**Graphical User Interface Subsystem**

**Following is the class diagram of GUI subsystem.**

Graphical User Interface Subsystem is the “Presentation” layer of 3-Tier Architecture and provides interaction with the system to the users. The information about BlockChain is visualized in interface and users can perform actions through static stable interface components and a management component. The subsystem is composed of 5 view classes and a controller. Each view class, contains the required instances for its purpose.

**Main screen:** It encounters the user when the program is initialized. Via the main screen, the user can access all functionalities of the system. Also, contents of the blockchain is visualized on a panel on the mainscreen.

**DataDownloadScreen:** Via download button in the main screen, the user can navigate to download screen which consists of a progress bar, showing how far along he/she is in the process to access data in servers.

**DataUploadScreen:** Via upload button in the main screen,the user can navigate to upload screen where the user can add a completely new data block to the system by selecting a file via browse button.

**DataUpdateScreen:** Via update button in the main screen, the user can navigate to update screen where the user upload a new data block instead of the chosen block in main screen by selecting a file via browse button.

**AuthenticationScreen:** Via authenticate button in the main screen, the user can navigate to authentication screen which provides a basic login panel the user can enter its id and password.

**QueryScreen:** Via query button in the main screen, the user can navigate to query screen which provides a panel that user can view the results of its query taken from the server.

**ScreenManager:** It is the controller for user interface components. It holds the object that creates current user interface. With the proper mouse inputs, ScreenManager changes the objects that create the user interfaces.