

FIFA22

GROUP 4

Kim Ki Yeong / Shin Dong Ha

INDEX



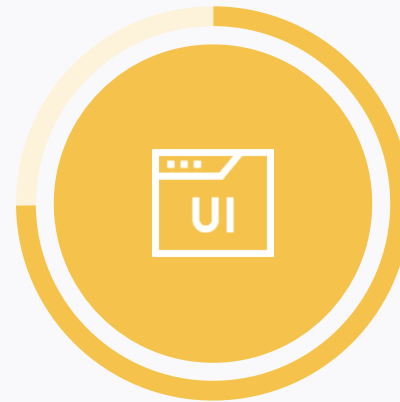
Introduction

Target user
Purpose of Application
Functions
Languages



DB Design & Modelling

ERD
Dataset
Tables



UI Demo

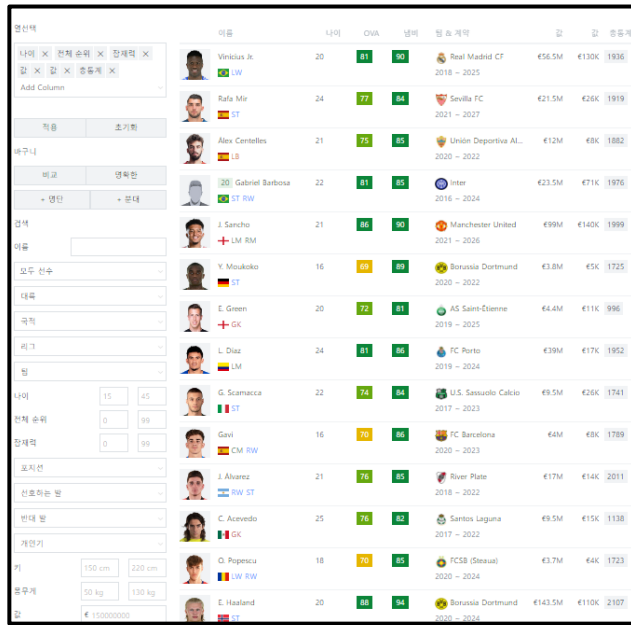
- 1) Search Function
- 2) Compare Function
- 3) Revise Function



Q&A

GUI

that we referred to



The screenshot shows a web interface for searching football players. On the left, there are various filters and sorting options like 'Position', 'Age', 'Nationality', and 'Market Value'. The main area displays a list of players with columns for Name, Age, OVR, Club, and Market Value. The interface is clean and functional, typical of a data-heavy website.

이름	나이	OVR	클럽	시장 가치
Vinicius Jr.	20	81	Real Madrid CF	€56.5M
Rafa Mir	24	77	Sevilla FC	€21.5M
Alon Casterlos	21	75	Union Deportiva Al.	€12M
Gabriel Barbosa	22	81	Inter	€23.5M
J. Sancho	21	86	Manchester United	€99M
Y. Moukoko	16	69	Borussia Dortmund	€3.8M
E. Green	20	72	AS Saint-Etienne	€4.4M
L. Dias	24	81	FC Porto	€39M
G. Scamacca	22	74	U.S. Sassuolo Calcio	€9.5M
Gavi	16	70	FC Barcelona	€4M
J. Alvarez	21	76	River Plate	€17M
C. Acosta	25	76	Santos Laguna	€9.5M
O. Popovic	18	70	FCSS (Beaune)	€3.7M
E. Haaland	20	88	Borussia Dortmund	€143.5M

< sofifa.com >



The screenshot shows a player comparison interface from FIFA Online Inven. It features two player cards at the top, each with a profile picture, name, and basic stats. Below the cards, there are detailed comparison tables for various attributes like speed, shooting, passing, and defense. The interface is designed to allow users to easily compare different players side-by-side.

속력	108	110
가속력	111	114
골 결정력	110	105
슈팅 파워	101	59
중거리 슈팅	113	88
위치 선정	108	94
물리 슈팅	111	66
피셜티 킥	113	96
짧은 패스	113	106
시야	109	106
크로스	106	91
긴 패스	114	113
프리킥	109	23
카본	109	27
드라이브	117	22
볼 컨트롤	118	29
민첩성	113	25

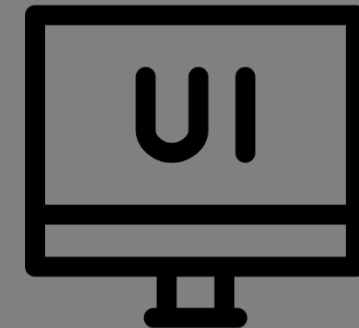
< FIFA Online Inven >

We designed our GUI to contain functions from these two pages in one application.



Target Users

People who want to search players data from selected leagues



Purpose of GUI

To make easy to find and compare players data

UI

Design decision

The screenshot shows a web application titled "Revise Player Information". It features a search bar with the text "heung" and a "Search" button. Below the search bar, there are filters for Age, Height(cm), Weight(kg), Overall, Position, Leagues, and Sort option. A "Compare" button is also present. The main content area displays a table of players with columns: NAME, height, weight, league, Positions, AGE, and OVERALL. The table lists 15 players, including H. Son, Ederson, Alisson, A. Robertson, E. Cavani, J. Henderson, M. Mount, Richarlison, J. Maddison, J. Denayer, D. Henderson, Nelson Semedo, Gerson, C. Wilson, G. Sigurdsson, D. Sánchez, Emerson, and Emerson.

NAME	height	weight	league	Positions	AGE	OVERALL
H. Son	183	78	English Premier Lee	LM,CF,LW	28	89
Ederson	188	86	English Premier Lee	GK	27	89
Alisson	191	91	English Premier Lee	GK	28	89
A. Robertson	178	64	English Premier Lee	LB	27	87
E. Cavani	185	77	English Premier Lee	ST	34	85
J. Henderson	182	80	English Premier Lee	CDM,CM	31	84
M. Mount	178	70	English Premier Lee	CAM,CM,RW	22	83
Richarlison	181	71	English Premier Lee	ST,LW,LM	24	82
J. Maddison	175	73	English Premier Lee	CAM,CM	24	82
J. Denayer	184	80	French Ligue 1 (1)	CB	26	80
D. Henderson	188	85	English Premier Lee	GK	24	80
Nelson Semedo	177	69	English Premier Lee	RWB,RB	27	80
Gerson	184	72	French Ligue 1 (1)	CM	24	80
C. Wilson	180	66	English Premier Lee	ST	29	79
G. Sigurdsson	186	77	English Premier Lee	CAM,CM	31	79
D. Sánchez	187	79	English Premier Lee	CB	25	79
Emerson	176	79	French Ligue 1 (1)	LB,LWB	26	79
Emerson	181	79	English Premier Lee	RB	22	79

We tried to put all functions from web sites on previous slide.

At first, We make our main window with search function.

And make updating and comparing function which use search results on new window.

UI

Functions

Revise Player Information

Enter the player's name.

heung

son

Search

Search more details (New window)

Compare

H. Son Ederson

Compare Players

<Search conditions>

Age Min Max

Height(cm) Min Max

Weight(kg) Min Max

Overall Min Max

Position

Leagues

Sort option

Positions Order by Descending order

NAME height weight league Positions AGE OVERALL

Compare	H. Son	183	78	English Premier Lee	LM,CF,LW	28	89
Compare	Ederson	188	86	English Premier Lee	GK	27	89
Compare	Alisson	191	91	English Premier Lee	GK	28	89
Compare	A. Robertson	178	64	English Premier Lee	LB	27	87
Compare	E. Cavani	185	77	English Premier Lee	ST	34	85
Compare	J. Henderson	182	80	English Premier Lee	CDM,CM	31	84
Compare	M. Mount	178	70	English Premier Lee	CAM,CM,RW	22	83
Compare	Richarlson	181	71	English Premier Lee	ST,LW,LM	24	82
Compare	J. Maddison	175	73	English Premier Lee	CAM,CM	24	82
Compare	J. Denayer	184	80	French Ligue 1 (1)	CB	28	80
Compare	D. Henderson	188	85	English Premier Lee	GK	24	80
Compare	Nelson Semedo	177	69	English Premier Lee	RWB,RB	27	80
Compare	Gerson	184	72	French Ligue 1 (1)	CM	24	80
Compare	C. Wilson	180	66	English Premier Lee	ST	29	79
Compare	G. Sigurdsson	186	77	English Premier Lee	CAM,CM	31	79
Compare	D. Sánchez	187	79	English Premier Lee	CB	25	79
Compare	Emerson	176	79	French Ligue 1 (1)	LB,LWB	28	79
Compare	Emerson	181	79	English Premier Lee	RB	22	79

Revise Player Information

clear

Name Update

H. Son Select

1. User can search with simple filter
2. User can easily compare searched players data
3. User can update wrong value in database easily

Tools

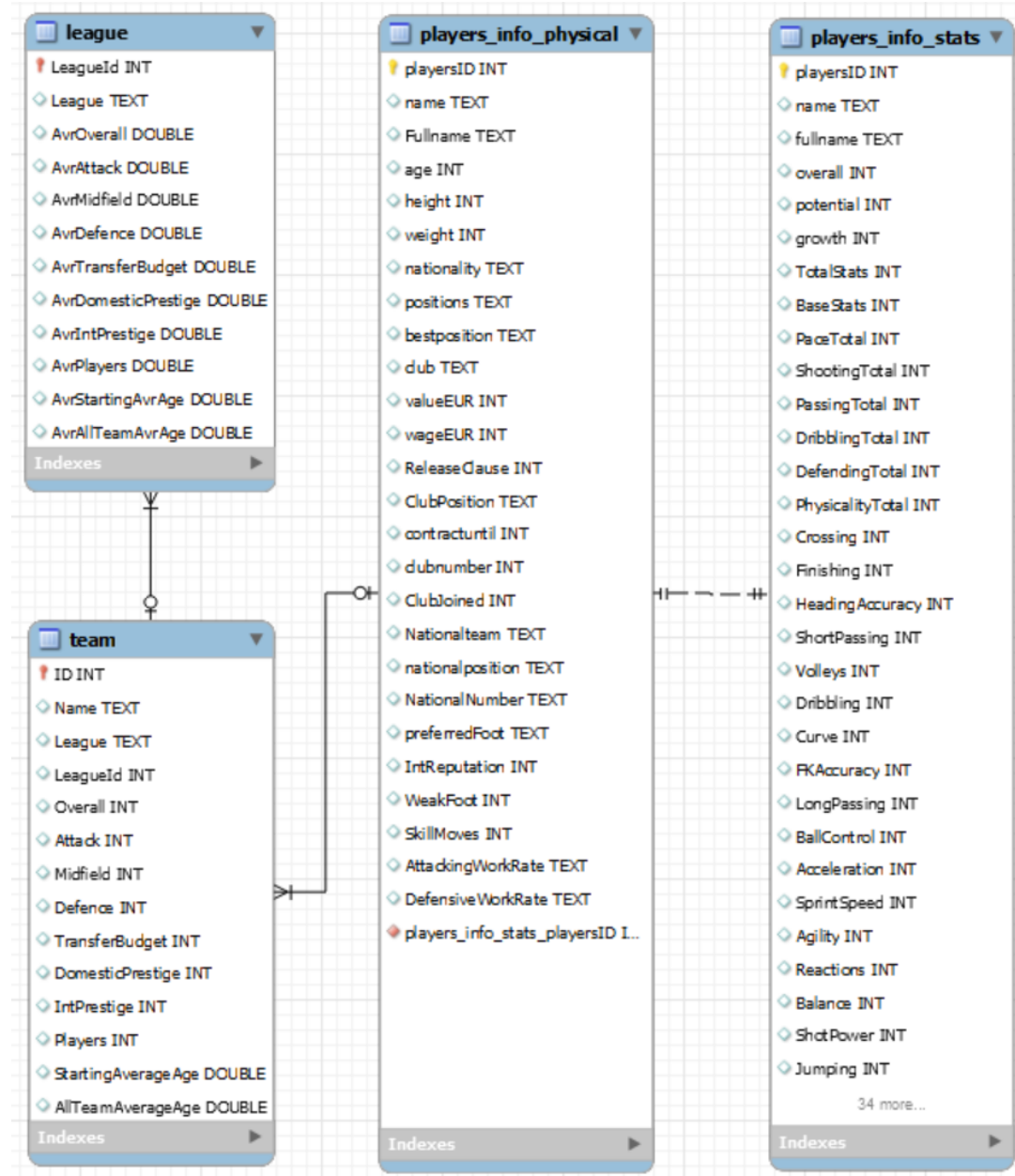


To build GUI with Tkinter



To import and clear dataset

ERD



Dataset

The screenshot shows the Kaggle interface for the 'FIFA 22 Complete Player Dataset'. The sidebar on the left contains navigation links: Home, Competitions, Datasets (highlighted), Code, Discussions, Courses, and More. Below these are 'Recently Viewed' items and a 'View Active Events' link. The main content area features a search bar at the top. The dataset page for 'FIFA 22 Complete Player Dataset [UPD:01/10/21]' is displayed, showing it was updated 2 months ago (Version 2) by Alex. It includes a 'Data' tab, 'Tasks', 'Code (5)', 'Discussion (3)', 'Activity', and 'Metadata' sections. A 'Download (8 MB)' button and a 'New Notebook' button are visible. The dataset has a 'Usability' score of 9.4, a 'License' of CC BY-NC-SA 4.0, and 'Tags' including computer science, online communities, programming, sports, games, and 2 more. The 'Description' section includes a 'Context' paragraph and a 'Content' paragraph.



players_fifa22.csv



teams_fifa22.csv

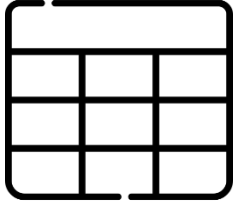
< Kaggle - FIFA 22 Complete Player Dataset >



players_fifa22.csv

League

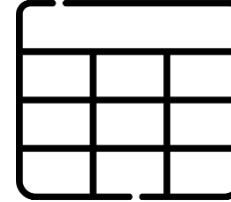
Belgian Jupiler Pro League (1), English Premier League (1),
French Ligue 1 (1), German 1. Bundesliga (1)
Italian Serie A (1), Korean K League 1 (1), Spain Primera Division (1)



players_info_physical

playersID, name, Fullname, age,
height, weight, nationality,
positions, bestposition, club,
valueEUR, wageEUR,
ReleaseClause, ClubPosition,
contractuntil, clubnumber,
ClubJoined, Nationalteam,
nationalposition,
NationalNumber, preferredFoot,
IntReputation, ... 4more

728 rows X 26 columns



players_info_stats

playersID, name, fullname,
overall, potential, growth,
TotalStats, BaseStats, PaceTotal,
ShootingTotal, PassingTotal,
DribblingTotal, DefendingTotal,
PhysicalityTotal, Crossing,
Finishing, HeadingAccuracy,
ShortPassing, Volleys, Dribbling,
Curve, FKAccuracy, LongPassing,
BallControl, ... 41more

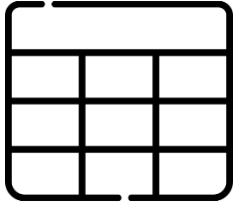
728 rows X 65 columns



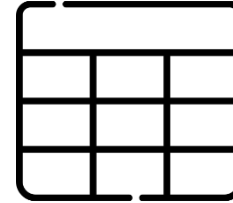
players_fifa22.csv

League

Belgian Jupiler Pro League (1), English Premier League (1),
French Ligue 1 (1), German 1. Bundesliga (1)
Italian Serie A (1), Korean K League 1 (1), Spain Primera Division (1)



players_info_physical



players_info_stats

```

1 CREATE TABLE players_info_physical
2 SELECT p.playersID, p.name, p.Fullname, p.age, p.height, p.weight,
3 p.nationality, p.positions, p.bestposition, p.club, p.valueEUR, p.wageEUR,
4 p.ReleaseClause, p.ClubPosition, p.contractuntil, p.clubnumber, p.ClubJoined,
5 p.Nationalteam, p.nationalposition, p.NationalNumber, p.preferredFoot,
6 p.IntReputation, p.WeakFoot, p.SkillMoves, p.AttackingWorkRate, p.DefensiveWorkRate
7 FROM players_fifa22 as p
8 JOIN teams_fifa22 as t
9 ON p.Club = t.Name
10 WHERE t.League
11 IN ("Belgian Jupiler Pro League (1)", "English Premier League (1)",
12 "French Ligue 1 (1)", "German 1. Bundesliga (1)", "Italian Serie A (1)",
13 "Korean K League 1 (1)", "Spain Primera Division (1)");

```

```

1 CREATE TABLE players_info_stats
2 SELECT p.playersID, p.name, p.fullname, p.overall, p.potential, p.growth,
3 p.TotalStats, p.BaseStats, p.PaceTotal, p.ShootingTotal, p.PassingTotal,
4 p.DribblingTotal, p.DefendingTotal, p.PhysicalityTotal, p.Crossing,
5 p.Finishing, p.HeadingAccuracy, p.ShortPassing, p.Volleys, p.Dribbling,

```

⋮ 44 more

```

14 FROM players_fifa22 as p
15 JOIN teams_fifa22 as t
16 ON p.club = t.name
17 WHERE t.League
18 IN ("Belgian Jupiler Pro League (1)", "English Premier League (1)",
19 "French Ligue 1 (1)", "German 1. Bundesliga (1)", "Italian Serie A (1)",
20 "Korean K League 1 (1)", "Spain Primera Division (1)");

```



teams_fifa22.csv

League

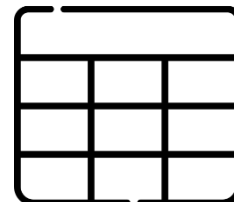
Belgian Jupiler Pro League (1), English Premier League (1),
French Ligue 1 (1), German 1. Bundesliga (1)
Italian Serie A (1), Korean K League 1 (1), Spain Primera Division (1)



team

(ID, Name, League, Leagueld,
Overall, Attack, Midfield,
Defence, TransferBudget,
DomesticPrestige, IntPrestige,
Players, StartingAverageAge,
AllTeamAverageAge

131 rows X 14 columns



league

(League, Leagueld, AvrOverall,
AvrAttack, AvrMidfield,
AvrDefence, AvrTransferBudget,
AvrDomesticPrestige,
AvrIntPrestige, AvrPlayers,
AvrStartingAvrAge,
AvrAllTeamAvrAge

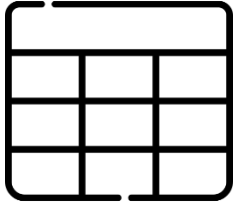
7 rows X 12columns



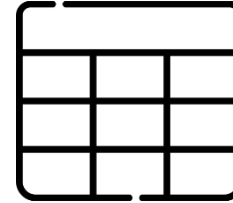
teams_fifa22.csv

League

Belgian Jupiler Pro League (1), English Premier League (1),
French Ligue 1 (1), German 1. Bundesliga (1)
Italian Serie A (1), Korean K League 1 (1), Spain Primera Division (1)



team



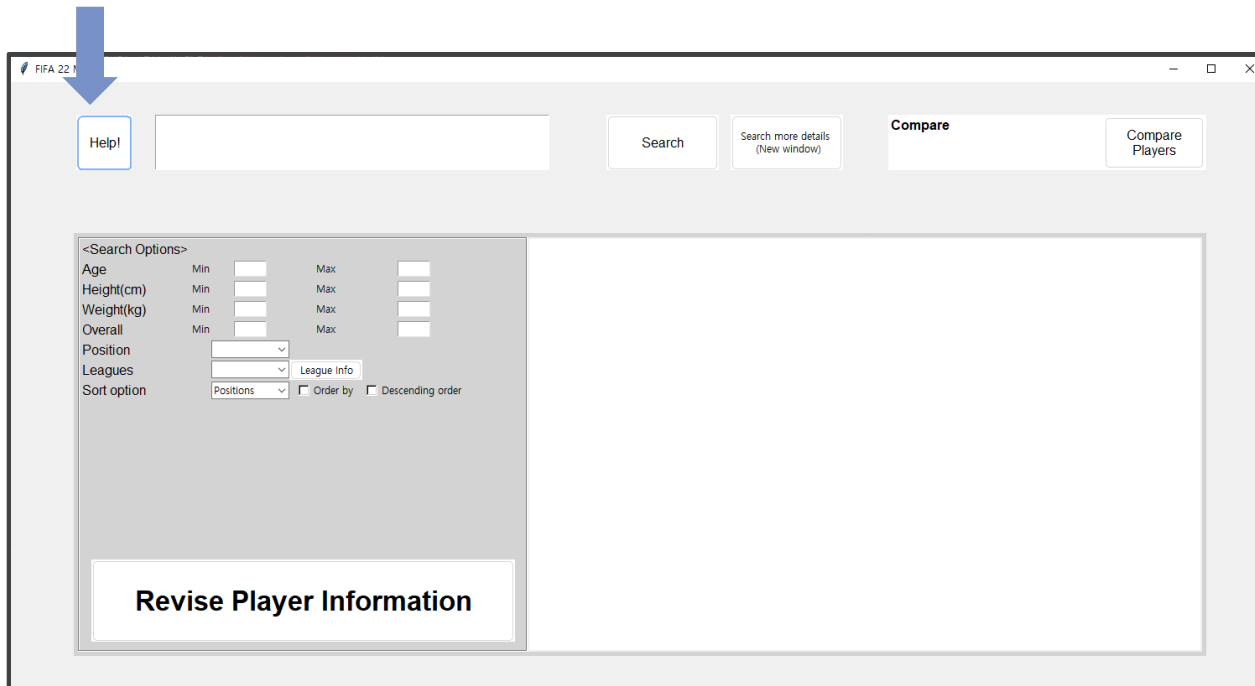
league

```
1 CREATE TABLE team
2 SELECT
3 ID, Name, League, LeagueId, Overall, Attack, Midfield, Defence, TransferBudget,
4 DomesticPrestige, IntPrestige, Players, StartingAverageAge, AllTeamAverageAge
5 FROM teams_fifa22
6 WHERE League
7 IN ("Belgian Jupiler Pro League (1)", "English Premier League (1)",
8     "French Ligue 1 (1)", "German 1. Bundesliga (1)", "Italian Serie A (1)",
9     "Korean K League 1 (1)", "Spain Primera Division (1)");
```

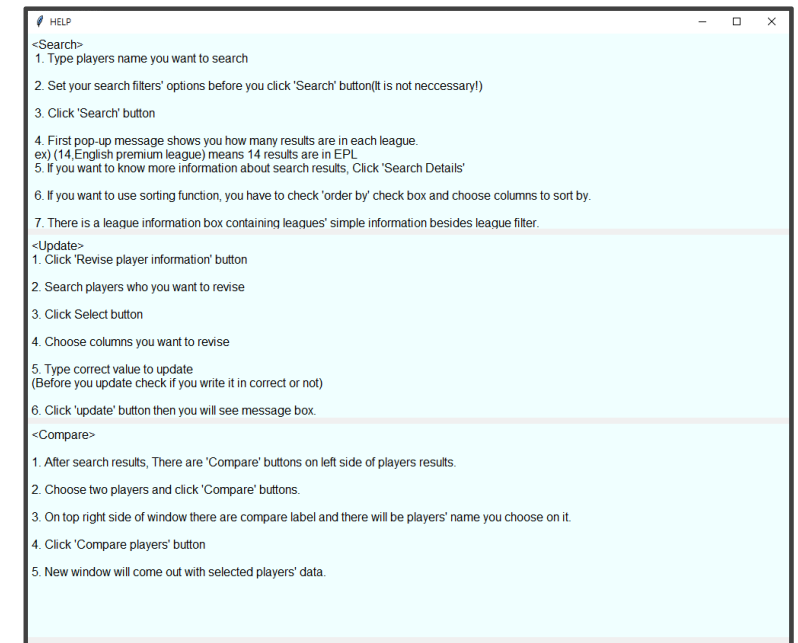
```
1 CREATE TABLE league
2 SELECT
3 League, LeagueId, AVG(Overall) AS AvrOverall, AVG(Attack) AS AvrAttack,
4 AVG(Midfield) AS AvrMidfield, AVG(Defence) AS AvrDefence,
5 AVG(TransferBudget) AS AvrTransferBudget, AVG(DomesticPrestige) AS AvrDomesticPrestige,
6 AVG(IntPrestige) AS AvrIntPrestige, AVG(Players) AS AvrPlayers,
7 AVG(StartingAverageAge) AS AvrStartingAverageAge, AVG(AllTeamAverageAge) AS AvrAllTeamAverageAge
8 FROM teams_fifa22
9 WHERE League
10 IN ("Belgian Jupiler Pro League (1)", "English Premier League (1)",
11     "French Ligue 1 (1)", "German 1. Bundesliga (1)", "Italian Serie A (1)",
12     "Korean K League 1 (1)", "Spain Primera Division (1)");
13 GROUP BY League;
```

UI Demo – Help button

Help button



FIFA22 Search Application



Help Manual Window

UI Demo - 1) Search Function

The screenshot shows the 'FIFA 22 MAIN' application window. At the top, there is a 'Help!' button, a large search input field, a 'Search' button, a 'Search more details (New window)' button, a 'Compare' button, and a 'Compare Players' button. Below the search bar is a '<Search Options>' panel. This panel contains filters for Age, Height(cm), Weight(kg), and Overall, each with 'Min' and 'Max' input fields. It also includes a 'Position' dropdown, a 'Leagues' dropdown with a 'League Info' button, and a 'Sort option' dropdown set to 'Positions'. There are checkboxes for 'Order by' and 'Descending order'. At the bottom of the search options panel is a 'Revise Player Information' button. The main content area to the right of the search options is currently empty.

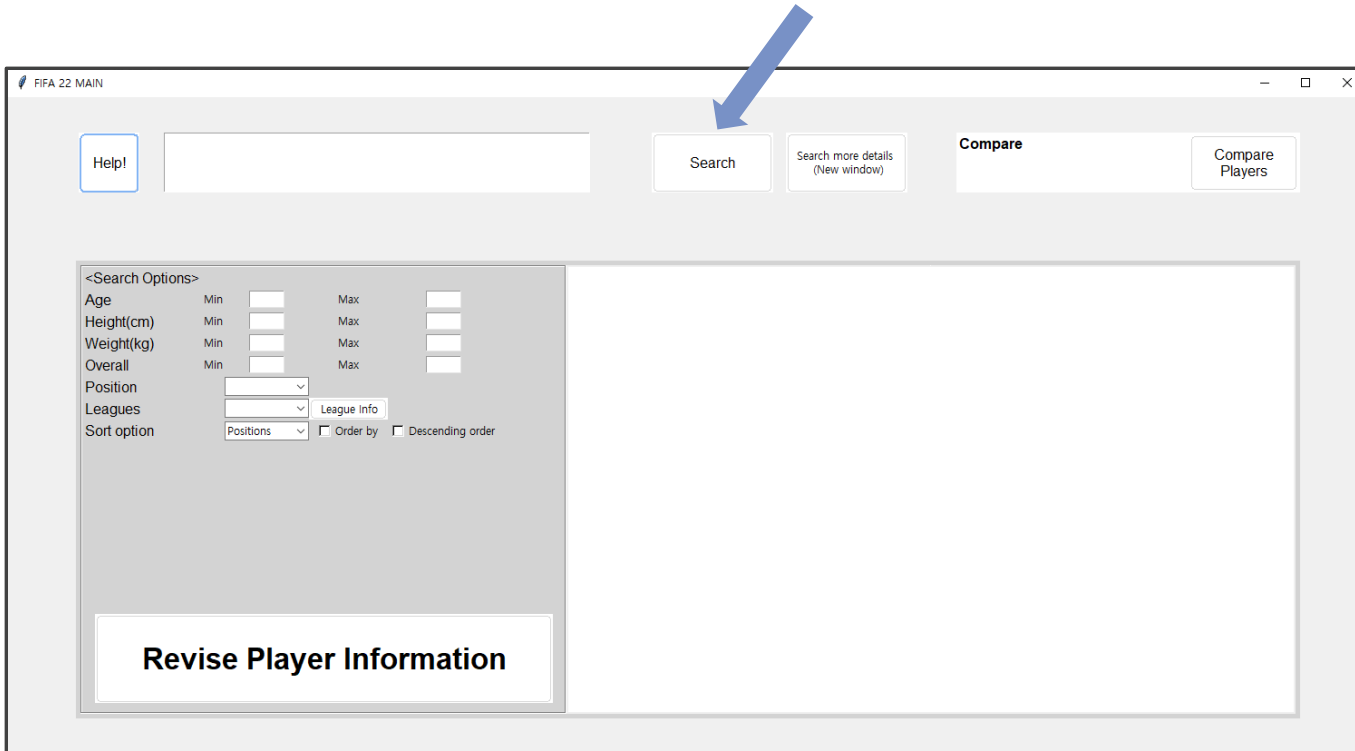
1. Simple Search

2. Search Options

3. Search more details

UI Demo - Simple Search

Search button



The screenshot shows the 'FIFA 22 MAIN' window. At the top, there is a 'Help!' button, a large text input field, a 'Search' button (highlighted by a blue arrow), a 'Search more details (New window)' button, a 'Compare' section with a 'Compare Players' button, and a 'League Info' button. Below the input field is a '<Search Options>' panel containing filters for Age, Height(cm), Weight(kg), and Overall, each with 'Min' and 'Max' input fields. It also includes a 'Position' dropdown, a 'Leagues' dropdown, and a 'Sort option' dropdown with checkboxes for 'Order by' and 'Descending order'. At the bottom of the search options panel is a 'Revise Player Information' button. The main content area on the right is currently empty.

<Simple Search>

Type player's name you want to search. And click Search button.

UI Demo – Number of results



<Number of Results>

This message box will show you how many results are in each league.

Ex) (47,English Premier League(1))

This means 47 results in EPL

UI Demo - Simple Search

RIFA 22 MAIN

Help!

sort

Search

Search more details
(New window)

Compare

Compare
Players

<Search Options>

Age

Min

Max

Height(cm)

Min

Max

Weight(kg)

Min

Max

Overall

Min

Max

Position

Leagues

League Info

Sort option

Positions

☐ Order by

☐ Descending order

Revise Player Information

Compare

NAME

height

weight

league

Positions

AGE

OVERALL

Compare

H. Son

183

78

English Premier Lee

LM,CF,LW

28

89

Compare

Ederson

188

86

English Premier Lee

GK

27

89

Compare

Alisson

191

91

English Premier Lee

GK

28

89

Compare

A. Robertson

178

64

English Premier Lee

LB

27

87

Compare

E. Cavani

185

77

English Premier Lee

ST

34

85

Compare

J. Henderson

182

80

English Premier Lee

CDM,CM

31

84

Compare

M. Mount

178

70

English Premier Lee

CAM,CM,RW

22

83

Compare

Richarlison

181

71

English Premier Lee

ST,LW,LM

24

82

Compare

J. Maddison

175

73

English Premier Lee

CAM,CM

24

82

Compare

J. Denayer

184

80

French Ligue 1 (1)

CB

26

80

Compare

D. Henderson

188

85

English Premier Lee

GK

24

80

Compare

Nelson Semedo

177

69

English Premier Lee

RWB,RB

27

80

Compare

Gerson

184

72

French Ligue 1 (1)

CM

24

80

Compare

C. Wilson

180

66

English Premier Lee

ST

29

79

Compare

G. Sigurdsson

186

77

English Premier Lee

CAM,CM

31

79

Compare

D. Sánchez

187

79

English Premier Lee

CB

25

79

Compare

Emerson

176

79

French Ligue 1 (1)

LB,LWB

26

79

Compare

Emerson

181

79

English Premier Lee

RB

22

79

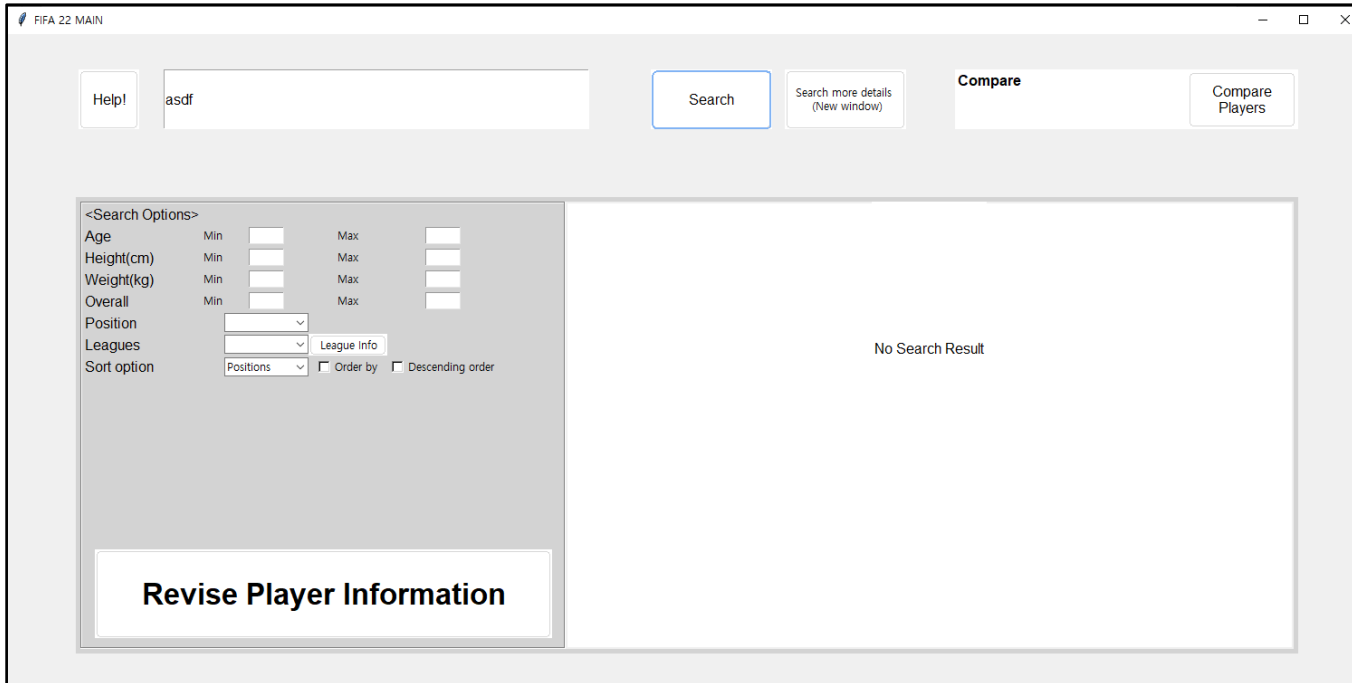
< Simple Search >

After number of results pop-up box, results will be on bottom right label.

It shows only 6 columns from database.

I set query limitation by using LIMIT 30, because of app's running time

UI Demo - Simple Search(No Results)



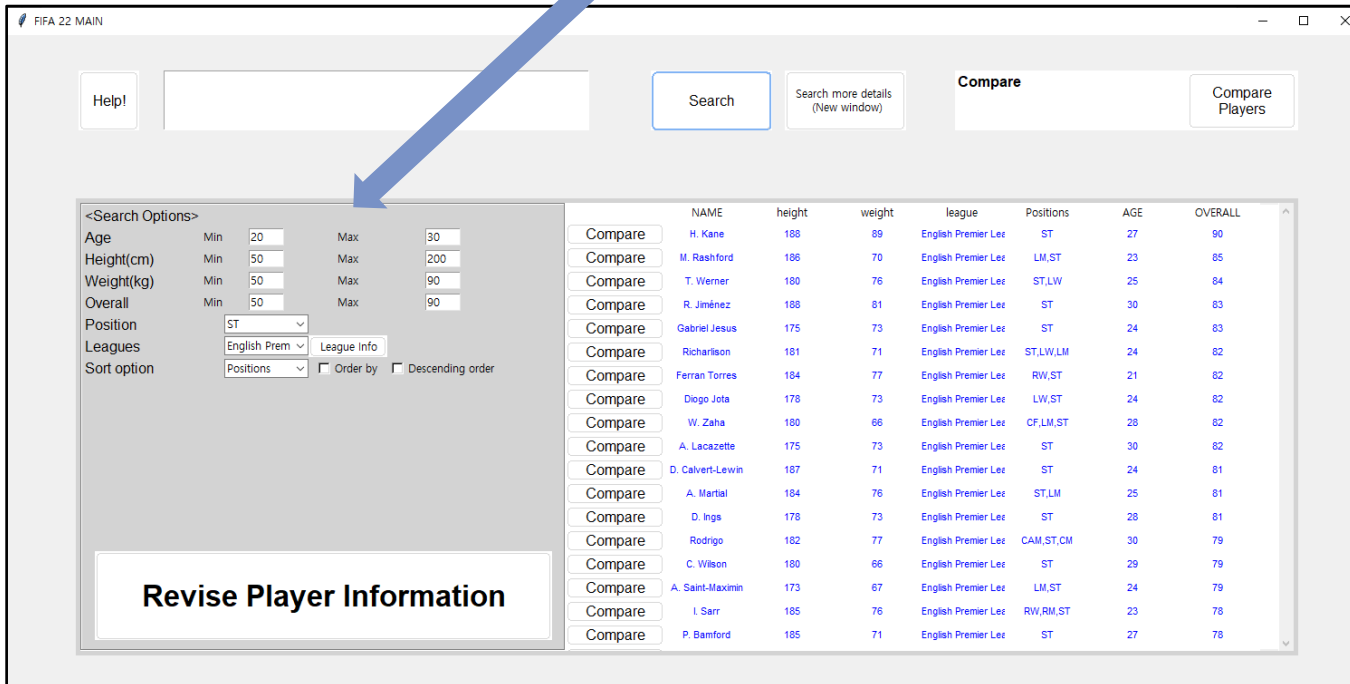
The screenshot shows a web application window titled "FIFA 22 MAIN". At the top, there is a search bar containing the text "asdf". To the left of the search bar is a "Help!" button. To the right are buttons for "Search", "Search more details (New window)", "Compare", and "Compare Players". Below the search bar is a "Search Options" panel. This panel includes input fields for Age, Height(cm), Weight(kg), and Overall, each with "Min" and "Max" sub-fields. It also features a "Position" dropdown menu, a "Leagues" dropdown menu with a "League Info" button, and a "Sort option" section with a "Positions" dropdown and checkboxes for "Order by" and "Descending order". At the bottom of the search options is a button labeled "Revise Player Information". The main content area of the application displays the text "No Search Result".

<No results>

You can see 'No Search Result' text when there is no value on query results.

UI Demo - Search Options

Option filters



Help! [Search Bar] Search Search more details (New window) Compare Compare Players

<Search Options>

Age Min 20 Max 30
Height(cm) Min 50 Max 200
Weight(kg) Min 50 Max 90
Overall Min 50 Max 90
Position ST
Leagues English Prem League Info
Sort option Positions ☐ Order by ☐ Descending order

Revise Player Information

	NAME	height	weight	league	Positions	AGE	OVERALL
Compare	H. Kane	188	89	English Premier Le	ST	27	90
Compare	M. Rashford	186	70	English Premier Le	LM,ST	23	85
Compare	T. Werner	180	76	English Premier Le	ST,LW	25	84
Compare	R. Jiménez	188	81	English Premier Le	ST	30	83
Compare	Gabriel Jesus	175	73	English Premier Le	ST	24	83
Compare	Richarlison	181	71	English Premier Le	ST,LW,LM	24	82
Compare	Ferran Torres	184	77	English Premier Le	RW,ST	21	82
Compare	Diogo Jota	178	73	English Premier Le	LW,ST	24	82
Compare	W. Zaha	180	66	English Premier Le	CF,LM,ST	28	82
Compare	A. Lacazette	175	73	English Premier Le	ST	30	82
Compare	D. Calvert-Lewin	187	71	English Premier Le	ST	24	81
Compare	A. Martial	184	76	English Premier Le	ST,LM	25	81
Compare	D. Ings	178	73	English Premier Le	ST	28	81
Compare	Rodrigo	182	77	English Premier Le	CAM,ST,CM	30	79
Compare	C. Wilson	180	66	English Premier Le	ST	29	79
Compare	A. Saint-Maximin	173	67	English Premier Le	LM,ST	24	79
Compare	I. Sarr	185	76	English Premier Le	RW,RM,ST	23	78
Compare	P. Bamford	185	71	English Premier Le	ST	27	78

< Search Options>

You can use option filters to search players data more specific.

There are options of columns in simple search results.

And you can also use sorting function by checking 'Order by' check box.

UI Demo - Search Options(Query)

Main Query

```
query = 'SELECT p1.`NAME`, p1.`height`,p1.`weight`, t.`league`,p1.`Positions`,p1.`AGE`, stat.`OVERALL` FROM players_info_physical p1 \
JOIN team t ON p1.club = t.`name` JOIN players_info_stats stat ON p1.`name` = stat.`name` \
WHERE p1.`fullname` like "%{0}%" and \
p1.`age` >= {1} and \
p1.`age` <= {2} and \
p1.`weight` >= {3} and p1.`weight` <= {4} and \
p1.`height` >= {5} and p1.`height` <= {6} and \
stat.`overall` >= {7} and stat.`overall` <= {8} and \
p1.`positions` like "%{9}%" and \
t.`league` like "%{10}%" \
{11} {12} {13} LIMIT 30'
```

< Search query>

Use query variable to search data with various options.

Formatting Variables

```
query.format(
    str(entry1.get()), #input value
    Agemin, Agemax, #age
    wmin, wmax, #weight
    hmin, hmax, #height
    overmin, overmax, # overall
    str(combo_p.get()), #positions
    str(combo_lg.get()), #league
    str(order_onoff.get()), option_get, dec_get
) #order by option
```

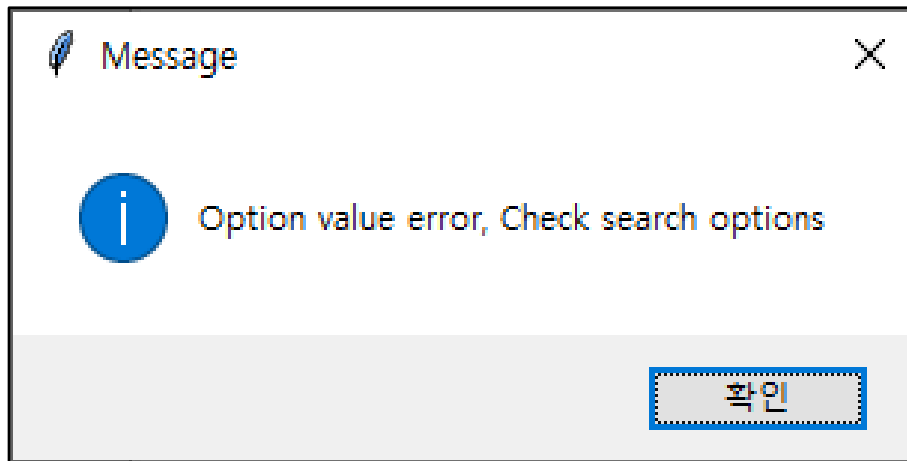
Default Variables

```
Agemin = 0
Agemax = 100
hmax = 300
hmin = 0
wmax = 500
wmin = 0
option_get = ' '
dec_get = ' '
overmin = 0
overmax = 100
```

< Default Variables>

If you do not enter any filter options, query will select data with default variables.

UI Demo - Search Options (Error handling)



< Error box >

You can see this error box, when you type wrong value in option entry box.

UI Demo - Search Options (League Information)

Leagues League Info

League Information											
League	LeagueId	AvrOverall	AvrAttack	AvrMidfield	AvrDefence	AvrTransferBudget	AvrDomesticPrestige	AvrIntPrestige	AvrPlayers	AvrStartingAvrAge	AvrAllTeamAvrAge
Belgian Jupiler Pro	4	69.6	69.6	69.8	68.5	8983333.3	5.1	3.1	27.1	25.3	24.0
English Premier Lea	13	78.5	79.6	78.8	77.8	57025000.0	5.2	4.4	32.7	26.9	24.5
French Ligue 1 (1)	16	75.0	75.3	75.0	74.1	19640000.0	5.0	2.8	29.0	25.9	24.3
German 1. Bundes	19	75.8	76.3	75.8	74.9	27827777.8	5.0	4.1	30.6	26.2	24.4
Italian Serie A (1)	31	75.1	75.5	74.4	74.2	24000000.0	5.1	3.6	28.0	26.9	25.8
Korean K League	83	66.3	66.8	66.3	64.9	4175000.0	5.3	3.5	28.0	28.2	27.1
Spain Primera Divis	53	77.9	79.1	78.1	77.0	29420000.0	6.0	4.1	31.6	28.0	25.6

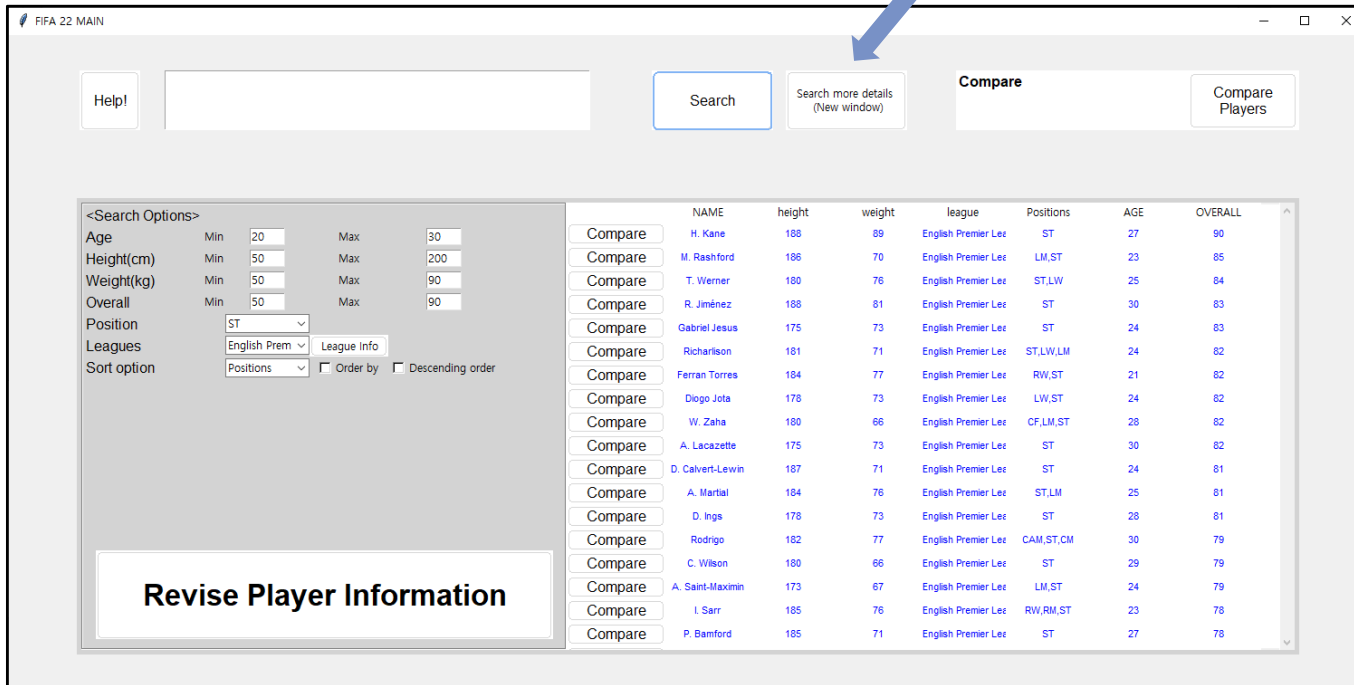
< League Information >

There is a League info button on left side of Leagues option and you can see new window when you click that.

This window is for who doesn't know anything about league information.

UI Demo - Search more details

Search more details



The screenshot shows the FIFA 22 MAIN interface. At the top, there is a search bar with a 'Search' button and a 'Search more details (New window)' button. A blue arrow points to the 'Search more details (New window)' button. Below the search bar, there is a 'Compare' button and a 'Compare Players' button. On the left side, there is a '<Search Options>' panel with various filters: Age (Min: 20, Max: 30), Height(cm) (Min: 50, Max: 200), Weight(kg) (Min: 50, Max: 90), Overall (Min: 50, Max: 90), Position (ST), Leagues (English Prem), Sort option (Positions), and checkboxes for 'Order by' and 'Descending order'. At the bottom left, there is a 'Revise Player Information' button. On the right side, there is a table of players with columns: NAME, height, weight, league, Positions, AGE, and OVERALL. The table lists 15 players, each with a 'Compare' button next to their name.

	NAME	height	weight	league	Positions	AGE	OVERALL
Compare	H. Kane	188	89	English Premier Lee	ST	27	90
Compare	M. Rashford	186	70	English Premier Lee	LM,ST	23	85
Compare	T. Werner	180	76	English Premier Lee	ST,LW	25	84
Compare	R. Jiménez	188	81	English Premier Lee	ST	30	83
Compare	Gabriel Jesus	175	73	English Premier Lee	ST	24	83
Compare	Richarlison	181	71	English Premier Lee	ST,LW,LM	24	82
Compare	Ferran Torres	184	77	English Premier Lee	RW,ST	21	82
Compare	Diogo Jota	178	73	English Premier Lee	LW,ST	24	82
Compare	W. Zaha	180	66	English Premier Lee	CF,LM,ST	28	82
Compare	A. Lacazette	175	73	English Premier Lee	ST	30	82
Compare	D. Calvert-Lewin	187	71	English Premier Lee	ST	24	81
Compare	A. Martial	184	76	English Premier Lee	ST,LM	25	81
Compare	D. Ings	178	73	English Premier Lee	ST	28	81
Compare	Rodrigo	182	77	English Premier Lee	CAM,ST,CM	30	79
Compare	C. Wilson	180	66	English Premier Lee	ST	29	79
Compare	A. Saint-Maximin	173	67	English Premier Lee	LM,ST	24	79
Compare	I. Sarr	185	76	English Premier Lee	RW,RM,ST	23	78
Compare	P. Bamford	185	71	English Premier Lee	ST	27	78

< Search more details >

There is more information in database. If you want to know those info, you have to click 'Search more details' button.

UI Demo - Search more details(Query)

```
query2='SELECT p1.*, stat.* FROM players_info_physical p1 \
JOIN team t ON p1.club = t.`name` JOIN players_info_stats stat ON p1.`name` = stat.`name`\
WHERE p1.`fullname` like "%{0}%" and \
p1.`age` >= {1} and \
p1.`age` <= {2} and \
p1.`weight` >= {3} and p1.`weight` <= {4} and \
p1.`height` >= {5} and p1.`height` <= {6} and \
stat.`overall` >= {7} and stat.`overall` <= {8} and \
p1.`positions` like "%{9}%" and \
t.`league` like "%{10}%" \
{11} {12} {13} LIMIT 50'
```

< Search more details>

Everything is same as the first query which is for simple search and search option, but search range is only difference.

UI Demo - Search more details

Specific Search Results															
playersID	name	Fullname	age	height	weight	nationality	positions	bestposition	club	valueEUR	wageEUR	ReleaseClause	ClubPosition	contractuntil	clubnumbe
200104	H. Son	Heung Min Son	28	183	78	Korea Republic	LM,CF,LW	LM	Tottenham Hotspur	104000000	220000	197600000	LW	2025	7
210257	Ederson	Ederson Santana d	27	188	86	Brazil	GK	GK	Manchester City	94000000	200000	181000000	GK	2026	31
212831	Alisson	Alisson Ramses Be	28	191	91	Brazil	GK	GK	Liverpool	82000000	190000	157900000	GK	2027	1
216267	A. Robertson	Andrew Robertson	27	178	64	Scotland	LB	LB	Liverpool	83500000	175000	160700000	LB	2026	26
179813	E. Cavani	Edinson Cavani	34	185	77	Uruguay	ST	ST	Manchester United	26000000	190000	48100000	SUB	2022	21
183711	J. Henderson	Jordan Henderson	31	182	80	England	CDM,CM	CDM	Liverpool	29500000	140000	54600000	CM	2025	14
233064	M. Mount	Mason Mount	22	178	70	England	CAM,CM,RW	CAM	Chelsea	58500000	120000	119900000	RW	2024	19
231943	Richarlison	Richarlison de And	24	181	71	Brazil	ST,LW,LM	ST	Everton	46500000	100000	91800000	LM	2024	7
220697	J. Maddison	James Maddison	24	175	73	England	CAM,CM	CAM	Leicester City	41500000	100000	82000000	CAM	2024	10
220182	J. Denayer	Jason Denayer	26	184	80	Belgium	CB	CB	Olympique Lyonnai	24500000	64000	48400000	CB	2022	5
233306	D. Henderson	Dean Henderson	24	188	85	England	GK	GK	Manchester United	36000000	70000	73800000	SUB	2025	26
227928	Nélson Semedo	Nélson Cabral Sem	27	177	69	Portugal	RWB,RB	RWB	Wolverhampton We	22000000	81000	43500000	RWB	2023	22
229927	Gerson	Gerson Santos da	24	184	72	Brazil	CM	CDM	Olympique de Mars	30000000	41000	59300000	LM	2026	8
196978	C. Wilson	Callum Wilson	29	180	66	England	ST	ST	Newcastle United	17500000	53000	33299999	ST	2024	9
184484	G. Sigurðsson	Gylfi Sigurðsson	31	186	77	Iceland	CAM,CM	CAM	Everton	14500000	83000	27800000	RES	2022	10
220793	D. Sánchez	Davinson Sánchez	25	187	79	Colombia	CB	CB	Tottenham Hotspur	19500000	77000	38500000	CB	2024	6
210736	Emerson	Emerson Palmieri di	26	176	79	Italy	LB,LWB	LB	Olympique Lyonnai	15000000	85000	0	LB	2022	3
247204	Emerson	Emerson Leite De S	22	181	79	Brazil	RB	RB	Tottenham Hotspur	25000000	70000	49400000	RB	2026	12
201995	Felipe Anderson	Felipe Anderson Pe	28	175	70	Brazil	LM,CAM	LM	Lazio	14000000	58000	23800000	RW	2025	7
246147	M. Greenwood	Mason Greenwood	19	181	70	England	RM,ST	CAM	Manchester United	30500000	56000	62500000	RM	2025	11
232080	J. Harrison	Jack Harrison	24	175	70	England	LM,RM	LM	Leeds United	22000000	66000	46200000	LM	2024	22
210736	Emerson	Emerson Palmieri di	26	176	79	Italy	LB,LWB	LB	Olympique Lyonnai	15000000	85000	0	LB	2022	3
247204	Emerson	Emerson Leite De S	22	181	79	Brazil	RB	RB	Tottenham Hotspur	25000000	70000	49400000	RB	2026	12
227055	Gelson Martins	Gelson Dany Batali	26	173	74	Portugal	RM,LM	RM	AS Monaco	16500000	50000	32600000	RM	2024	7
225024	M. Holgate	Mason Holgate	24	184	75	England	CB,RB	CB	Everton	13000000	56000	25700000	SUB	2025	4
201377	J. Murillo	Jeison Murillo	29	184	76	Colombia	CB	CB	RC Celta de Vigo	9500000	20000	0	CB	2022	24
194806	C. Dawson	Craig Dawson	31	188	77	England	CB	CB	West Ham United	7000000	56000	13300000	CB	2023	15
240740	C. Hudson-Odoi	Callum Hudson-Odo	20	178	79	England	RW,LW	CAM	Chelsea	23000000	72000	47200000	SUB	2024	20
241202	P. Daka	Patson Daka	22	183	71	Zambia	ST	ST	Leicester City	21500000	78000	45200000	SUB	2026	29
201858	N. Sansone	Nicola Sansone	29	173	63	Italy	CAM,LW,ST	CAM	Bologna	7500000	32000	12800000	SUB	2023	10
212678	L. Augustinsson	Ludwig Augustinss	27	181	72	Sweden	LB,LM	LB	Sevilla FC	8000000	23000	17400000	SUB	2025	3
210896	M. Sanson	Morgan Sanson	26	180	73	France	CM	CAM	Aston Villa	9000000	56000	17800000	SUB	2025	8
208787	A. Thomasson	Adrien Thomasson	27	177	72	France	CAM,CM	CAM	RC Strasbourg Als	8500000	23000	17600000	CAM	2024	10
239580	Bremer	Gleison Bremer Silv	24	188	82	Brazil	CB	CB	Torino F.C.	11000000	31000	20900000	CB	2023	3
194201	P. Jansson	Pontus Jansson	30	194	86	Sweden	CB	CB	Brentford	4600000	38000	9200000	CB	2022	18
191076	J. Guðmundsson	Jóhann Berg Guðm	30	179	77	Iceland	RM,LM	RM	Burnley	5500000	32000	10500000	RM	2023	7
233866	O. Edouard	Ousmane Edouard	23	187	83	France	ST	CAM	Crystal Palace	12500000	44000	26300000	SUB	2025	22

< Search more details >

This new window shows you every information about players you searched.

UI Demo - Challenges from search functions

< Challenges >

Making queries stable with many variables was the most difficult part on Searching function. Because I have to make searching function running well with 'no option entry value' case. Especially making sort function was the most challenging part. I wanted to make user to choose to use sort option or not. Order by query without column name make MYSQL syntax error. To solve it I used check box to put order by or not. And used 'if' to apply other values.

Code in this slide means if there is no value from order_onoff, clear order by column value(option_get) and descending order value(dec_get).

```
#ORDER BY check 여부에 따른 if문
if str(order_onoff.get()) == '':
    option_get = ''
    dec_get = ''
else:
    option_get = str(optioncombo.get())
    dec_get = str(descasc.get())
```

UI Demo - Challenges from search functions

```
#ORDERBY - onoff
order_onoff = StringVar()
onoff = Checkbutton(label_left, text="Order by", variable=order_onoff, onvalue="ORDER BY",
offvalue=" ")
onoff.deselect()
onoff.config(bg="light grey")
onoff.grid(row=7, column=3)
onoff_get = str(order_onoff.get())
```

```
#ORDERBY - desc
descasc = StringVar()
dec = Checkbutton(label_left, text="Descending order", variable=descasc, onvalue="Desc",
offvalue="Asc")
dec.deselect()
dec.config(bg="light grey")
dec.grid(row=7, column=4)
dec_get = str(descasc.get())
```

```
l_option = Label(label_left, text="Sort option", font=12, bg="light grey")
l_option.grid(row=7, column=0, sticky=W)

columnlist= ["Positions", "AGE", "Height", "Weight", "stat.Overall"]
optioncombo = ttk.Combobox(label_left, values=columnlist)
optioncombo.set(columnlist[0])
optioncombo.config(width=10)
optioncombo.grid(row=7, column=2)
```

< Order by on/off variable>

I have to check 'check box' to get "ORDER BY" string value, and this will go into query sentence

< Order by desc/asc variable>

User can choose order standard by check box with this variables. This variable will be empty when on/off value is empty (If condition is on previous slide.)

< Order by column variable>

User can choose column to sort with combo box. If you want to add more standard, just put columns name in columnlist.

This variable also will be empty when on/off value is empty.

Revise Player Information

Enter the player's name.

son

Name	Update
H. Son	Select
Ederson	Select
Alisson	Select
A. Robertson	Select
E. Cavani	Select
J. Henderson	Select
M. Mount	Select
Richarlison	Select
J. Maddison	Select
J. Denayer	Select
D. Henderson	Select
Nelson Semedo	Select
Gerson	Select
C. Wilson	Select
G. Sigurdsson	Select
D. Sanchez	Select
Emerson	Select
Felipe Anderson	Select
M. Greenwood	Select
J. Harrison	Select
Emerson	Select
Gelson Martins	Select

clear

UI Demo

3) Revise Function

Revise Player Information

H. Son

Conditions

Value(existing) age 28

Value(update) 25

clear update

Update Completed

Player "H. Son" Update Completed!!

age : 28 → 25



