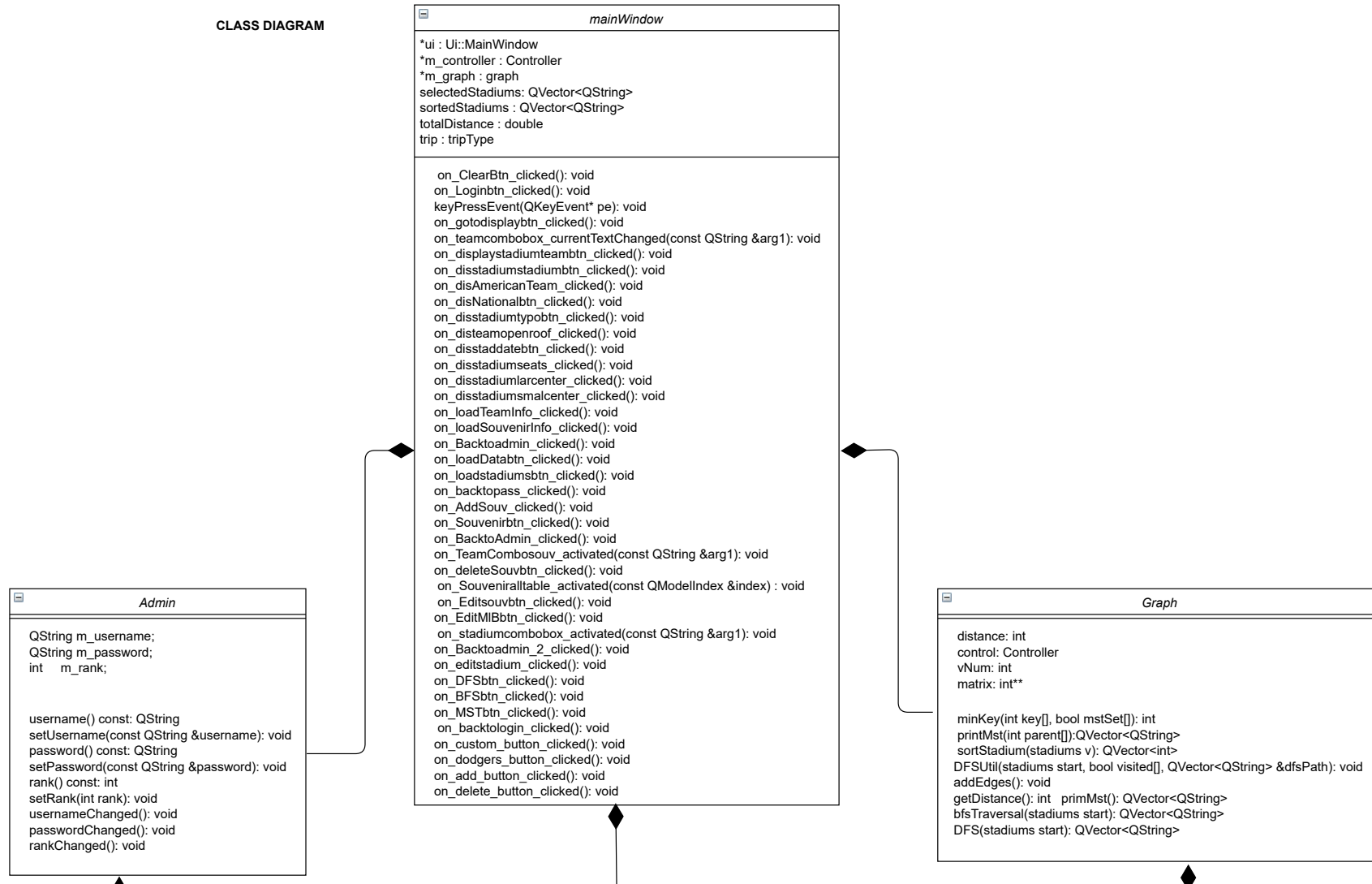
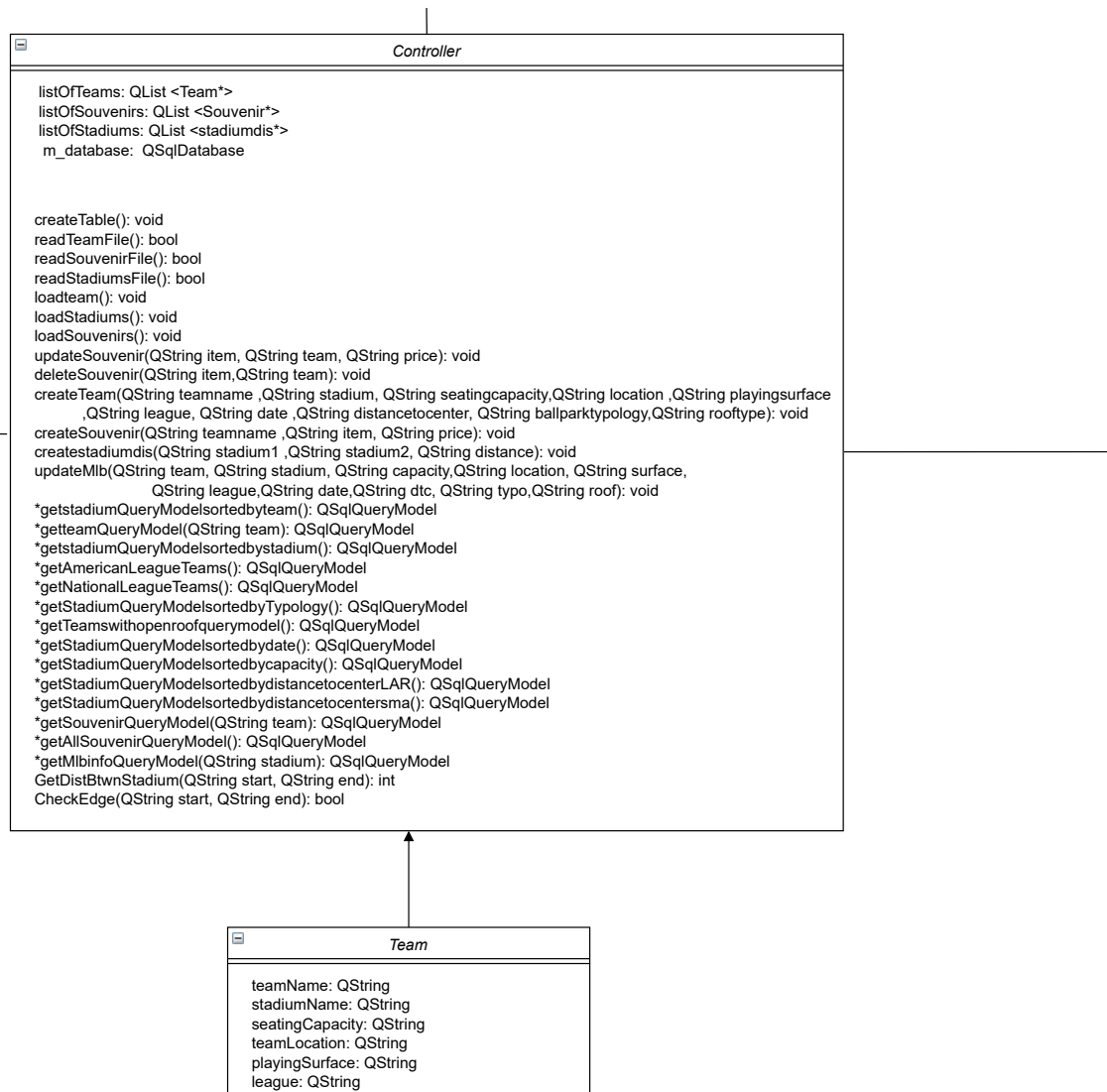


CLASS DIAGRAM

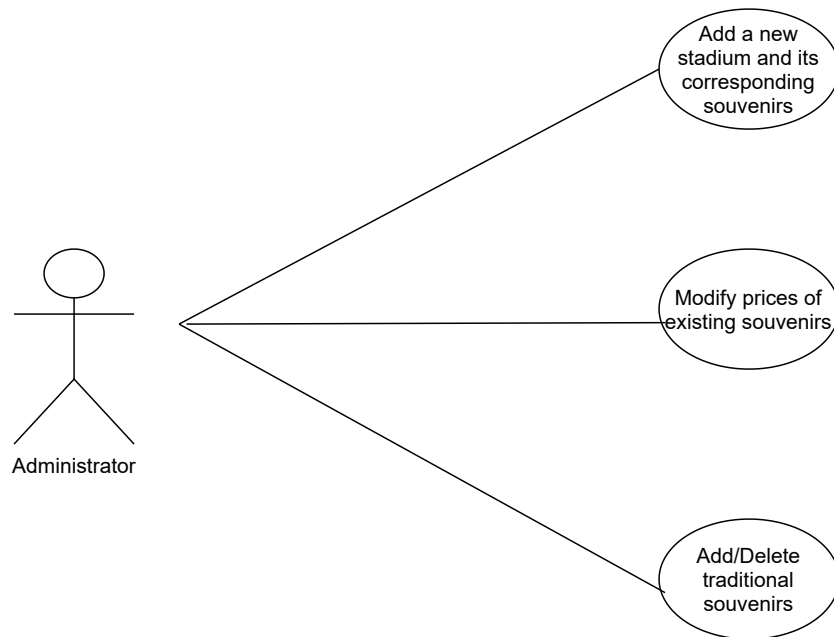




```
dateOpened: QString
distanceToCenter: QString
ballparkTypology: QString
teamRoofType: QString

setTeamName(QString name): void
getTeamName(): QString
setStadiumName(QString stadium): void
getStadiumName(): QString
setSeatingCapacity(QString capacity): void
getSeatingCapacity(): QString
setLocation(QString location): void
getLocation(): QString
setPlayingSurface(QString surface): void
getPlayingSurface(): QString
setLeague(QString League): void
getLeague(): QString
setDateOpened(QString date): void
getDateOpened(): QString
setDTC(QString dtc): void
getDTC(): QString
setBallparkTypology(QString typology): void
getBallparkTypology(): QString
setRoofType(QString rooftype): void
getroofType(): QString
```

Use Case Diagram



Big O(mega)G's Use Case Diagrams

Case #1

Use Case Name: Add new stadium and its corresponding souvenirs

Use Case Description: A new MLB stadium is added along with its corresponding souvenirs through the administrative system.

Primary Actor: An administrator

Application: This function can only be used by an administrator as it resides within the Administrative menu

Precondition: The current user must be an administrator. This can only be possible by means of the correct login information.

Postcondition: The new stadium(s) will be added to the database along with the respective souvenirs. The admin and the baseball fan will be able to view the new stadium and souvenirs if they press a certain button or buttons to view team information.

Trigger: The “Load Data” button will be clicked. Afterwards, the “Load Stadiums” button will be clicked.

Basic Flow: Once the “Load Stadiums” button is clicked, the admin will get the chance to read the new stadium and its respective souvenirs from an input file. The application will grant the admin to access the file through his or her file system. Once the admin selects on the correct file, then the new information will be stored into the database containing all of the teams' information.

Alternative Flow: Slight issues can arise during this process:

- Admin inputs the wrong credentials. If this is the case, then the admin cannot access the administrative system unless he inputs the correct data.
- QT cannot connect to the database which will impact the tasks that the admin wants to accomplish.
- The file system does not open after clicking “Load Stadiums” due to connection issues or the database file missing.

- The admin does input the new information, but the database does not store the newly processed data.
- The admin does input the new information, but the database already contains the information. If this is the case, then an error message will open or will not allow the admin to re-add the already stored data.

Case #2

Use Case Name: Change prices of traditional souvenirs

Use Case Description: The prices of each stadiums' souvenirs can be modified.

Primary Actor: An administrator

Application: This function can only be used by an administrator as it resides within the Administrative menu

Precondition: The current user must be an administrator. This can only be possible by means of the correct login information.

Postcondition: The prices of traditional souvenirs are edited and saved in the database. The admin will be able to view the new prices. The fans will also be able to view the newly edited prices during their trips.

Trigger: The "Edit Souvenirs" button will be clicked. Afterwards, the souvenirs table will be displayed.

Basic Flow: Once the "Edit Souvenirs" button is clicked, the admin will get the chance to edit the prices of each souvenir corresponding to a particular team/stadium. The admin is able to manually adjust the prices by inputting the proper numerical value.

Alternative Flow: Slight issues can emerge during this process:

- The souvenir table is not displayed due to database connection issues. If this is the case, then the admin will not be able to carry out the desired task.

- The admin does not select a particular team/stadium. This situation will lead to prices not being edited.
- The admin inputs non-numerical data, a negative number, or a number exceeding realistic price values (such as \$1,000,000). An error message prompting the admin to input proper values will appear if any of these conditions are met.

Case #3

Use Case Name: Add and delete traditional souvenirs

Use Case Description: New souvenirs can be added to the database. In addition, old souvenirs can be deleted from the database.

Application: This function can only be used by an administrator as it resides within the Administrative menu.

Precondition: The current user must be an administrator. This can only be possible by means of the correct login information.

Postcondition: The new souvenirs are added to the database. The old souvenirs will be removed from the database. The admin will be able to verify that these tasks have been processed successfully by viewing the souvenir table.

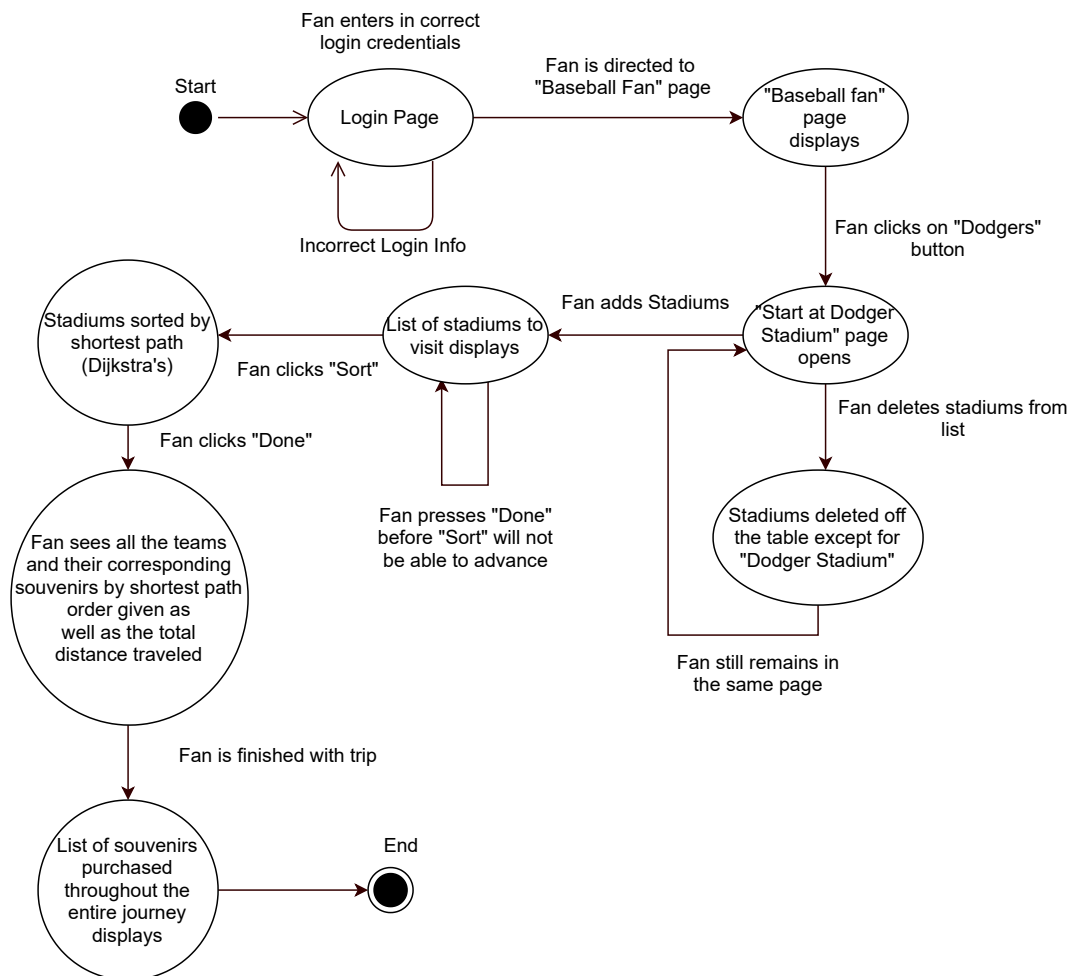
Trigger: In order to add new souvenirs, the “Load Data” button will be clicked first and the “Load Souvenirs” button second. To delete souvenirs, the admin must click the “Edit Souvenirs” button which will result in the souvenirs table being shown.

Basic Flow: Once the “Load Souvenirs” button is clicked, the admin will get the chance to input the new souvenirs by selecting the appropriate file through his/her file system. Once this procedure is met, then the newly added souvenirs will exist in the database. After clicking on “Edit Souvenirs” to delete old souvenirs, the admin has the ability to delete the particular souvenir(s) after selecting the team/stadium that he/she wants to choose from.

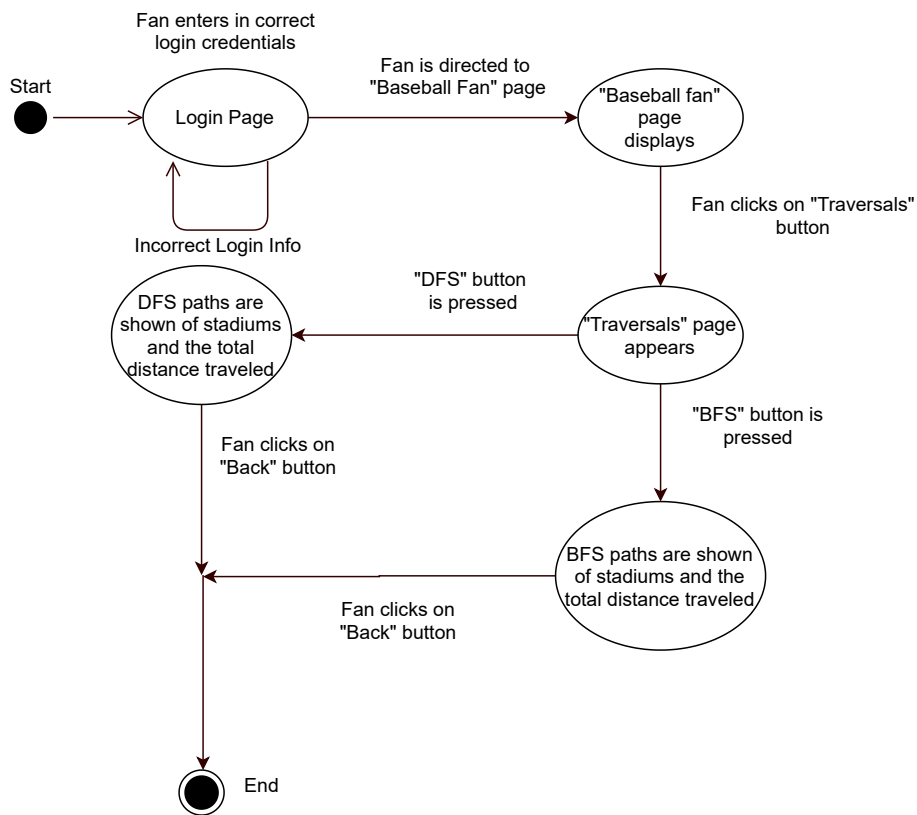
Alternative Flow: Slight issues may occur during this process:

- The souvenir table is not displayed due to database connection issues. If this is the case, then the admin will not be able delete any souvenirs.
- The admin does not select a particular team/stadium. This situation will also lead to the souvenirs not being erased.
- The file system does not appear after clicking “Load Souvenirs” due to database issues. This will result in the admin not being able to add any new souvenirs.
- The admin mistakenly tries to add new souvenirs twice. If this occurs, then the system will give a warning that the souvenirs have already been added.

**Fan visits any other team of
their choice starting at Dodger
Stadium using Dijkstra's for
Shortest Path (State Diagram #1)**



**Fan views the paths taken using
DFS and BFS along with their
assoicated mileages (State Diagram #2)**



**Admin is able to modify stadium
information such as capacity,
stadium name, roof type, etc.
(State Diagram #3)**

