar(100)	☑
Description	nvarchar(MAX)	☑
isFieldPost	bit	☑
PostName	nvarchar(100)	☑
GISLocation	nvarchar(200)	☑
RelevantInfo	nvarchar(MAX)	☑
		☐

Training

Column Name	Data Type	Allow Nulls
TrainingID	bigint	☐
Title	nvarchar(200)	☑
Venue	nvarchar(MAX)	☑
Coordinates	nvarchar(100)	☑
TrainerID	nvarchar(50)	☑
TrainingDate	date	☑
RegionID	int	☑
		☐

TrainingAttendance

Column Name	Data Type	Allow Nulls
TrainingID	bigint	☐
VolunteerID	bigint	☐
Status	nvarchar(50)	☑
		☐

Vehicles

Column Name	Data Type	Allow Nulls
VehicleID	bigint	☐
RegNo	nvarchar(20)	☑
OwnerID	nvarchar(50)	☑
DriverID	nvarchar(10)	☑
DriverName	nvarchar(50)	☑
RegistrationExpiry	date	☑
isVolunteer	bit	☑
VolunteerID	bigint	☑
VehicleDetailID	bigint	☑
		☐

VehicleDetails

Column Name	Data Type	Allow Nulls
🔑 VehicleDetailID	bigint	☐
VehicleType	nvarchar(50)	☑
Capacity	int	☑
Model	nchar(10)	☑
		☐

Event

Column Name	Data Type	Allow Nulls
🔑 EventID	bigint	☐
Title	nvarchar(200)	☑
Description	nvarchar(MAX)	☑
Venue	nvarchar(MAX)	☑
Coordinates	nvarchar(100)	☑
EventDate	date	☑
RegionID	int	☑
		☐

EventAttendence

Column Name	Data Type	Allow Nulls
🔑 VolunteerID	bigint	☐
🔑 EventID	bigint	☐
Status	nvarchar(50)	☑
		☐

Accomodation

Column Name	Data Type	Allow Nulls
🔑 AccomodationID	bigint	☐
Name	nvarchar(100)	☑
Address	nvarchar(300)	☑
GpsCoordinates	nvarchar(200)	☑
Descriptions	nvarchar(MAX)	☑
Rooms	bigint	☑
Capacity	nvarchar(50)	☑
▶		☐

VolunteerAccomodation

Column Name	Data Type	Allow Nulls
🔑 VolunteerID	bigint	☐
🔑 RoomNo	nvarchar(50)	☐
🔑 RegistrationID	bigint	☐
AccomodationID	bigint	☑
Description	nvarchar(MAX)	☑
▶		☐