A

Project Report

On

Online Crime Reporting System

Submitted To

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DECLARATION

I, Yash Chaturvedi, hereby declare that the presented project report titled "**ONLINE CRIME REPORTING SYSTEM"** is uniquely prepared by me after the completion of project.

I also confirm that the report is only prepared for my academic requirement, not for any other purpose. It might not be used with the interest of the opposite party of the corporation.

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ACKNOWLEDGEMENT

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I would like to say thanks to EISystems Services for the opportunity given to me as an intern in the Python Development Section.

Special thanks go to Mr. Mayur Dev Sewak, General Manager, Operations, EISystems Services.

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Finally, I would like to extend my heartfelt gratitude to my family members for all the support and friends for their invaluable support throughout the internship.

ABSTRACT

Here I want to create an online crime reporting system software which is well accessible to the general public, the department of local government and there-fore the body department. The traditional public in Asian country is afraid to lodge a grievance as a result of their full of a false worry regarding the department of local government. A web grievance registering system can allay the fears of the general public and can conjointly facilitate within the public serving to the department of local government in catching criminals. This system has been taken as a protective and safety-based application for both public and government interest.

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NOTATIONS

NET	:	NETWORK ENABLED TECHNOLOGIES
FRT	:	FACE RECOGNITION TECHNIQUE
CLR	:	COMMON LANGUAGE RUNTIME
ADO.NET	:	ACTIVEX OBJECT DATA
OLEDB	:	OPEN LINK ENVIRONMENT DATABASE
DDL	:	DATA DEFINITION LANGUAGE
DML	:	DATA MANIPULATION LANGUAGE
UML	:	UNIFIED MODELLING LANGUAGE
DLL	:	DYNAMIC LINK LIBRARIES

BACKGROUND OF STUDY

The quest to control crime and breakdown of law and order increases has the society grows and diversity of human intentions and interactions abound. An ideal society is governed by laws and regulations that are collectively agreed upon and measurable consequences that will be meted out for any member of the society that is found culpable to have floated any specific component of the legal infrastructure.

Besides the legal infrastructure in a society are the security apparatuses that enforce the law with the interest to maintain law and order. The legal infrastructures determine the extent to which law enforcement agents can act or protect the common interests of individuals in the society. It also outlines the civic responsibilities and human rights for the members of the society.

Customarily, members of the society are supposed to report any incidence of breakdown of law and order to the appropriate civil and military security apparatuses. Reported cases are also supposed to the intelligently collected, evaluated and investigated to a more conclusive and justifiable end. Evidences are collected, protected and properly examined before accuses persons are charges to Law court and fairly prosecuted. Investigations are carried out without fear or favor. In fact, any attempt to prevent due process during crime investigation is in itself a crime and it is also punishable under the law.

Until recently, the process of reporting and investigating crimes in the society has been mainly manual. Individuals who have some complaints will work into any offices of the security agents to inform and write in statement issues that may need their attention. At these offices, the security agents will raise an incidence form and ask the reporter to fill some appropriate segments. The security agents will also ask some intelligent question from the reporter and makes notes of preliminary investigations. Evidences suggested will be noted and further investigations will be followed up and new evidences will be collected, evaluated and protected.

SUMMARY

Online Crime Reporting System is a web-based application that is developed using Django. Crime is a part of illegal activities in human life. It is quite obvious that the rate of crimes is increasing day by day in all societies across the world, but we do believe that there is a lot which can be done by both the governments and the individuals to reduce the crimes in communities. The rise of population and complex society rises the range of anti-social conducts that must be restricted by the government through the military and different organizations particularly the Police Force. There are many current crime management systems which faces several difficulties, as there is no means to report crime instantly other than phone calls, messaging or face-to-face compliant filing. Hence, "Crime Report" has proposed an online crime reporting system which allows the user to file crime complaints. This system helps the users take an advantage of reporting any complaint from anywhere bringing the whole system online.

OBJECTIVE

The objective of the Crime Reporting System is to build up a web-based program to report the crimes that happen in the city. The system registers the complaints from the people through online web application where they can complain about the crime and it will be helpful for the police department in catching criminals. The person can give complaint at any time. There are many current crime management systems which faces several difficulties, as there is no means to report crime instantly other than phone calls, messaging or face-to-face compliant filing. Hence, we have proposed an online crime reporting system which allows the user to file complaints.

PROJECT DEVELOPMENT

Crime is a part of illegal activities in human life. It is quite obvious that the rate of crimes is increasing day by day in all societies across the world, but we do believe that there is a lot which can be done by both the governments and the individuals to reduce the crimes in communities. The rise of population and complex society rises the range of anti-social conducts that must be restricted by the government through the military and different organizations particularly the Police Force. There are many current crime management systems which faces several difficulties, as there is no means to report crime instantly other than phone calls, messaging or face-to-face compliant filing. Hence, I have developed an online crime reporting system which allows the user to file complaints or missing reports and keep a track of it. To file any of the complaint, the user should register in to the system and provide his right credentials to file them. The Front End of the crime reporting system is done using HTML, CSS, Bootstrap and SQLite serves as a backend to data. The system, has both the user as well the Admin Part. This system helps the users in taking advantage of reporting any complaint from anywhere bringing the whole system online.

BRIEF OVERVIEW OF THE TECHNOLOGIES USED

Front-end

1. HTML
2. CSS
3. Bootstrap

Back-end

1. Django
2. SQLite

SYSTEM ANALYSIS

Existing System:

System analysis is a detailed study of the various operation performed by a system and their relationships within and outside of the system. Here the key question is- What all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system.

During analysis data collected on the various files, decision points and transactions handled by the present system. Training, experience and common sense are required for collection of relevant information needed to develop the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution.

A good analysis model should provide not only the mechanisms of problem understanding but also the framework of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts:

- System planning and initial investigation
- Information Gathering
- Applying analysis tools for structured analysis
- Feasibility study
- Cost/ Benefit analysis

There are many current crime management systems which faces several difficulties, as there is no means to report crime instantly other than phone calls, messaging or face-to-face compliant filing. So, after conducting the feasibility study I decided to make an Online Crime Reporting System.

Proposed System:

Proposed system is an Online Crime Reporting System. Through this web-based application users can take advantage of reporting any complaint from anywhere bringing the whole system online which makes this web-based application future proof. Our proposed system has following advantages:

- User friendly Interface
- Fast access to database
- Less Error
- No chance of data misuse
- Not time consuming
- Look and Feel environment

All the manual difficulties have been rectified by implementing computerization.

FEASIBILITY ANALYSIS

Whatever we think need not be feasible. It is wise to think about the feasibility of any problem we undertake. Feasibility is the study of impact, which happens in the organization by the development of a system. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as Technical Feasibility and Economical Feasibility.

- **Technical Feasibility:** We can strongly say that it is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same is available in the organization; here we are utilizing the resources which are available already.

- **Economic Feasibility:** Development of this application is highly feasible. The organization needed not spend much more for the development of the system already available. The only thing is to be done is making an environment for the development with an effective supervision. I we are doing so; we can attain the maximum usability of the corresponding resources. Even after the development the organization will not be in a condition to invest more in the organization. Therefore, the system is economically feasible.

SYSTEM REQUIREMENTS

Now this online crime reporting system is designed in such a way that it takes fewer resources to work properly.

It has its own sort of minimum requirements that we need to take care of:

- The system needs a minimum of 2 GB of ram to run all the features smoothly and suddenly.
- It needs a minimum 1.3 GHz processor to rum smooth as less than that may create problems.
- The system needs to be operated by some authorized person as wrong hands can make it irresponsible.
- Rest is all up to the user's usage will care for hardware.
- For security Antivirus is recommended.

The system is made properly and all the testing is done as per the requirements. So, the rest of the things depend upon the user and no one can harm the data or the software if the proper care is done.

SYSTEM DESIGN

- **Input Design:**

  Input Design is the process of converting user-oriented input to a computer-based format. Input design is a part of overall system design, which requires very careful attention. Often the collection of input data is the most expensive part of the system.

  The main objectives of the input design are:

  1. Produce cost effective method of input
  2. Achieve highest possible level of accuracy
  3. Ensure that the input is acceptable to and understood by the staff.

  Input Data: The goal of designing input data is to make enter easy, logical and free from errors as possible. The entering data entry operators need to know the allocated space for each field; filed sequence and which must match with that in the source document. The format in which the data fields are entered should be given in the input form. Here data entry is online; it makes use of processor that accepts commands and data from the operator through a keyboard. The input required is analyzed by the processor. It is then accepted or rejected. Input stages include the following processes:

  - Data recording
  - Data Transcription
  - Data Conversion
  - Data Verification
  - Data Control
  - Data Transmission
  - Data Correction

One of the aims of the system analyst must be to select data capture method and devices, which reduce the number of stages so as to reduce both the chances of error and cost. Input types can be categorized as:

- External
- Internal
- Operational
- Interactive
- Computerized

Input files can exist in document from before being input to the computer. Input design is rather complex since it involves procedures for capturing data as well as inputting it to the computer.

- **Output Design:**
  Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of these results for latter consultation. Computer output is the most important and direct source of information to the users. Designing computer output should proceed in an organized well throughout the manner. The right output must be available for the people who find the system easy to use. The outputs have been defined during the logic design stage. If not, they should defined at the beginning of the output designing terms of types of output connect, format, response, etc.

  Various types of outputs are:
  - External Outputs
  - Internal Outputs
  - Operational Outputs
  - Interactive Outputs
  - Turn around Outputs

  All screens are informative and interactive in such a way that the user can full fill his requirements through asking queries.

DATABASE DESIGN

The general theme behind a database is to handle information as an integrated whole. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and effectively. After designing input and output, the analyst must concentrate on database design or how data should be organized around user requirements. The general objective is to make information access, easy quick, inexpensive and flexible for other users. During database design the following objectives are concerned:

- Controlled Redundancy
- Data Independence
- Accurate and integrating
- More information at low cost
- Recovery from failure
- Privacy and security
- Performance
- Ease of learning and use

DATA FLOW DIAGRAM

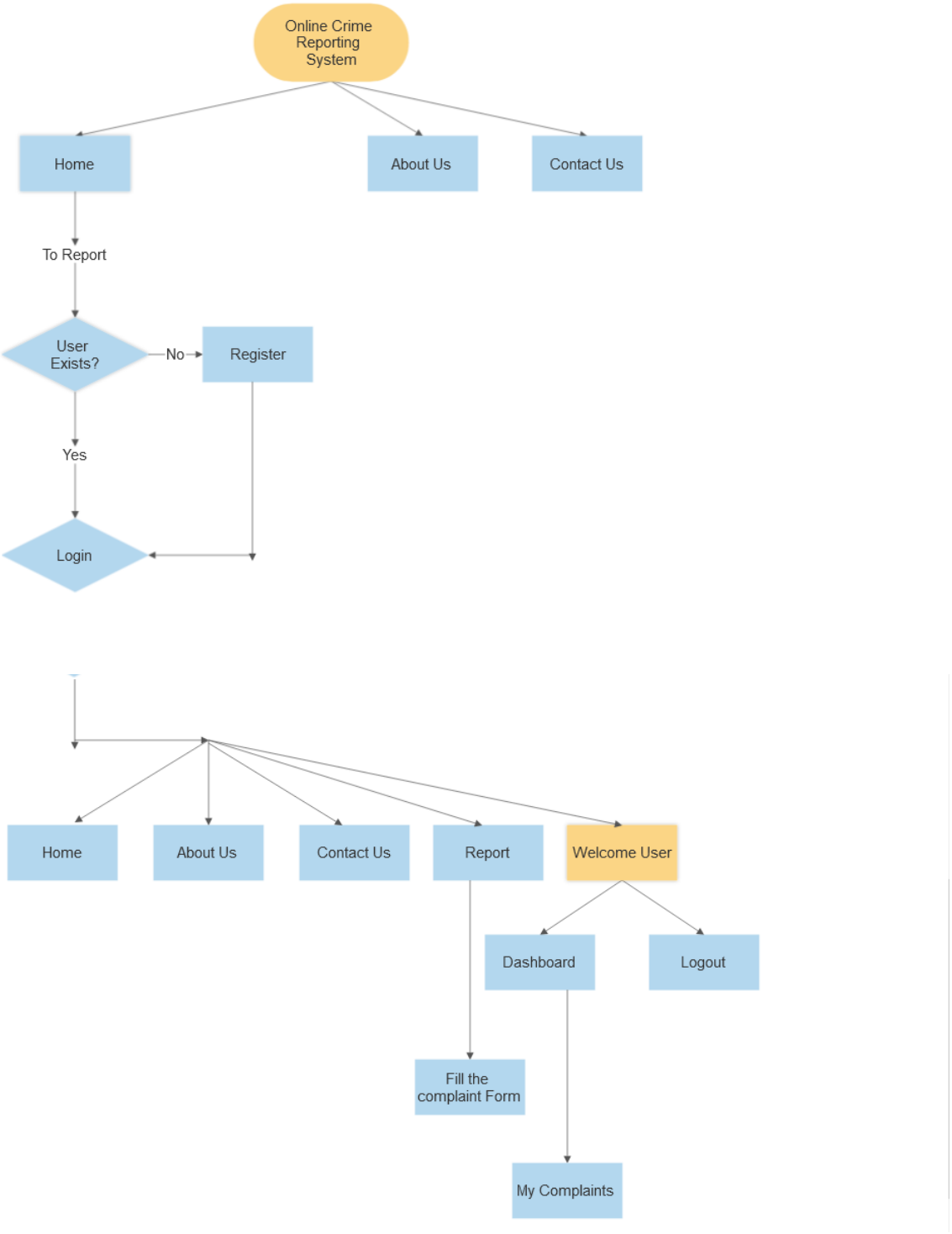
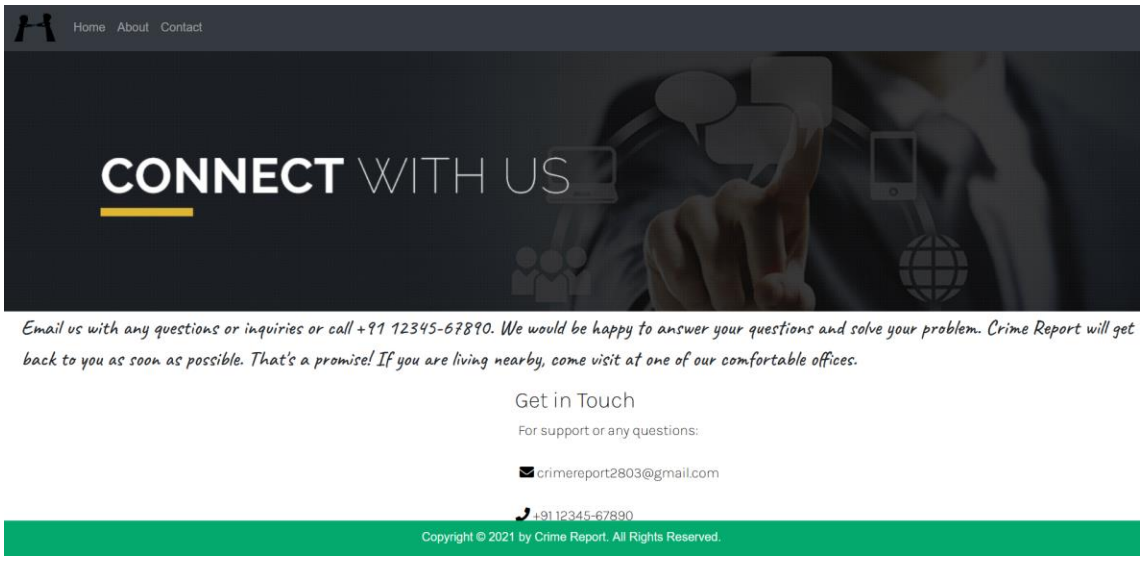
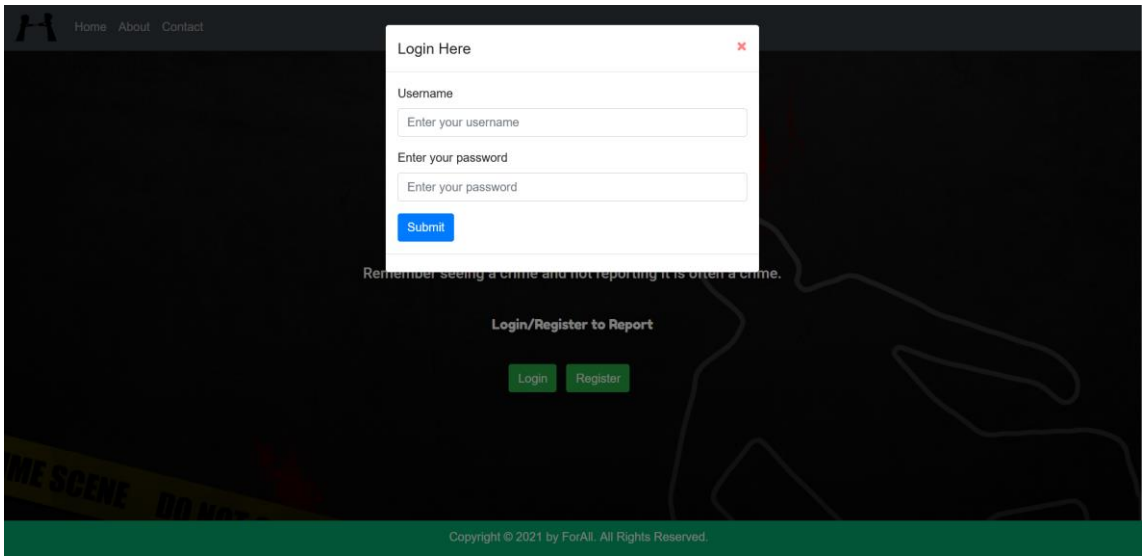


Figure1. Flow Diagram

SOME SNAP SHOTS




Home About Contact
Login Here
Username
Enter your username
Enter your password
Enter your password
Submit
Login/Register to Report
Login
Register
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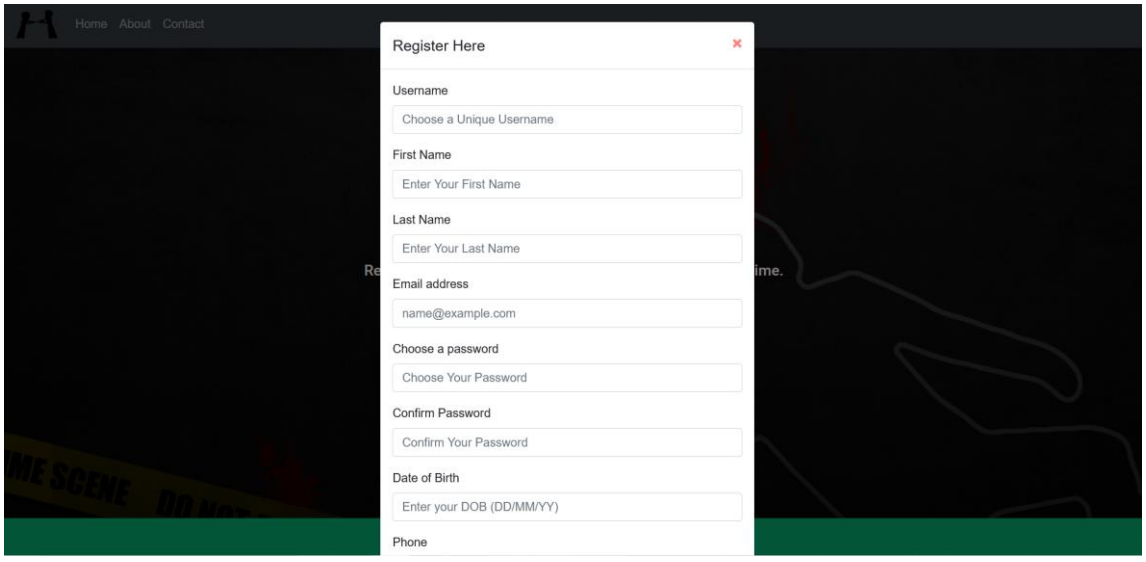
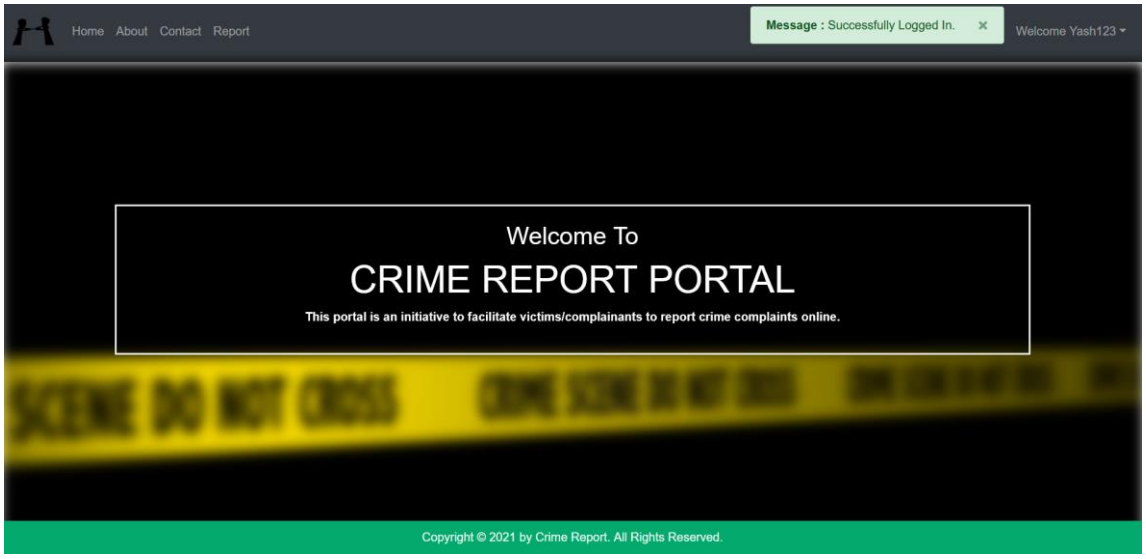
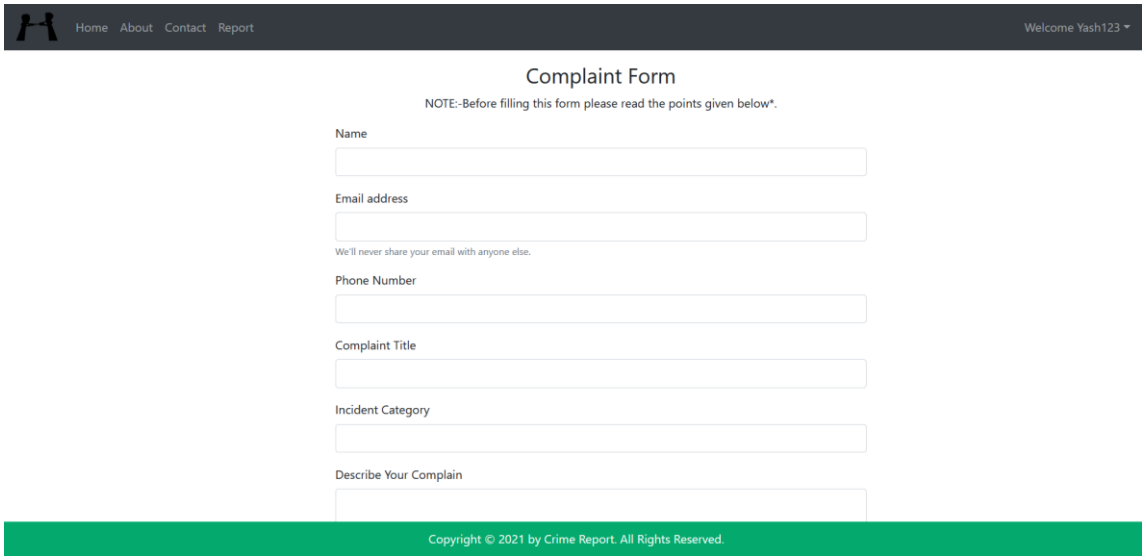
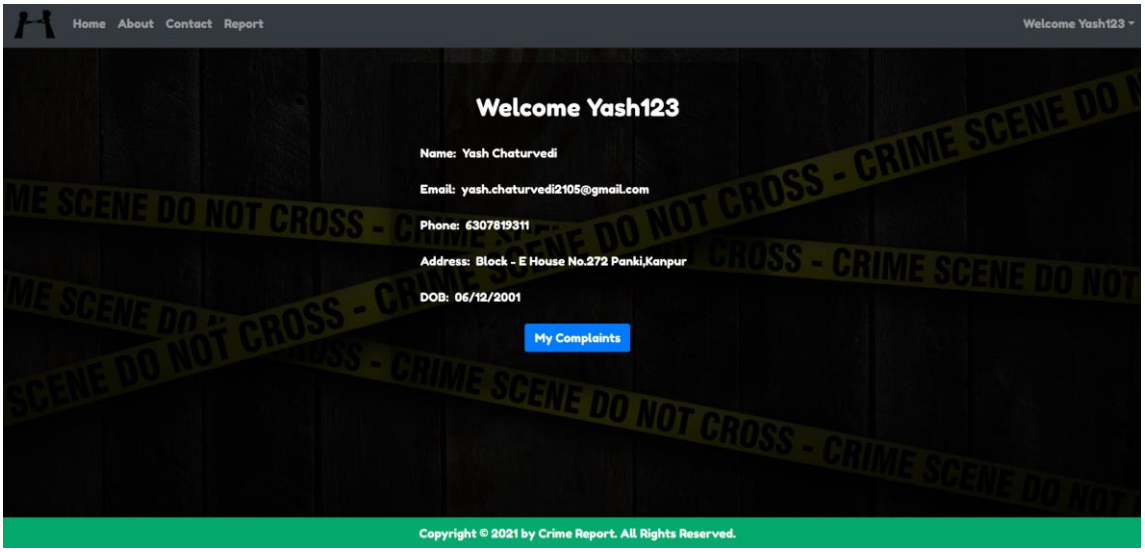

Home About Contact
Register Here
Username
Choose a Unique Username
First Name
Enter Your First Name
Last Name
Enter Your Last Name
Email address
name@example.com
Choose a password
Choose Your Password
Confirm Password
Confirm Your Password
Date of Birth
Enter your DOB (DD/MM/YY)
Phone


Home About Contact Report
Message : Successfully Logged In.
Welcome Yash123
Welcome To
CRIME REPORT PORTAL
This portal is an initiative to facilitate victims/complainants to report crime complaints online.
SCENE DO NOT CROSS
Copyright © 2021 by Crime Report. All Rights Reserved.


Home About Contact Report
Welcome Yash123
Complaint Form
NOTE:-Before filling this form please read the points given below*.
Name
Email address
We'll never share your email with anyone else.
Phone Number
Complaint Title
Incident Category
Describe Your Complain
Copyright © 2021 by Crime Report. All Rights Reserved.


Home About Contact Report
Welcome Yash123
Welcome Yash123
Name: Yash Chaturvedi
Email: yash.chaturvedi2105@gmail.com
Phone: 6307819311
Address: Block - E House No.272 Panki,Kanpur
DOB: 06/12/2001
My Complaints
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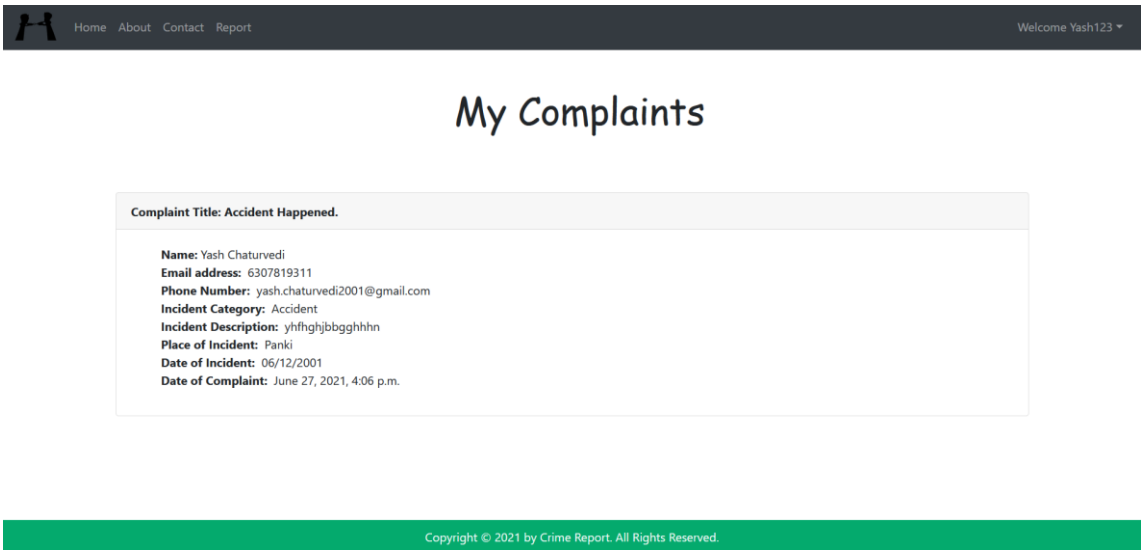
Home About Contact Report
Welcome Yash123
My Complaints
Complaint Title: Accident Happened.
Name: Yash Chaturvedi
Email address: 6307819311
Phone Number: yash.chaturvedi2001@gmail.com
Incident Category: Accident
Incident Description: yhfhghjbbgghhhn
Place of Incident: Panki
Date of Incident: 06/12/2001
Date of Complaint: June 27, 2021, 4:06 p.m.
Copyright © 2021 by Crime Report. All Rights Reserved.

CODE

```
from django.shortcuts import render, HttpResponse, redirect
from django.contrib.auth.models import User
from django.contrib import messages
from django.contrib.auth  import authenticate,logout
from django.contrib.auth import login as auth_login
def home(request):
    return render(request,'home.html')
def about(request):
    return render(request,'about.html')
def contact(request):
    return render(request,'contact.html')
def about1(request):
    return render(request,'about1.html')
def contact1(request):
    return render(request,'contact1.html')
def sample(request):
    return render(request,'sample.html')
def login(request):
    return render(request,'login.html')
def report(request):
    return render(request,'report.html')
def handleSignUp(request):
    if request.method=="POST":
        # Get the post parameters
        username=request.POST['username']
        email=request.POST['email']
        fname=request.POST['fname']
        lname=request.POST['lname']
        pass1=request.POST['pass1']
        pass2=request.POST['pass2']

         # check for errorneous input
        if len(username)<10:
            messages.error(request, " Your user name must be
under 10 characters")
            return redirect('home')
        if not username.isalnum():
            messages.error(request, " User name should only
contain letters and numbers")
            return redirect('home')
```

```
 if (pass1!= pass2):
             messages.error(request, " Password mismatch!")
             return redirect('home')
        # Create the user
        myuser = User.objects.create_user(username, email,
pass1)
        myuser.first_name= fname
        myuser.last_name= lname
        myuser.save()
        messages.success(request, "Registered Successfully,
Please Login...!")
        return redirect('home')
    else:
        return HttpResponse("404 - Not found")


def handeLogin(request):
    if request.method=="POST":
        # Get the post parameters
        loginusername=request.POST['loginusername']
        loginpassword=request.POST['loginpassword']

        user=authenticate(username= loginusername, password=
loginpassword)
        if user is not None:
            auth_login(request, user)
            messages.success(request, "Successfully Logged In.")
            return redirect("sample")


        else:
            messages.error(request, "Invalid credentials! Please
try again")
            return redirect("home")

    return HttpResponse("404- Not found")


    return HttpResponse("login")

def handelLogout(request):
    logout(request)
    messages.success(request, "Successfully Logged Out.")
```

```
 return redirect('home')


#!/usr/bin/env python
"""Django's command-line utility for administrative tasks."""
import os
import sys


def main():
    """Run administrative tasks."""
    os.environ.setdefault('DJANGO_SETTINGS_MODULE',
'project.settings')
    try:
        from django.core.management import
execute_from_command_line
    except ImportError as exc:
        raise ImportError(
            "Couldn't import Django. Are you sure it's installed
and "
            "available on your PYTHONPATH environment variable?
Did you "
            "forget to activate a virtual environment?"
        ) from exc
    execute_from_command_line(sys.argv)


if __name__ == '__main__':
    main()


"""
Django settings for project project.

Generated by 'django-admin startproject' using Django 3.2.4.

For more information on this file, see
https://docs.djangoproject.com/en/3.2/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/3.2/ref/settings/
"""
```

```
from pathlib import Path
import os

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent


# Quick-start development settings - unsuitable for production
# See
https://docs.djangoproject.com/en/3.2/howto/deployment/checklist
/

# SECURITY WARNING: keep the secret key used in production
secret!
SECRET_KEY = 'django-insecure-
g8(jr_*%u825t_^n5zld2p#fkc4zv%w5q9oe0(r7wlq%verome'

# SECURITY WARNING: don't run with debug turned on in
production!
DEBUG = True

ALLOWED_HOSTS = []
# DEBUG = False
# ALLOWED_HOSTS = ['127.0.0.1','crimereport.herokuapp.com']

# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'crime.apps.CrimeConfig',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    # 'whitenoise.middleware.WhiteNoiseMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
```

```
 'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]

ROOT_URLCONF = 'project.urls'

TEMPLATES = [
    {
        'BACKEND':
'django.template.backends.django.DjangoTemplates',
        'DIRS': ['templates'],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',

'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'project.wsgi.application'


# Database
# https://docs.djangoproject.com/en/3.2/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': BASE_DIR / 'db.sqlite3',
    }
}


# Password validation
# https://docs.djangoproject.com/en/3.2/ref/settings/#auth-
password-validators
```

```
AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME':
'django.contrib.auth.password_validation.UserAttributeSimilarity
Validator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.MinimumLengthValidator'
,
    },
    {
        'NAME':
'django.contrib.auth.password_validation.CommonPasswordValidator
',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.NumericPasswordValidato
r',
    },
]


# Internationalization
# https://docs.djangoproject.com/en/3.2/topics/i18n/

LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_L10N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/3.2/howto/static-files/

STATIC_URL = '/static/'
STATICFILES_DIRS=[os.path.join(BASE_DIR,'static')]
```

```
# Default primary key field type
# https://docs.djangoproject.com/en/3.2/ref/settings/#default-
auto-field
# STATIC_URL = '/static/'
# STATICFILES_DIRS = [
#     os.path.join(BASE_DIR, 'static')
# ]
# STATIC_ROOT = os.path.join(BASE_DIR, 'static_cdn',
'static_root')

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'
```

OUTPUT DATASETS

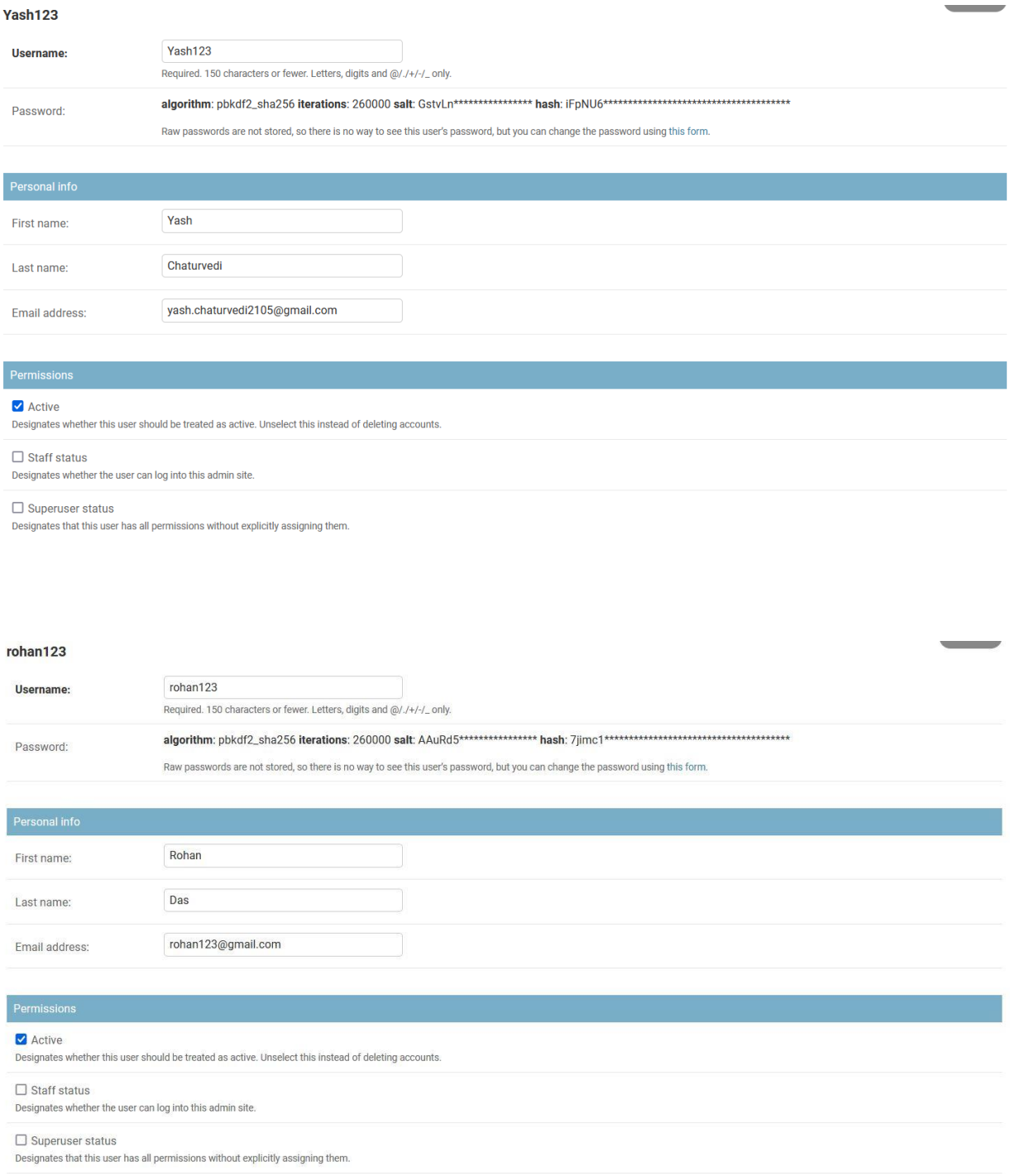

Figure2. User Information

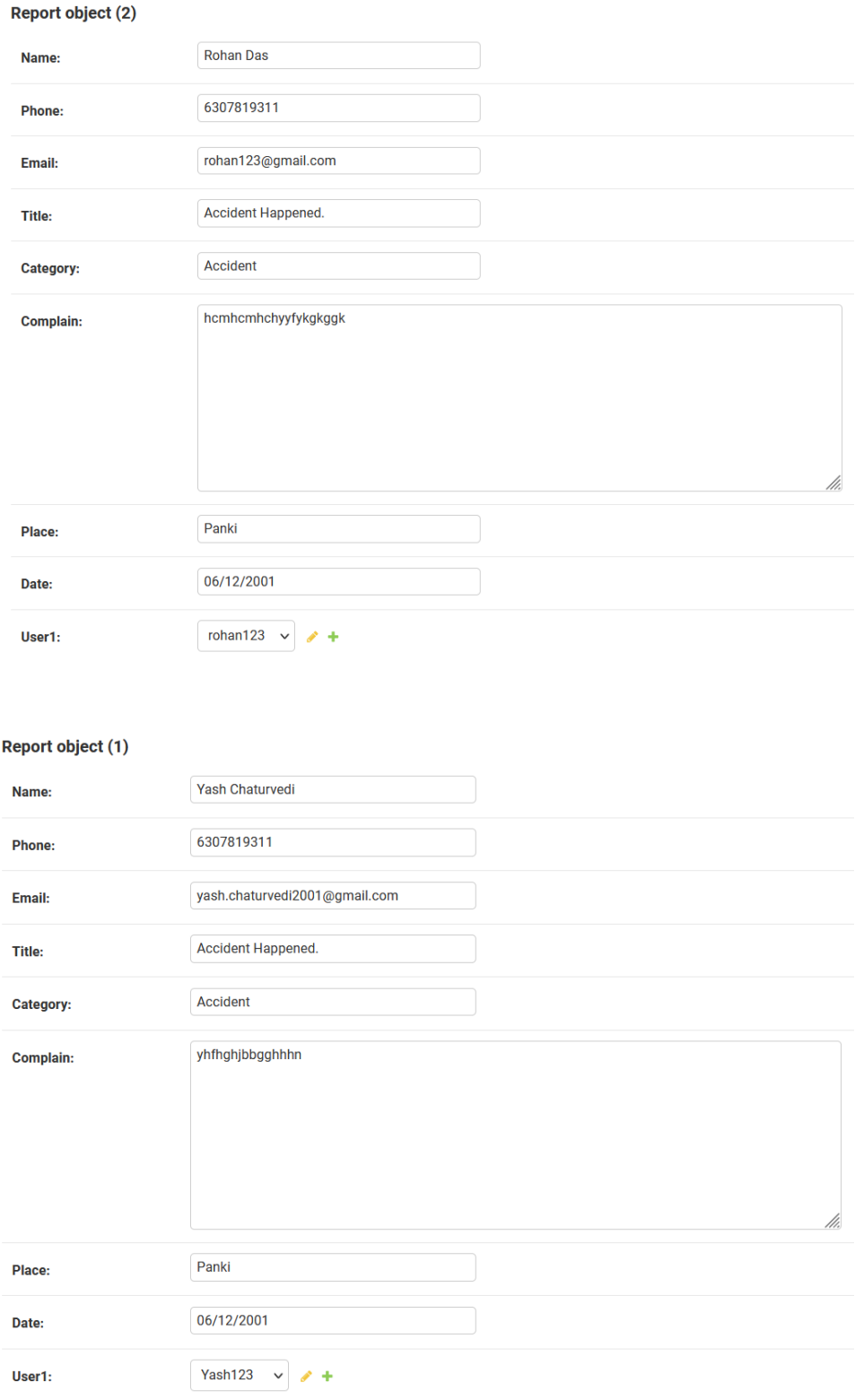

Figure3. Complaint Information

SYSTEM DESIGN: TABLES

AUTHENTICATION AND AUTHORIZATION		
Groups	+ Add	Change
Users	+ Add	Change

CRIME		
Extendedusers	+ Add	Change
Reports	+ Add	Change
Reportss	+ Add	Change

	USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
☐	Yash123	yash.chaturvedi2105@gmail.com	Yash	Chaturvedi	✗
☐	rohan123	rohan123@gmail.com	Rohan	Das	✗
☐	yash	yash.chaturvedi2001@gmail.com			✓

TABLE 1: User Table

	REPORT
	Report object (2)
	Report object (1)

CRIME		
Extendedusers	+ Add	Change
Reports	+ Add	Change
Reportss	+ Add	Change

	EXTENDEDUSER
	extendeduser object (15)
	extendeduser object (14)

TABLE 2: Complaint Table

TEST CASES

Authentication Test: Verification of permitted user's entry on login page and also checks case sensitivity for login entry.

Query Test: Testing for various queries generated in the application were tested whether the query request for local database returns the correct dataset for the corresponding query as well as queries for updating (edit), save the data properly in database.

Validation Test: Here it was tested that, if correct or incorrect entries by the user are accepted and the processed data outputs the expected results.

FUTURE ENHANCEMENTS

The future enhancements which shall include in this web-based application are:

- We look forward to working with the Government in implementing the recommendations and seeing an improvement of the organization.
- Intercom facility will be enhanced which will add a little more flexible communication between the user and the executive team.
- Users can view the progress of their complaint online.

CONCLUSION

In the modern world, the use of computers and mobile phones is becoming rampant. As a result, crime reporting system needs to embrace new technologies. This report has presented a simple, convenient, cost-effective, but efficient online crime reporting system with a user-friendly, sensitive and intelligible web interface. Whereby it can be accessed at any time provided there is internet connection.

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