

Project Report

CS 219 Database Systems

Project Title: Emergency Services (Web App)

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Introduction:

The main purpose of this project is to facilitate people in trouble and provide ease when they require emergency assistance. The project is designed with an amazing and user-friendly interface so that people don't panic or hesitate to register their complaints.

The project archives the main idea that it was designed for.

The project consists of 2 portals: the user portal and the application manager portal.

The user portal which comes with an elegant design allows the user to sign up for an account email verification. During the sign-up procedure, the user is assigned a unique id that helps to identify the user at the back-end. The user once signed up can now sign-in and file complaints in case of emergencies. The user is given an option to see the complaint history split into 3 different categories:

1. Generating (The complaints that have been filed but haven't been handled)
2. Processing (The complaints are being handled)
3. Solved (The complaints have been solved)

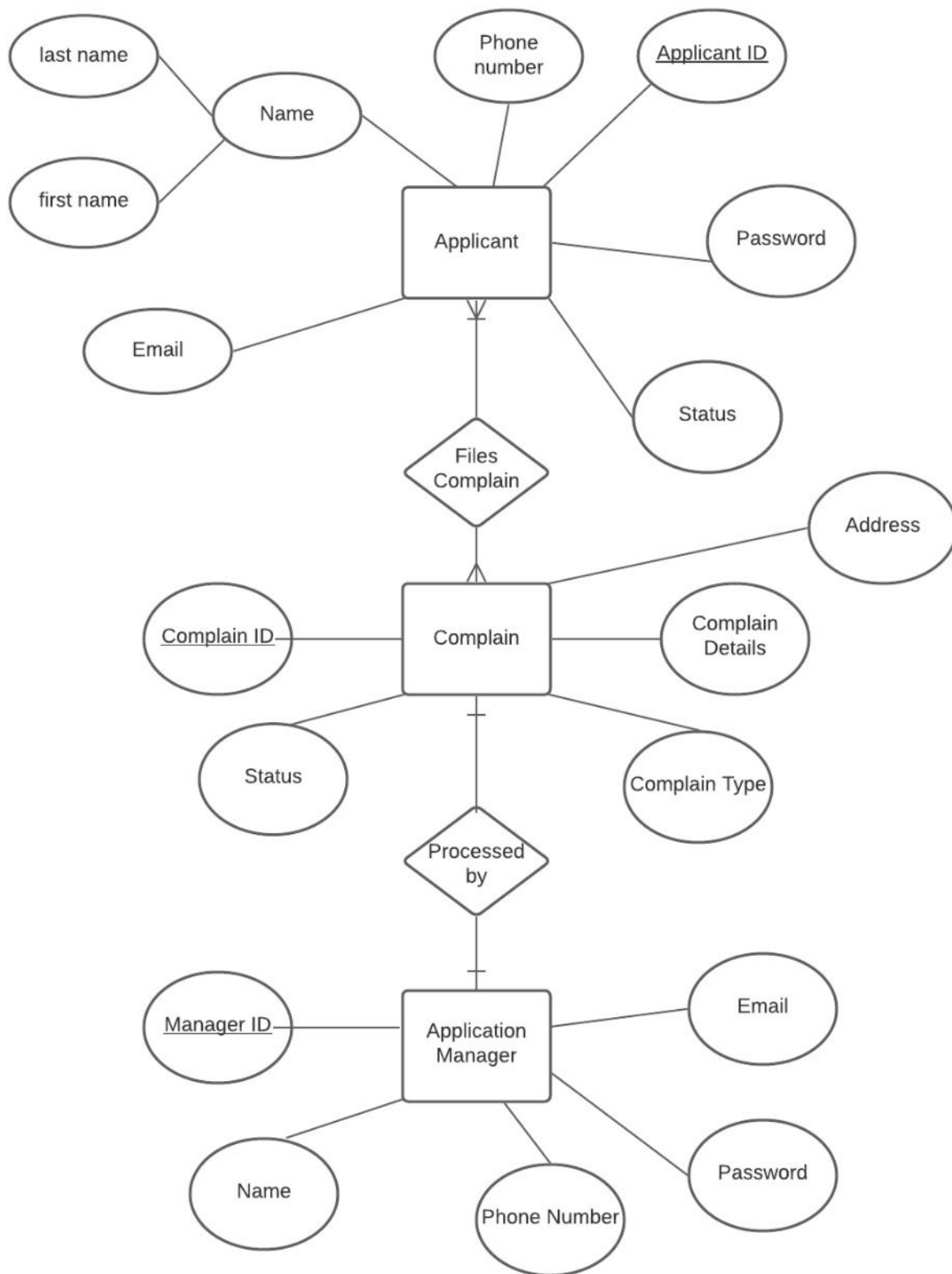
The user can also see the detailed complaints and if there are any issues the user can administer them on call. In case if there is some issue in the complaint the user can call the authorities so they can guide the user and help them not to panic

The administration will sign up an account for the application manager and assign his/her respective emails. Once the managers have been assigned their emails they can look into the emails and update the status of the complaint.

The application manager will verify all the complaints on call through their respective service centers once the applications have been verified they are sent to the process stage where the application manager will get in touch with the services and alert them via call. Once everything is done the status is updated accordingly (Dispatch, Arrive).

Once the situation is dealt with the emergency services will update the application manager thus he/she will update the status of the application.

Entity Relationship Diagram:



Database Schema Design:

application_user

user_id	varchar(30)	PK
username	varchar(50)	
email	varchar(50)	
phone	number	
pass	varchar(50)	
status	varchar(30)	

complain

complain_id	varchar(50)	PK
user_id	varchar(30)	PK FK
status	varchar(50)	
complain_type	varchar(30)	
complain_details	varchar(500)	NULL
app_id	varchar(30)	NULL FK
address	varchar(50)	NULL

application_manager

app_id	varchar(30)	PK
username	varchar(50)	
email	varchar(50)	
phone	number	
pass	varchar(50)	

Main Features: (Features are already explained in introduction)

User Panel:

1. File Complaint
2. Complaint Status
3. Complaint History

Application Manager Panel:

1. View Complaints
2. Update Complaints Status
3. View Complaint Details

Technologies Used:

- HTML
- CSS
- Javascript
- Flask
- Oracle

Challenges and Issues:

The main challenge that we faced was time management as we were short of time because we had to learn and implement flask at the same time. Along with this, we had faced issues while connecting Oracle Database with Flask we weren't able to implement the join and where clause so we had implemented it using loops but later on with some research and it took some time before we got our hands on official Oracle documentation for flask which was one of the major resources that we had used during the project.

We also had a problem while reading input from Html Forms it was a technical problem that was resolved after I posted the query on stack overflow (I have attached the link to the question in resources)

The major problems we faced were during the start of the project that I have mentioned above. Once these problems were resolved there were minor problems like indentation issues, wrong variable usage, etc.

Github Link:

<https://github.com/Adil-Asif/Emergency-Service>

References

- ❑ https://oracle.github.io/python-cx_Oracle/samples/tutorial/Python-and-Oracle-Database-Scripting-for-the-Future.html
- ❑ https://www.youtube.com/watch?v=MwZwr5Tvyxo&list=PL-osiE80TeTs4UjLw5MM6OjgkjFeUxCYH&ab_channel=CoreySchafer (Bits and Pieces of this playlist were watched)
- ❑ <https://stackoverflow.com/questions/65273758/flask-is-unable-to-pick-data-from-html-form/65273826#65273826>