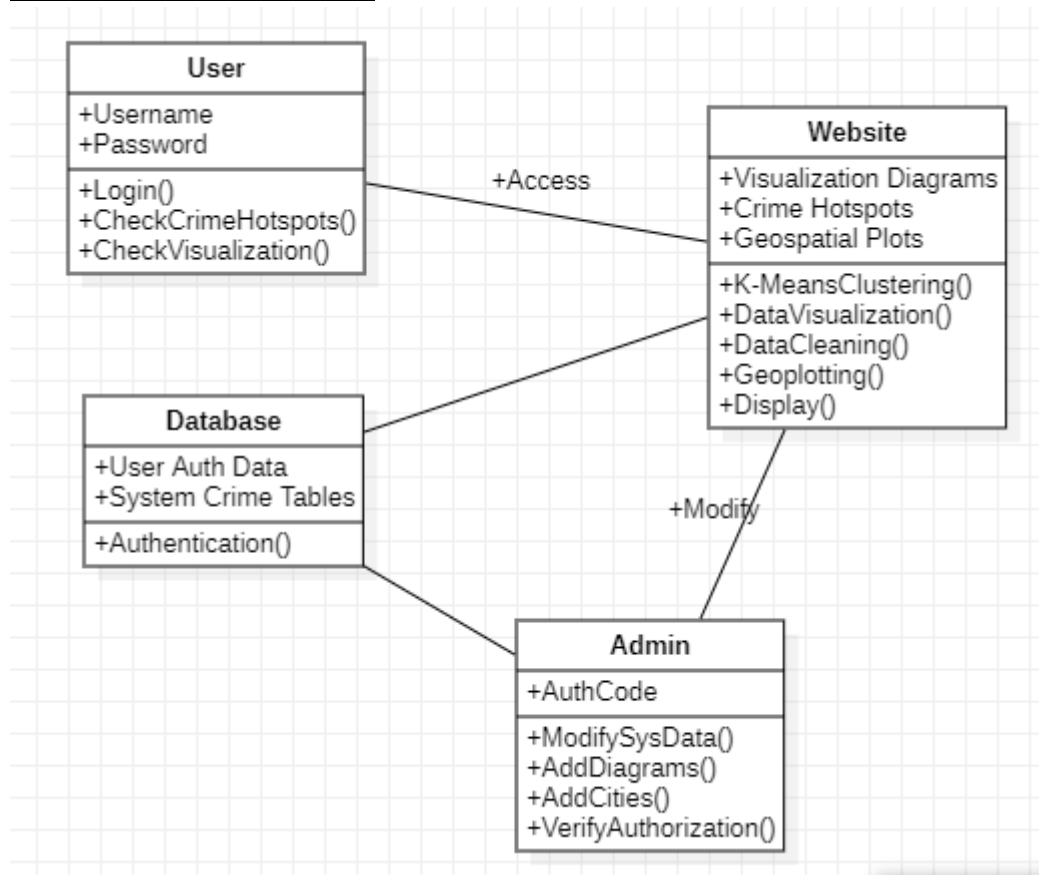# 12. MODELING UML CLASS DIAGRAM AND SEQUENCE DIAGRAM:
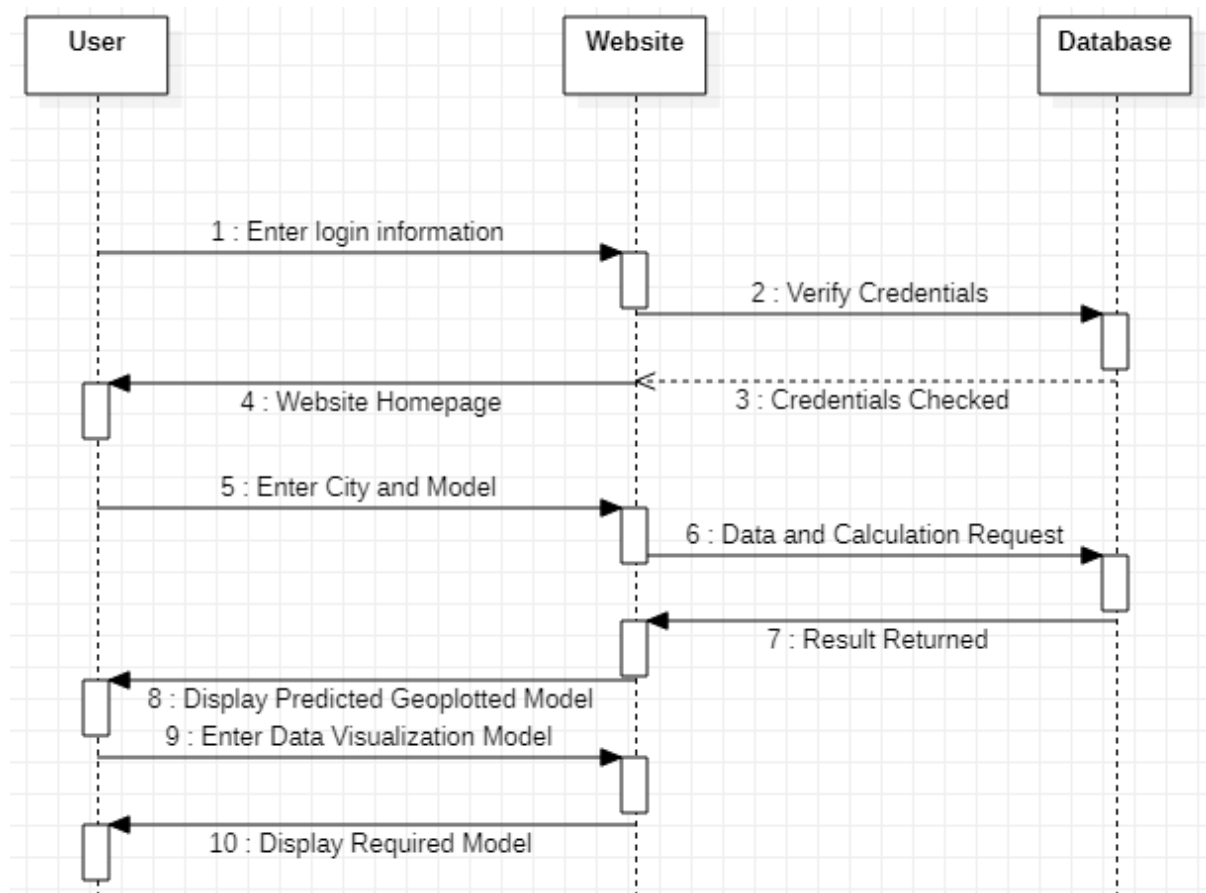
12.1.1 CLASS DIAGRAM:

12.1.2 CLASS DIAGRAM DESCRIPTION:

A UML class diagram is a type of static structure diagram that is used both for general conceptual modelling of the systematics of the application and for detailed modelling, translating the models into programming code.

- User class contains user information and the methods which they use to login as well as view the diagrams from the website.
- Database class has crime data as well as user authorization data to check if the login details can be verified and crime data is provided to the programs when needed.
- Admin class has the ability to modify data and programs as needed, and can improve the quality of the website.
- Website class holds the backend programs and the frontend display part as well, holding the algorithms and the resultant diagrams.

12.1.3 SEQUENCE DIAGRAM:

12.1.4 SEQUENCE DIAGRAM DESCRIPTION:

There are 3 objects:

- User
- Website
- Database

1. User sends login info to the website which is verified by the database.
2. Credentials are checked and user is allowed to enter homepage.
3. User selects required model which is then sent to ML algorithms to produce output.
4. The predicted model and comments by the admin are displayed on the webpage.
5. User can be allowed to choose multiple models if needed.