

volunteer-management-application

SUMMARY

The purpose of this application is to provide a demonstration of a HR-type management system tailored for the needs of volunteer activities. This application was built as a course project and is meant for educational purposes only.

GENERAL

The demonstration setting is a fictional helpline service that provides counseling services for youth via digital platforms. Helpline contacts are answered by volunteer counselors who work under the supervision of a helpline team. The helpline team provides the volunteers a basic training for the task, additional training to update and enhance skills and tools required to carry out the helpline tasks. Volunteers are provided with additional support in the form of development discussions.

The helpline staff needs to store information on the volunteer workers to maintain the helpline activities. The basic principle is to store only information that is necessary and relevant for the helpline activity. A detailed list of information is described later on. Because the nature of this project is educational, some information requiring the storing of more sensitive content has been opted out to make sure that not in any point of development and testing such information would be submitted into this application and stored in its database (for instance a background check done to volunteers working with children and adolescents). Additionally because of the scope of the course the focus is on the most relevant basic features.

FEATURES

This application can be used in different roles. Helpline coordinators manage personal information stored about volunteers. Coordinators also create accounts for volunteers. Volunteers use this application to report on volunteer activities they perform. Volunteers have an access to review what information has been stored about them. The application also has an administrator who has access to some additional features in the application (detailed below). The helpline staff can send messages to a volunteer and a volunteer can send messages to the helpline staff.

1. Coordinators

Coordinators manage personal information collected and stored about each volunteer. Coordinators can add new volunteers and update information on existing volunteers. Coordinators can send volunteers messages (detailed in part 4) and review all information available on each volunteer. Following information will be stored in the application on each volunteer. Items marked with * are mandatory, other items are optional.

- last name*
- first name*
- username*
- email address*
- phone number*
- date volunteer career started*
- date career ended
- level of activity (two or more shifts month, one shift per month, on a leave, terminated)*
- basic training (date graduated)*
- additional trainings
- tools provided (laptop, smartphone, headset)
- development discussions held (date)

2. Volunteers

Volunteers can review information stored about them and volunteers can send messages to staff. Volunteers can submit tasks they have completed. A task includes a date, type of task and brief summary of activities performed.

- date (dd.mm.yyyy)
- type of activity (chat-counselling / phone counselling / group chat supervisor)
- summary of activity (open text field)

3. Administrator

Administrator can perform all the tasks a coordinator can perform. Additionally an administrator can add new types of training modules, new types of tools, new types of volunteer activities. An administrator can also create new coordinators

Optional: An administrator can also delete volunteers. Upon deletion a volunteer will be 'pseudonymized,' meaning all personal information will be removed but all activity will be kept intact.

4. Personal message

A personal message can be sent to a volunteer through the application. Sent messages form a correspondence. The correspondence can be seen by the volunteer, all coordinators and all administrators. Message content:

- timestamp (hh:mm dd.mm.yyyy)
- message sender
- message content

5. Creating a new user

Administrators can create new coordinators and volunteers. Coordinators can create new volunteers. For each created user a default password is set (I.e. password: changeme). Upon first login the password has to be reset.

DATAMODEL

This is an initial concept for the data model. The datatypes will be clarified later when the database solution has been familiarized with.

Table: Users

Description: contains basic user information. All users are stored in the same table. The role defines what is the role for each user.

user_id (PRIMARY ID KEY)

role (VARCHAR)

lastname (VARCHAR)

firstname (VARCHAR)

username (VARCHAR)

email (VARCHAR)

phone (VARCHAR)

startdate (DATE)

enddate (DATE)

basictraining (DATE)

Table: Activitylevel

Description: This table details the available activity levels.

activity_id (PRIMARY ID KEY)

level [two or more shifts month, one shift per month, on a leave, terminated]

Table: Currentactivity

Description: this table stores all the instances in which the activity level for each volunteer has been set. This could be used in future to track how well each volunteer has committed to the mutually agreed upon activity level. That is beyond the scope of this project, but this solution creates a foundation for future additional development.

date (DATE)

from table: Users: user_id

from table: Activitylevel: activity_id

Table Tasks

Description: This table contains the different tasks volunteers can participate in

task_id (PRIMARY ID KEY)

task (VARCHAR)

Table Volunteerqualification

Description: This table contains a list of tasks each volunteer has been approved to carry out.

from table: Users: user_id

from table: Tasks: task_id

Table: Volunteeraction

Description: This table contains all the activities volunteers have carried out.

from table: Users: user_id

from table: Tasks: task_id

date (DATE)

description (VARCHAR)

Table: Additionaltrainings

Description: This table details the additional training modules available to volunteers.

training_id (PRIMARY ID KEY)

training (VARCHAR)

Table: Tools

Description: This table details the tools that can be loaned to volunteers.

tool_id (PRIMARY ID KEY)

tooltype (VARCHAR)

serialnumber (VARCHAR)

loaned (BOOLEAN)

Table: Loanedtools

Description: details the tools given to each volunteer

from table: Users: user_id

from table: Tools: tool_id

loandate (DATE)

returndate (DATE)

loaned (BOOLEAN)

Table: Developmentdiscussion

Description: The date, volunteer_id and coordinator_id are stored.

date (DATE)

volunteer_id from table: Users: user_id

coordinator_id from table: Users: user_id

Table: Messages

Description: This table contains sent messages. Every row includes the message id, volunteer to whom the message is related to, sender id, timestamp and the message content.

msg_id (PRIMARY ID KEY)

volunteer_id (from Table Users: user_id)

sender_id (from Table Users: user_id)

timestamp (TIMESTAMP)

content (A DATATYPE THAT CAN HANDLE LONG STRINGS OF TEXT)

Table: Password

Description: This table contains encrypted versions of user passwords

from table: Users: user_id

password (VARCHAR)

Table: log

Description: Contains information on actions performed in the application. Description contains a description of the action carried out (i.e. updated field 'email').

user_id (from table: Users: user_id)

timestamp (TIMESTAMP)

description: (VARCHAR)