Team ALAYO— Use Cases

Use Case: 1

Use Case Name: View Lists

**Actors:**

* Baseball fan
* Sort System
* MLB

**Triggers:**

* The baseball fans want to view the sorted information so that they can be more familiar with MLB information.

**Preconditions:**

* MLB information about teams and their corresponding stadiums has been provided.
* The sort system has been created.

**Post-conditions:**

* MLB information about teams and their corresponding stadiums stores in the Sort System.
* The team name will be sorted by the system.
* Stadium name will be sorted by the system.
* Park typology will be sorted by the system
* Opening date of each stadium will be sorted by the system
* Seating capacity will be sorted by the system
* distance to center field will be sorted by the system

**Normal Flow:**

1. MLB provides information about major teams and stadiums.
2. Information will be stored in the sort system.
3. Display the information in the map.
4. The baseball fan can select sort by team name.
5. The system will sort by team name.
6. The baseball fan can select to view the major league, American league or open roof type.
7. The system will display the information by following fans selection.
8. The baseball fan can select sort by stadium name.
9. The system will sort by stadium name.
10. The baseball fan can select to view the major league or American league
11. The system will display the information by following fans selection.
12. The baseball fan can select sort by park typology.
13. The system will sort by park typology and display the information about team names and their corresponding stadiums name and its park typology.
14. The baseball fan can select sort by open date.
15. The system will sort by open date from oldest to newest and display the information about team names and their corresponding stadiums name.
16. The baseball fan can select sort by seating capacity.
17. The system will sort by seating capacity from smallest to largest and display the information about team names and their corresponding stadiums name.
18. The baseball fan can select sort by distance to center field.
19. The system will sort by distance to center field from greatest to smallest.
20. The system will display the stadiums which have greatest or smallest distance to center field name and its corresponding team name.

**Alternate Flows:**

3A1: The map will display the information about baseball team which includes Stadium name, Seating capacity, Location, Playing surface, Team name, League, Date opened, Distance to center field, Ballpark typology, Roof type.

1. The baseball fan can select his or her favorite team to get the information.
2. The baseball team information will only display the selection one and will not display others.

7A1: The display includes the name of the team and the corresponding stadium name.

1. if fans choose to view the major league, the display will show the sorted major league team names and their corresponding stadiums name.
2. if fans choose to view the American league, the display will show the sorted American league team names and their corresponding stadiums name.
3. if fans choose to view open roof type, the display will show name of the baseball team who has the open roof type and will also show the number of teams.

11A1: The display includes the name of the team and the corresponding stadium name.

1. if fans choose to view the major league, the display will show the sorted major league team names and their corresponding stadiums name.
2. if fans choose to view the American league, the display will show the sorted American league team names and their corresponding stadiums name.

Use Case: 2

Use Case Name: Modify Information

**Actors:**

* Administrator
* system

**Triggers:**

* The administrator wants to modify the information about the stadiums.
* The administrator wants to add stadium and its information.
* The administrator wants to add souvenirs.
* The administrator wants to delete souvenirs.

**Preconditions:**

* The information of the stadium is provided.
* The administrator has his or her own account which includes user name and passwords.
* The information of souvenirs is provided.
* The system has been created to store information.

**Post-conditions:**

* stadium information can be stored and updated to the system.
* souvenirs information can be stored and updated to the system.

**Normal Flow:**

1. The administrator should log in his or her account.
2. The administrator can choose to modify the information about the stadiums.
3. The system will save the information which has just entered.
4. The administrator can choose to add the information about the stadiums.
5. The system will save the information which has just entered.
6. The administrator can choose to add souvenirs for the new stadium.
7. The administrator can enter information for souvenirs’ names and prices.
8. The system will save the information which has just entered.
9. The administrator can choose to change prices of souvenirs for stadiums.
10. The system will follow operation and update the information.
11. The administrator can choose to add or delete souvenirs for other stadiums.
12. The system will follow operation and update the information.
13. The menu will let administrator to decide to do more operation.

**Alternate Flows:**

1A1: The system compares the information entered by the administrator, including the username and password, and check whether they are valid.

1. If the password is valid, the administrator can login the view page.

2. If the password or the use name is not correct, the administrator is required to enter again.

2A1: stadium information including capacity, stadium name, playing surface, roof type, ballpark typology, date opened, distance to center field, and location if a team moves into a new stadium.

11A1: Administrator can do the operation several times before exit.

1. Administrator can modify the data of stadiums.
2. The step will back to 2.
3. Administrator can choose to add another stadium.
4. Administrator can choose to add new souvenirs for the stadium.
5. The step will back to 6.
6. Administrator can choose to change prices of souvenirs for stadiums.
7. The step will back to 9.
8. Administrator can choose to add or delete souvenirs for stadiums.
9. The step will back to 11.
10. The Administrator can choose exit to back to menu.

Use Case: 3

Use Case Name: Taking trip

**Actors:**

* baseball fans
* system

**Triggers:**

* The baseball fans want to visit their favorite baseball team or the corresponding stadiums. They also want to buy some souvenirs in the stadiums.

**Preconditions:**

* The stadium provides souvenirs and their corresponding information, such as name and price.
* Distances between each stadium are provided in the map.

**Post-conditions:**

* Store information about souvenirs.
* Store distances between each stadium.
* Using some algorithms to get the total distance.

**Normal Flow:**

1. The baseball fan wants to start with Angel Stadium (Los Angeles Angels) and visit other teams.
2. The system should tell the baseball fan the shortest distance and display the total distance.
3. The baseball fan wants to choose Comerica Part (Detroit Tigers) to start and visit all the other teams.
4. The system will find the closest stadium from the Comerica Part.
5. The baseball fan wants to choose his or her favorite teams to visit.
6. The system will recursively choose the team closest to the previous team to make the trip efficient.
7. The baseball fan wants to buy some souvenirs during the visit.
8. The system will track the baseball fan’s purchase in each stadium and provides the grand total of all spends for all the stadiums.

**Alternate Flows:**

2A1: The system use *Dijkstra’s* or the A\* algorithm to get the shortest distance and will display the total distance for the baseball fan.

4A1: The system will automatically find the closest stadium from Comerica Part. After the baseball fan visit that closest stadium, the system will find another closest stadium until visiting all the stadiums.

6A1: After the fan choosing the start team’s stadium and other team’s stadium he or she wants to visit. The system will rearrange the order of the stadiums to visit and come up with the shortest distance. This will allow the fan to visit his or her team's stadium more efficiently.