

**BİLKENT UNIVERSITY - ENGINEERING FACULTY**  
**DEPARTMENT OF COMPUTER ENGINEERING**



**CS 353 – Group 08**  
**SPRING 2020**  
**PROJECT DESIGN REPORT**

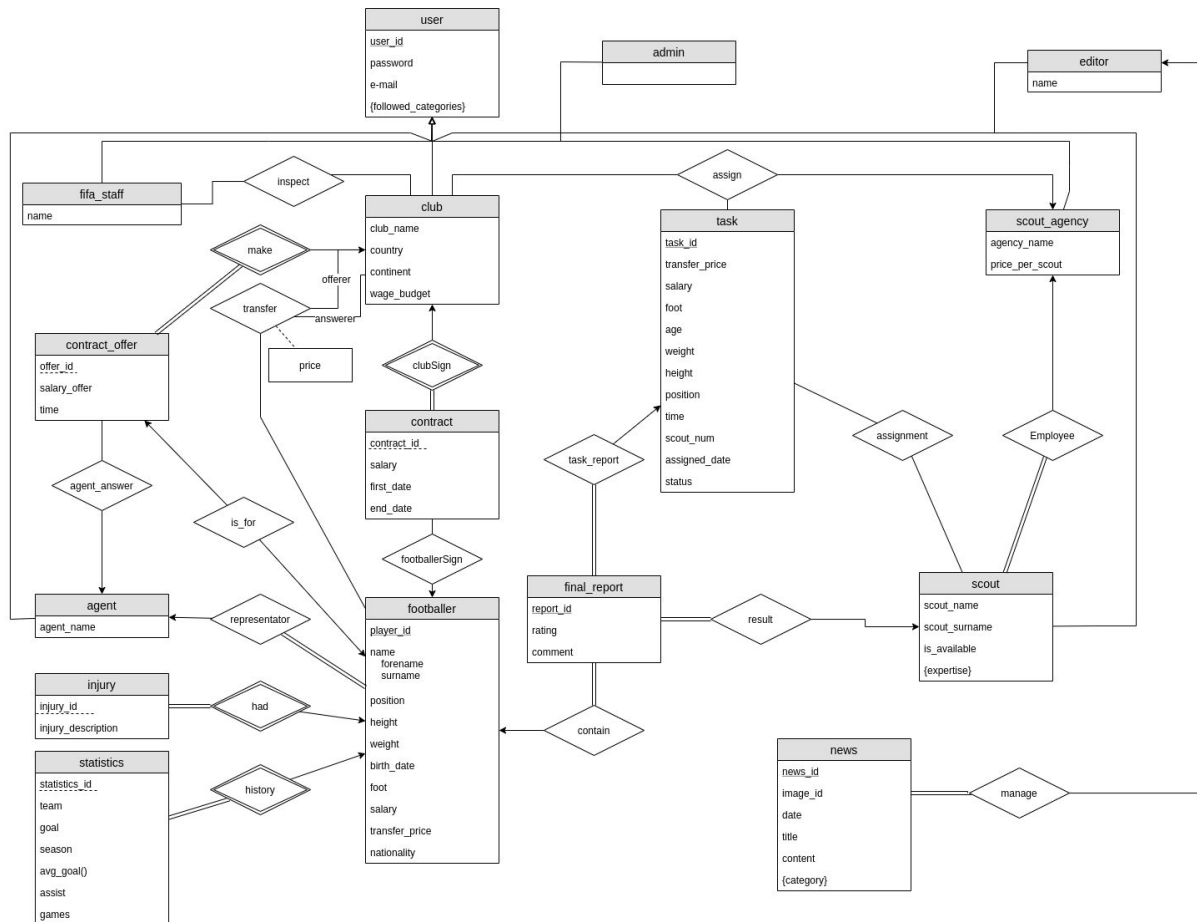
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# 1.Revised E/R Diagram



## 2. Table Schemas

- admin (user\_id, password, email)

✓ **primary key:** user\_id

✓ **candidate keys:** user\_id, email

✓ **functional dependencies:**

user\_id  $\twoheadrightarrow$  password, email

email  $\twoheadrightarrow$  password, user\_id

✓ Both user\_id and email are superkeys for the admin table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table admin(  
    user_id      char(5),  
    password     varchar(20) not null,  
    email        varchar(50) not null,  
    primary key (user_id)  
);
```

- fifa\_staff (user\_id, password, email, name)

✓ **primary key:** user\_id

✓ **candidate keys:** user\_id, email

✓ **functional dependencies:**

user\_id  $\twoheadrightarrow$  password, email, name

email  $\twoheadrightarrow$  password, user\_id, name

- ✓ Both `user_id` and `email` are superkeys for the `fifa_staff` table. Therefore, this relation schema is in BCNF and 3NF.

- ✓ **table definition:**

```
create table fifa_staff(  
    user_id      char(5),  
    password     varchar(20) not null,  
    email        varchar(50) not null,  
    name         varchar(80) not null,  
    primary key (user_id)  
);
```

- club (user\_id, password, email, club\_name, country, wage\_budget)

- ✓ **primary key:** `user_id`

- ✓ **foreign key:** `country` (to *country\_location* table)

- ✓ **candidate keys:** `user_id`, `email`, (`club_name`, `country`)

- ✓ **functional dependencies:**

`user_id`  $\twoheadrightarrow$  `club_name`, `country`, `wage_budget`

`email`  $\rightarrow$  `club_name`, `country`, `wage_budget`

`club_name`, `country`  $\twoheadrightarrow$  `user_id`, `wage_budget`

- ✓ `user_id`, `email`, and (`club_name`, `country`) are superkeys for the club table.

Therefore, this relation schema is in BCNF and 3NF.

- ✓ **table definition:**

```
create table club(  
    user_id      char(5),  
    password     varchar(20) not null,
```

```

        email          varchar(50) not null,

        club_name      varchar(50) not null,

        country        varchar(50),

        wage_budget    int,

        primary key (user_id),

        foreign key(country) references country_location

    );

```

- country\_location (country, continent)

✓ **primary key:** country

✓ **candidate keys:** country

✓ **functional dependencies:**

country → continent

✓ country is a superkey for the country\_location table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```

create table country_location(

    country          varchar(25),

    continent        varchar(25),

    primary key (country)

);

```

- scout\_agency (user\_id, password, email, agency\_name, price\_per\_scout)

✓ **primary key:** user\_id

✓ **candidate keys:** user\_id, email, agency\_name

✓ **functional dependencies:**

$\text{user\_id} \twoheadrightarrow \text{password, email, agency\_name, price\_per\_scout}$

$\text{agency\_name} \twoheadrightarrow \text{user\_id, password, email, price\_per\_scout}$

$\text{email} \rightarrow \text{user\_id, password, agency\_name, price\_per\_scout}$

- ✓  $\text{user\_id}$ ,  $\text{email}$ , and  $\text{agency\_name}$  are superkeys for the `scout_agency` table.

Therefore, this relation schema is in BCNF and 3NF.

- ✓ **table definition:**

```
create table scout_agency(  
    user_id          char(5),  
    password         varchar(20) not null,  
    email            varchar(50) not null,  
    agency_name      varchar(50) not null,  
    price_per_scout  int not null,  
    primary key (user_id)  
);
```

- agent (user\_id, password, email, agent\_name)

- ✓ **primary\_key:**  $\text{user\_id}$

- ✓ **candidate keys:**  $\text{user\_id}$ ,  $\text{email}$

- ✓ **functional dependencies:**

$\text{user\_id} \twoheadrightarrow \text{email, agent\_name}$

$\text{email} \rightarrow \text{user\_id, agent\_name}$

- ✓ Both  $\text{user\_id}$  and  $\text{email}$  are superkeys for the `agent` table. Therefore, this relation schema is in BCNF and 3NF.

- ✓ **table definition:**

```

create table agent(

    user_id          char(5),

    password         varchar(20) not null,

    email            varchar(50) not null,

    agent_name       varchar(80) not null,

    primary key (user_id)

);

```

- editor (user\_id, password, email, name)

✓ **primary key:** user\_id

✓ **candidate keys:** user\_id, email

✓ **functional dependencies:**

user\_id → password, email, name

email → user\_id, password, name

- ✓ Both user\_id and email are superkeys for the editor table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```

create table editor(

    user_id          char(5),

    password         varchar(20) not null,

    email            varchar(50) not null,

    name             varchar(80) not null,

    primary key(user_id)

);

```

- user (user\_id)



- ✓ **primary key:** user\_id
- ✓ **candidate keys:** user\_id
- ✓ **functional dependencies:** No functional dependency.
- ✓ **table definition:**

```
create table (
    user_id      char(5),
    primary key(user_id)
);
```

- followed\_tags (user\_id, tag)

- ✓ **primary key:** (user\_id, tag)
- ✓ **candidate keys:** (user\_id, tag)
- ✓ **foreign key:** user\_id (*to user table*)
- ✓ **functional dependencies:** No functional dependency.
- ✓ **table definition:**

```
create table followed_tags(
    user_id      char(5),
    tag          varchar(25),
    primary key(user_id, tag),
    foreign key(user_id) references user
);
```

- task (task\_id, transfer\_price, salary, foot, age, weight, height, position, time, scout\_num, assigned\_date, club\_id, agency\_id, status)

- ✓ **primary key:** task\_id
- ✓ **candidate keys:** task\_id

✓ **foreign\_key:** club\_id (to club table), agency\_id (to scout\_agency table)

✓ **functional dependencies:**

task\_id → transfer\_price, salary, foot, age, weight, height, position, time,  
scout\_num, status

✓ task\_id is a superkey for the task table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table task(  
    task_id          char(5),  
    transfer_price   int,  
    salary           int,  
    foot             varchar(5) not null,  
    age              smallint not null,  
    weight           smallint not null,  
    height           smallint not null,  
    position         varchar(10) not null,  
    time             smallint not null,  
    scout_num        smallint not null,  
    assigned_date    varchar(10) not null,  
    club_id          char(5) not null,  
    agency_id        char(5) not null,  
    status           varchar(10) not null,  
    primary key (task_id),  
    foreign key (club_id) references club,
```

foreign key (agency\_id) references *scout\_agency*

);

- contract\_offer (offer\_id, club\_id, agent\_id, salary\_offer, time, player\_id)

✓ **primary\_key:** (offer\_id, club\_id)

✓ **candidate keys:** (offer\_id, club\_id)

✓ **foreign key:** club\_id (*to club table*), agent\_id (*to agent table*)

✓ **functional dependencies:**

offer\_id, club\_id  $\twoheadrightarrow$  salary\_offer, time, agent\_id

✓ (offer\_id, club\_id) is a superkey for the contract\_offer table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

create table contract\_offer(

offer\_id char(5),

club\_id char(5),

agent\_id char(5),

salary\_offer int not null,

time smallint not null,

player\_id char(5),

primary key (offer\_id, club\_id),

foreign key (club\_id) references *club*,

foreign key (agent\_id) references *agent*,

foreign key (player\_id) references *footballer*

);

- contract (contract\_id, club\_id, player\_id, salary, first\_date, end\_date)

✓ **primary\_key:** (contract\_id, club\_id)

✓ **candidate keys:** (contract\_id, club\_id)

✓ **foreign\_key:** club\_id (*to club table*), player\_id (*to footballer table*)

✓ **functional dependencies:**

contract\_id, club\_id  $\twoheadrightarrow$  player\_id, salary, first\_date, end\_date

✓ (contract\_id, club\_id) is a superkey for the contract table. Therefore, this relation schema is in BCNF and 3NF.

- footballer (player\_id, agent\_id, forename, surname, position, height, weight, birth\_date, foot, salary, transfer\_price, nationality)

✓ **primary\_key:** player\_id

✓ **candidate keys:** player\_id

✓ **foreign\_key:** agent\_id (*to agent table*)

✓ **functional dependencies:**

player\_id  $\twoheadrightarrow$  agent\_id, forename, surname, position, height, weight, birth\_date, foot, salary, transfer\_price, nationality

✓ player\_id is a superkey for the footballer table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table footballer(
    player_id          char(5),
    agent_id           char(5),
    forename           varchar(25) not null,
```

surname	varchar(25) not null,
position	varchar(10) not null,
height	smallint not null,
weight	smallint not null,
birth_date	varchar(10) not null,
foot	varchar(5) not null,
salary	int,
transfer_price	int,
nationality	varchar(25)

primary key (player\_id),

foreign key (agent\_id) references *agent*

);

- statistics (statistics\_id, player\_id, team, goal, season, assist, games)

✓ **primary\_key:** (statistics\_id, player\_id)

✓ **candidate keys:** (statistics\_id, player\_id)

✓ **foreign key:** player\_id (*to footballer table*)

✓ **functional dependencies:**

statistics\_id, player\_id → team, goal, season, assist, games

✓ (statistics\_id, player\_id) is a superkey for the statistics table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table statistics(
    statistics_id      char(5),
    player_id          char(5),
```

```

team            varchar(25),

goal            int not null,

season          varchar(10) not null,

assist          smallint not null,

games           smallint not null,

primary key (statistics_id, player_id),

foreign key (player_id) references footballer

);

```

- injury (injury\_id, player\_id, injury\_description)

✓ **primary\_key:** (injury\_id, player\_id)

✓ **candidate keys:** (injury\_id, player\_id)

✓ **foreign\_key:** player\_id (*to footballer table*)

✓ **functional dependencies:**

injury\_id, player\_id → injury\_description

✓ (injury\_id, player\_id) is a superkey for the injury table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```

create table injury(

injury_id        char(5),

player_id        char(5),

injury_description  varchar(200) not null,

primary key (injury_id, player_id),

foreign key (player_id) references footballer

```

);

- final\_report (report\_id, player\_id, task\_id, scout\_id, rating, comment)

✓ **primary\_key:** report\_id

✓ **candidate keys:** report\_id

✓ **foreign\_key:** player\_id (*to footballer table*), task\_id (*to task table*), scout\_id (*to scout table*)

report\_id → player\_id, task\_id, scout\_id, rating, comment

✓ report\_id is a superkey for the final\_report table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table final_report(  
    report_id          char(5),  
    player_id          char(5),  
    club_id            char(5),  
    scout_id           char(5),  
    rating             double-precision,  
    comment            varchar(1000),  
    primary key (report_id),  
    foreign key (player_id) references footballer,  
    foreign key (task_id) references task,  
    foreign key (scout_id) references scout  
);
```

- news (news\_id, editor\_id, date, title, content, image\_id)

- ✓ **primary\_key:** news\_id
- ✓ **candidate keys:** news\_id, (date, title, content, category)
- ✓ **foreign\_key:** editor\_id (*to editor table*)
- ✓ **functional dependencies:**

news\_id → editor\_id, date, title, content, image\_id

date, title, content, category, image\_id → news\_id

- ✓ news\_id and (date, title, content, category, image\_id) are superkeys for the news table. Therefore, this relation schema is in BCNF and 3NF.

- ✓ **table definition:**

```
create table news(
    news_id          char(5),
    editor_id        char(5),
    date             date,
    title            varchar(25),
    content           varchar(1000),
    category         varchar(15),
    image_id         char(10),
    primary key (news_id),
    foreign key (editor_id) references editor
);
```

- categories (news\_id, category)

- ✓ **primary\_key:** (news\_id, category)
- ✓ **candidate keys:** (news\_id, category)



✓ **foreign\_key:** news\_id (to news table)

✓ **functional dependencies:**

news\_id  $\rightarrow$  category

✓ news\_id  $\rightarrow$  category is trivial, because news\_id  $\cup$  category = categories relation. Therefore, this relation schema is in BCNF and 4NF.

✓ **table definition:**

```
create table categories(  
    news_id          char(5),  
    category         varchar(100),  
    primary key (news_id, category),  
    foreign key (news_id) references news  
);
```

- scout (user\_id, password, email, agency\_id, scout\_name, scout\_surname, is\_available)

✓ **primary\_key:** user\_id

✓ **candidate keys:** user\_id, email

✓ **foreign\_key:** agency\_id (to scout\_agency table), task\_id (to task table)

✓ **functional dependencies:**

user\_id  $\twoheadrightarrow$  password, email, agency\_id, task\_id, scout\_name, scout\_surname, is\_available

email  $\twoheadrightarrow$  password, email, agency\_id, task\_id, scout\_name, scout\_surname, is\_available

- ✓ **user\_id** and **email** are superkeys for the **scout** table. Therefore, this relation schema is in BCNF and 3NF.

✓ **table definition:**

```
create table scout(
    scout_id          char(5),
    password          varchar(20) not null,
    email             varchar(50) not null,
    agency_id         char(5),
    task_id           char(5),
    scout_name        varchar(25) not null,
    scout_surname     varchar(25) not null,
    is_available      boolean not null,
    primary key (scout_id),
    foreign key (agency_id) references scout_agency,
    foreign key (task_id) references task
);
```

- assignment (scout\_id, task\_id)

- ✓ **primary\_key:** (scout\_id, task\_id)
- ✓ **candidate keys:** (scout\_id, task\_id)
- ✓ **functional dependencies:**

scout\_id  $\twoheadrightarrow$  task\_id

- ✓ scout\_id  $\rightarrow \rightarrow$  task\_id is trivial, because scout\_id  $\cup$  task\_id = assignment relation schema. Therefore, this relation schema is in BCNF and 4NF.

✓ **table definition:**

```
create table scout_expertise(  
    scout_id          char(5),  
    task_id           char(20),  
    primary key (scout_id, task_id),  
    foreign key (scout_id) references scout  
    foreign key (task_id) references task  
);
```

- scout\_expertise (scout\_id, expertise)

✓ **primary\_key:** (scout\_id, expertise)

✓ **candidate keys:** (scout\_id, expertise)

✓ **functional dependencies:**

scout\_id  $\twoheadrightarrow$  expertise

✓ scout\_id  $\rightarrow$  expertise is trivial, because scout\_id  $\cup$  expertise = scout\_expertise relation schema. Therefore, this relation schema is in BCNF and 4NF.

✓ **table definition:**

```
create table scout_expertise(  
    scout_id          char(5),  
    expertise          varchar(20),  
    primary key (scout_id, expertise),  
    foreign key (scout_id) references scout  
);
```

- inspect (fifa\_id, club\_id)

- ✓ **primary\_key:** (user\_id, club\_id)

- ✓ **candidate keys:** (user\_id, club\_id)

- ✓ **foreign\_key:** fifa\_id (*to fifa\_staff table*), club\_id (*to club table*)

- ✓ **functional dependencies:** *No functional dependency.*

- ✓ **table definition:**

```
create inspect(  
    fifa_id      char(5),  
    club_id      char(5),  
    primary key (fifa_id, club_id),  
    foreign key (fifa_id) references fifa_staff,  
    foreign key (club_id) references club  
);
```

- ✓

- transfer (offerer\_club\_id, answerer\_club\_id, player\_id, price)

- ✓ **primary\_key:** (offerer\_club\_id, answerer\_club\_id, player\_id)

- ✓ **foreign\_key:** offerer\_club\_id (*to club table*), answerer\_club\_id (*to club table*),  
player\_id (*to footballer table*)

- ✓ **candidate keys:** (offerer\_club\_id, answerer\_club\_id, player\_id)

- ✓ **functional dependencies:**

*offerer\_club\_id, answerer\_club\_id, player\_id → price*

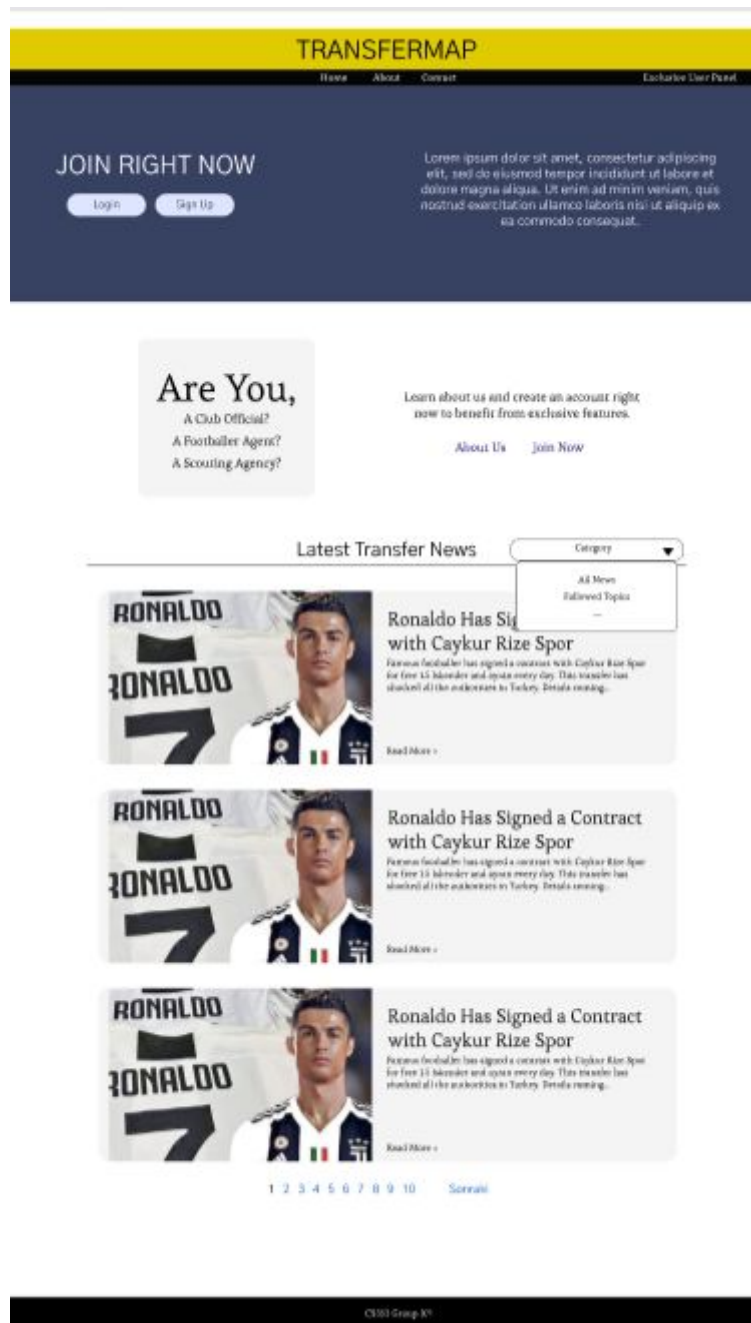
✓ *(offerer\_club\_id, answerer\_club\_id, player\_id) is a superkey for the transfer table. Therefore, this relation schema is in BCNF and 3NF.*

✓ **table definition:**

```
create table transfer(  
    offerer_club_id      char(5),  
    answerer_club_id     char(5),  
    player_id            char(5),  
    price                 int,  
    primary key (offerer_club_id, answerer_club_id, player_id),  
    foreign key (offerer_club_id) references club,  
    foreign key (answerer_club_id) references club,  
    foreign key (player_id) references footballer  
);
```

### 3. User Interface Design and SQL Statements

#### Main Page



In the news part, users will be able to see only a specific category. They will choose the category from the drop-down menu on the top right corner.

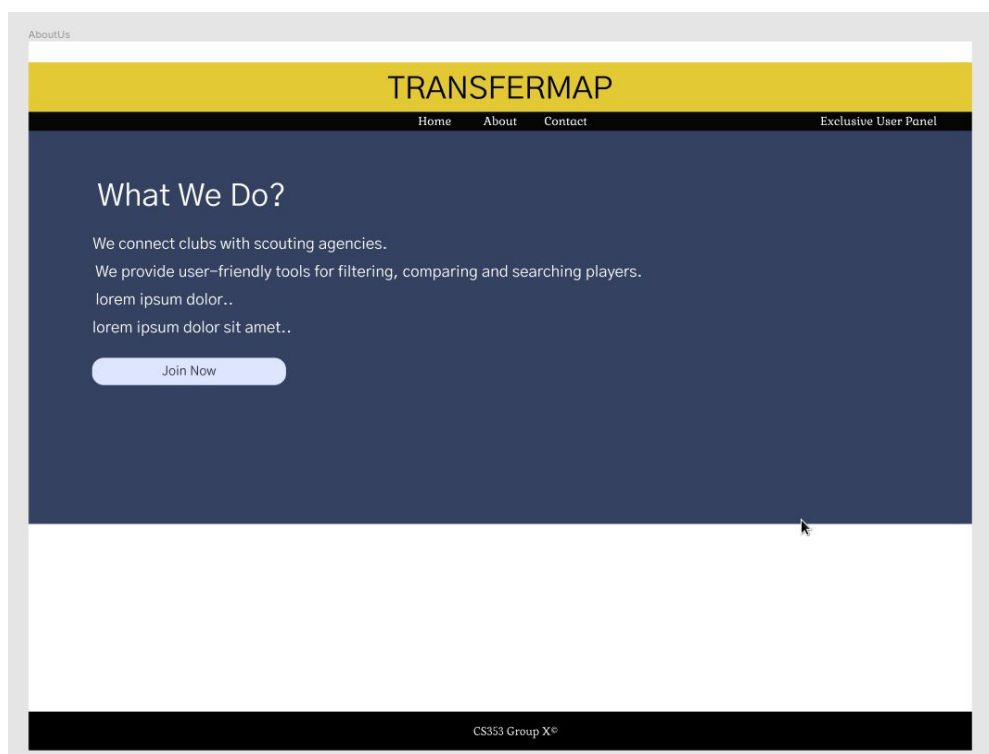
**input:** @category

**SQL Statement:**

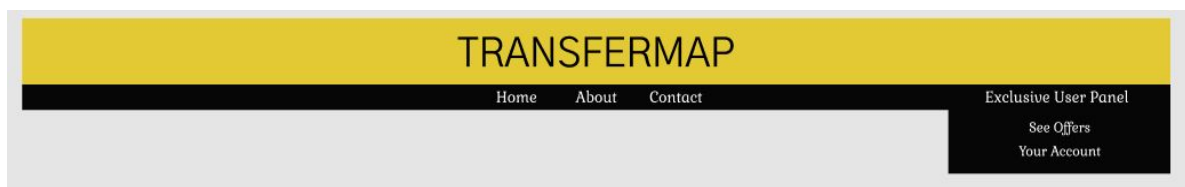
**To show news:**

```
CREATE VIEW categorized_news AS
SELECT *
FROM news NATURAL JOIN categories
WHERE category = @category
ORDER BY date ASC;
```

## About Us Page



## Panel Menu for Managers



This page is for managers to navigate the page through different pages.

## Panel Menu For Editors



This page is for editors to navigate the page through different pages.

## Panel Menu For Clubs



This page is for clubs to navigate the page through different pages.

## Panel Menu For Agencies



This page is for agencies to navigate the page through different pages.

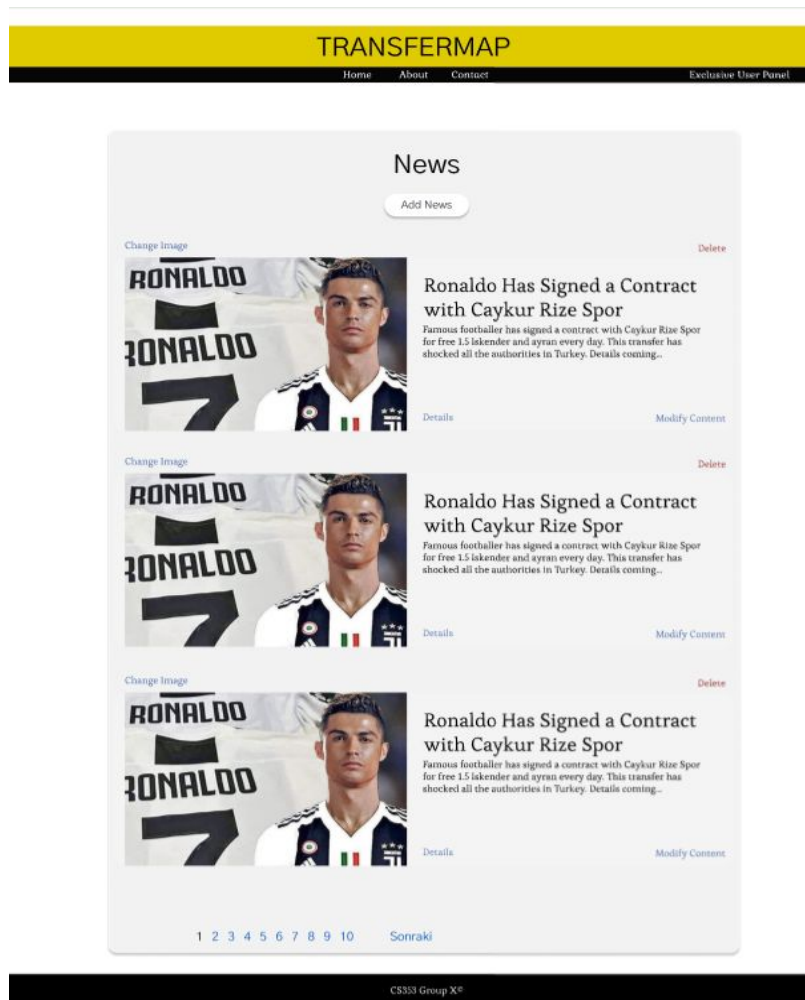
## Panel Menu For Scouts



This page is for scouts to navigate the page through different pages.



## Editor Editing Page



If modify is clicked, the next page is opened filled, and data can be changed and saved. If add is clicked, next page is opened empty.

**Input:** @editor\_id, @news\_id

**SQL Statements:**

```
CREATE VIEW news_editor AS
```

```
SELECT *
```

```
FROM news
```

```
WHERE editor_id = @editor_id;
```

**To delete news:**

```
DELETE FROM news_editor
```

```
WHERE news_id = @news_id;
```

## Editor Add News Page

TRANSFERMAP

Home About Contact Exclusive User Panel

If user choose add News, this page will open with blank spaces, if he is modifying a news, content will be filled with that content

Upload Image

Select Category ▼

Title

Tags

content

Post

CS353 Group X©

**input:** @editor\_id, @news\_id, @title, @image\_id, @content, @content, @category, @date

**SQL Statement:**

```
CREATE VIEW news_editor AS
SELECT *
FROM news
WHERE editor_id = @editor_id;
```

**To add news:**

```
INSERT INTO news_editor
VALUES (@news_id, @editor_id, @date, @title, @content, @image_id);
```

```
INSERT INTO categories
VALUES (@news_id, @category);
```

**To update news:**

```
UPDATE news_editor  
SET date = @date  
WHERE news_id = @news_id;
```

```
UPDATE news_editor  
SET title = @title  
WHERE news_id = @news_id;
```

```
UPDATE news_editor  
SET content = @content  
WHERE news_id = @news_id;
```

```
UPDATE news_editor  
SET image_id = @image_id  
WHERE news_id = @news_id;
```

```
INSERT INTO categories  
VALUES(@news_id, @category);
```

```
DELETE FROM categories  
WHERE news_id = @news_id AND category = @category;
```

## My Account Page

This page's content varies with different types of users.

**inputs:** @name, @email, @password, @categories, @user\_id, @price\_per\_scout

### **SQL Statements:**

#### **To update an editor account:**

```
UPDATE editor
```

```
SET email = @email, password = @password, editor.name = @name
```

```
WHERE user_id = @user_id;
```

**To update an agent account:**

UPDATE agent

SET email = @email, password = @password, agent\_name = @name

WHERE user\_id = @user\_id;

**To update a club account:**

UPDATE club

SET email = @email, password = @password, club\_name = @name

WHERE user\_id = @user\_id;

**To update a fifa account:**

UPDATE fifa\_staff

SET email = @email, password = @password, fifa\_staff.name = @name

WHERE user\_id = @user\_id;

**To update a scout account:**

UPDATE scout

SET email = @email, password = @password, scout\_name = @name

WHERE user\_id = @user\_id;

**To update an agency account:**

UPDATE scout\_agency

SET email = @email, password = @password, agency\_name = @name, price\_per\_scout = @price\_per\_scout

WHERE user\_id = @user\_id;

## Login Page


LoginPage

TRANSFERMAP

[Home](#) [About](#) [Contact](#) [Exclusive User Panel](#)

### Login

[Forgot password?](#)



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### SQL Statement:

input: @user, @password

```
SELECT *  
FROM user  
WHERE ( user_id = @user OR email = @user)  
AND password = @password;
```

## Contact With Us Page

Contact

**TRANSFERMAP**

Home About Contact Exclusive User Panel

Your Name (required)

Your Email (required)

Subject

Your Message

SEND

CS353 Group X®

## Sign Up page

left\_panel

**Sign Up**

You are: ☒ Club ☐ S.Agency ☐ Agent ☐ Standard

club name

password

password again

e-mail

country

continent

Sign Up

left\_panel

**Sign Up**

You are: ☐ Club ☒ S.Agency ☐ Agent ☐ Standard

agency name

password

password again

e-mail

Sign Up

LoginPage

**TRANSFERMAP**

Home About Contact Exclusive User Panel

**Sign Up**

You are: ☐ Club ☐ S.Agency ☐ Agent ☒ Standard


name and surname

password

password again

e-mail

Sign Up



CS353 Group X®

That page is for signing up for the website.

**Input:** @user\_id, @name\_surname, @password, @e-mail, @country, @continent

**SQL Statement:**

**To add a club account:**

```
INSERT INTO club
```

```
VALUES (@user_id, @password, @email, @name_surname, @country);
```

```
INSERT INTO country_location
```

```
VALUES(country, continent);
```

**To add an agency account:**

```
INSERT INTO scout_agency
```

```
VALUES (@user_id, @password, @email, @name_surname);
```

**To add an agent account:**

```
INSERT INTO agent
```

```
VALUES (@user_id, @password, @email, @name_surname);
```

**To add an editor account:**

```
INSERT INTO editor
```

```
VALUES (@user_id, @password, @email, @name_surname);
```

**To add an fifa account:**

```
INSERT INTO fifa_staff
```

```
VALUES (@user_id, @password, @email, @name_surname);
```



## Offers Page

TransferOfferPage

TRANSFERMAP

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contract\_content

### Latest Contract Offers

Player	Offerer Club	Offered Club	Offer	Other
Cristiano Ronaldo	Juventus	Real Madrid	14.5M\$	-
<input type="text" value="Enter Counter Offer Price"/>			<button>Counter offer</button>	<div>Status: Club waiting...</div> <div><button>Approve</button> <button>Decline</button></div>
Gareth Bale	Juventus	Real Madrid	14.5M\$	-
<input type="text" value="Enter Counter Offer Price"/>			<button>Counter offer</button>	<div>Status: Manager waiting...</div> <div><button>Approve</button> <button>Decline</button></div>
Paulo Dybala	Real Madrid	Juventus	14.5M\$	-
<input type="text" value="Enter Counter Offer Price"/>			<div>counter offer</div>	<div>Status: Approved</div> <div><button>Cancel</button></div>

Managers and clubs will see all the previous and current offers. Also the offers they made(for clubs). They can approve an offer, decline it, counteroffer, or cancel an offer.

**inputs:** @club\_id, @agent\_id

### For clubs:

```
CREATE VIEW club_offers AS
SELECT *
FROM contract_offer NATURAL JOIN club
WHERE club_id = @club_id;
```

### For agents:

```
CREATE VIEW agent_offers AS
SELECT *
FROM contract_offer NATURAL JOIN agent
WHERE agent_id = @agent_id;
```

## Footballer Search Page

The screenshot displays the 'TRANSFERMAP' website interface. On the left, there is a search filter section with fields for Name, Gender, Height, Weight, Age, Position, Nationality, League, Club, Preferred foot, Salary, and Transfer price. A 'Search' button is located below these fields. The main content area is titled 'Players' and lists several player cards. Each card displays a player's name, position, nationality, and club, along with 'Details' and 'Compare' buttons. A 'See Comparison' button is located at the top right. A popup menu is visible in the top right corner, showing a list of added players (William James, James Doe) with a '<close>' button. The interface also includes a navigation bar with 'Home', 'About', and 'Contact' links, and an 'Exclusive User Panel' link.

Clubs and scouts can make a search on this page. They can add players for comparison. Added players are shown in a popup menu in the top right corner that appears when hover. If the user clicks “see comparison”, the comparison page is opened for the players.

**input:** @player\_id1, @player\_id2, @id\_for\_details

**SQL Statement:**

<filtering will be done in coding part by the website>


CREATE VIEW details AS

SELECT \*

FROM footballer;

## Comparison Page

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William Turner

male

185

75

23.03.1985

35

Forward

Holland

Bundesliga

Dortmund

Right

Jack Sparrow

Name:

Gender:

Height:

Weight:

Birth date:

Age:

Position:


Nationality:

League:

Club:

Preferred foot:

Agent name:



William Turner

male

185

75

23.03.1985

35

Forward

Holland

Bundesliga

Dortmund

Right

Jack Sparrow

### Contract Information

10.000	Salary(S):	10.000
1.000.000	Transfer price(S):	1.000.000
15.09.2019	Start date:	15.09.2019
15.09.2023	End date:	15.09.2023

### Statistical Information

#### Seasons 2018-2019

Barcelona	Club:	Barcelona
25	Goals:	25
0.78	Goals per game:	0.78
5	Assists:	5
30	Played games:	30

#### Seasons 2019-2020

Dortmund	Club:	Dortmund
15	Goals:	15
1.5	Goals per game:	1.5
2	Assists:	2
10	Played games:	10

[Change player](#)  
[Add Player to Report](#)

[Change player](#)  
[Add Player to Report](#)

If the comparison page is displayed by a scout, he can add the player instantly to his report. The button will not appear if the page is displayed by a club.

**SQL Statement:**

**input:** @report\_id, @player\_id, @scout\_id, @club\_id, @player\_id1, @player\_id2

**To insert a player into the report:**

INSERT INTO final\_report

VALUES(@report\_id, @player\_id, @club\_id, @scout\_id);

**Display players:**

CREATE VIEW comparison AS

(SELECT \* FROM (footballer NATURAL JOIN injury NATURAL JOIN statistics NATURAL JOIN contract) WHERE player\_id = @player\_id1)

UNION

(SELECT \* FROM (footballer NATURAL JOIN injury NATURAL JOIN statistics NATURAL JOIN contract) WHERE player\_id = @player\_id2);

## Footballer Details Page

Select Task

- Task Assigned by Real Madrid
- Task Assigned By Juventus

Name: William Turner

Position: Forward

Nationality: Holland

Club: Dortmund

Compare

Add to Report

Make offer

<If the page is displayed by a club, Add to Report button will be replaced with Make offer button>

<popup>

To Footballer:

Salary:

Contract Begin Date:

Contract End Date:

To Club:

Transfer Price:

Send offer

See old Transfers

### General Information

Name:

William Turner

Gender:

male

Height:

185

Weight:

75

Birth date:

23.03.1985

Age:

35

Position:

Forward

Nationality:

Holland

League:

Bundesliga

Club:

Dortmund

Preferred foot:

Right

Agent name:

Jack Sparrow

### Contract Information

Salary(\$):

10.000

Transfer price(\$):

1.000.000

Start date:

15.09.2019

End date:

15.09.2023

### Statistical Information

#### Seasons 2018–2019

Club:

Barcelona

Goals:

25

Goals per game:

0.78

Assists

5

Played games

30

#### Seasons 2019–2020

Club:

Dortmund

Goals:

15

Goals per game:

1.5

Assists

2

Played games

10

On this page, all the info of footballer can be seen also the previous transfers. If it is displayed by a club, A “make offer button” will appear. When clicked, a popup is opened to enter salary, etc. and send an offer.

**SQL Statement:**

**input:** @report\_id, @task\_id, @offer\_id, @scout\_id

**To make a contract offer to a footballer from the report:**

```
WITH my_club(id) AS (SELECT club_id FROM final_report WHERE report_id = @report_id)
WITH my_agent(id) AS (SELECT agent_id
                      FROM ( (SELECT player_id, agent_id FROM footballer)
                          NATURAL JOIN
                          (SELECT player_id FROM final_report WHERE report_id =
                            @report_id)))
INSERT INTO contract_offer
VALUES (@offer_id, my_club.id, my_agent.id);
```

**To display footballer details:**

```
CREATE VIEW footballer_details AS
SELECT *
FROM footballer NATURAL JOIN injury NATURAL JOIN statistics NATURAL JOIN contract
WHERE player_id = @player_id;
```

**To add footballer to the report:**

```
WITH my_player(id) AS (SELECT player_id
                      FROM footballer NATURAL JOIN final_report
                      WHERE report_id = @report_id)
INSERT INTO final_report
VALUES(@report_id, my_player.id, @task_id, @scout_id);
```

## Create Task Page for Clubs

TRANSFERMAP

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Exclusive User Panel

Gender:

male or female

Height:

min

max

Weight:

min

max

Age:

min

max

Position:

select an option

Time:

select an option

Scout number

select an option

Preferred foot:

select an option

Salary:

min

max

Transfer price:

min

max

Set Task

Scouting Agency List

Name: Agency A

Price Per Scout(per month): 10.000 \$

Available Scout Number: 12

Assign Task

Name: Agency B

Price Per Scout(per month): 10.000 \$

Available Scout Number: 7

Assign Task

Name: Agency C

Price Per Scout(per month): 10.000 \$

Available Scout Number: 4

Assign Task

Name: Agency D

Price Per Scout(per month): 10.000 \$

Available Scout Number: 3

Assign Task

Name: Agency E

Price Per Scout(per month): 10.000 \$

Available Scout Number: 21

Assign Task

Name: Agency F

Price Per Scout(per month): 10.000 \$

Available Scout Number: 6

Assign Task

Clubs can enter task info and assign it to any available agency.

**input:** @task\_id, @transfer\_price, @salary, @foot, @age, @weight, @height, @position,  
@time, @scout\_num, @assigned\_date, @club\_id

**SQL Statement:**

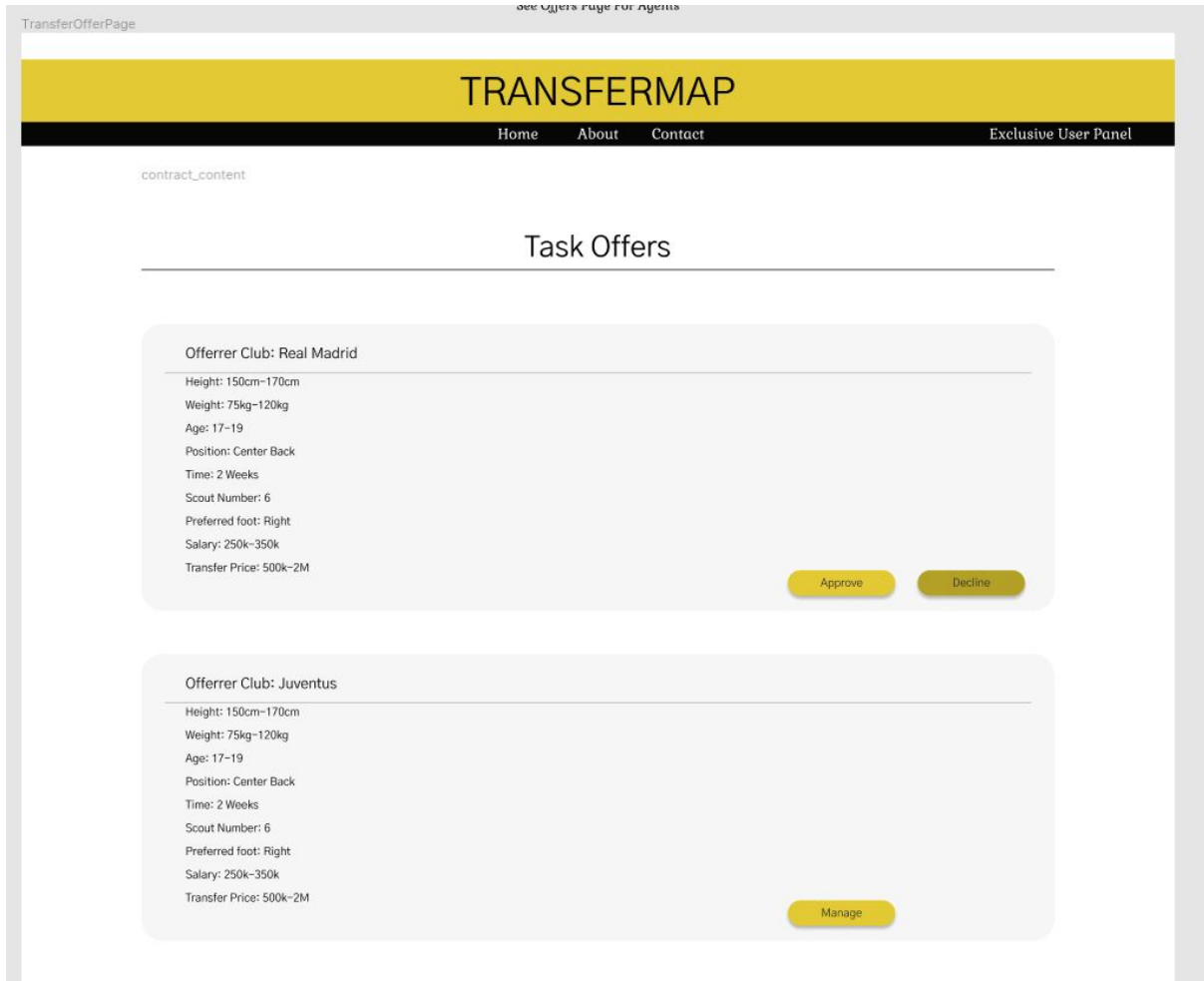
```
CREATE VIEW club_tasks AS  
SELECT *  
FROM task  
WHERE club_id = @club_id;
```

**To add a task:**

```
INSERT INTO club_tasks  
VALUES(@task_id, @transfer_price, @salary, @foot, @age, @weight, @height, @position,  
@time, @scout_num, @assigned_date, @club_id);
```



## Tasks Page for Agency



Agencies can see tasks that offered, and also active tasks. Agencies can approve or decline a task. If approved, they can add scouts to the task by clicking the manage task button.

**input:** @agency\_id, @task\_id, @scout\_id

### SQL Statement:

```
CREATE VIEW agency_tasks AS
SELECT *
FROM task
WHERE agency_id = @agency_id;
```

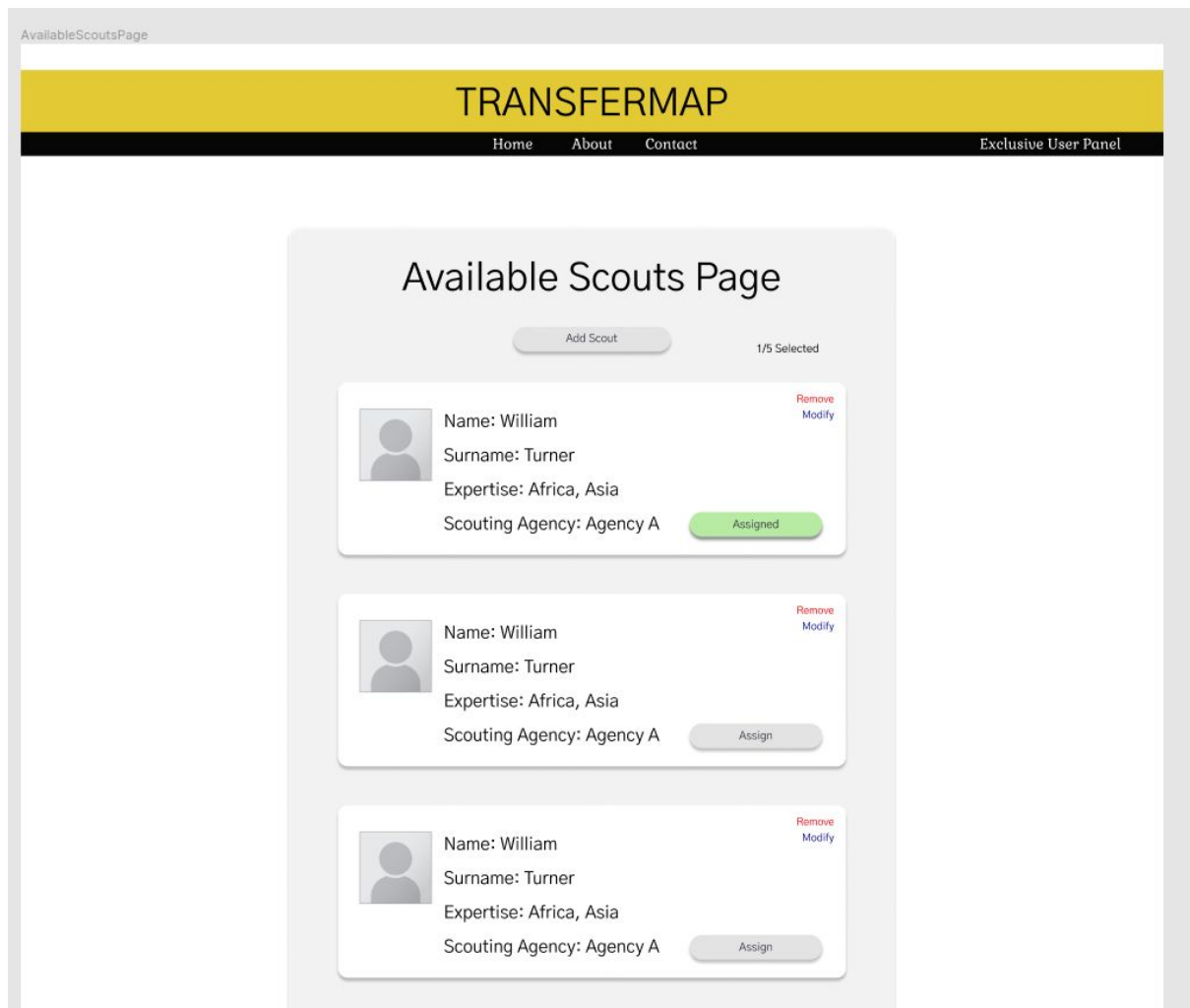
### To approve a task:

```
UPDATE task
```

SET agency\_id = @agency\_id, status = 'Approved'

WHERE task\_id = @task\_id;

## Select Scout Page



Agencies can select scouts by clicking “Manage” for a task on the previous page. Also, they can add new scouts or remove/modify current ones. The page also says how many scouts are needed for the corresponding task.

**input:** @agency\_id, @scout\_id, @task\_id, @name, @expertise

**SQL Statement:**

CREATE VIEW agency\_scouts AS

SELECT \*

FROM scout

WHERE agency\_id = @agency\_id;

**To add a scout to the agency:**

```
INSERT INTO agency_scouts  
VALUES(scout_id);  
UPDATE agency_scouts  
SET name = @name  
WHERE scout_id = @scout_id;
```

**To update scout name:**

```
UPDATE agency_scouts  
SET name = @name  
WHERE scout_id = @scout_id;
```

**To add an expertise to the scout:**

```
INSERT INTO scout_expertise  
VALUES(scout_id, @expertise);
```

**To delete an expertise to the scout:**

```
DELETE FROM scout_expertise  
WHERE scout_id = @scout_id;
```

**To assign a task to a scout:**

```
INSERT INTO assignment  
VALUES (@scout_id, @task_id);
```

**To withdraw a task from a scout:**

```
DELETE FROM assignment  
WHERE scout_id = @scout_id AND task_id = @task_id;
```

## Assigned Tasks Page for Scouts

ReportsComingFromScouts

# TRANSFERMAP

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reports

### Assigned Tasks Report Page

Assigned by: Juventus Status: Newly Assigned

Height: 150cm-170cm  
Weight: 75kg-120kg  
Age: 17-19  
Position: Center Back  
Time: 2 Weeks  
Scout Number: 6  
Preferred foot: Right  
Salary: 250k-350k  
Transfer Price: 500k-2M

[Send Report](#) [Edit Report](#)

Assigned by: Real Madrid Status: Delivered at 01.08.2019

Height: 150cm-170cm  
Weight: 75kg-120kg  
Age: 17-19  
Position: Center Back  
Time: 2 Weeks  
Scout Number: 6  
Preferred foot: Right  
Salary: 250k-350k  
Transfer Price: 500k-2M

[Show Report](#)

When a scout is assigned, a new task is added to this page. Also, the scout is notified when a new task is added. Scouts can click edit reports and edit reports for footballers. Footballers must be added from the search page. When they are done, they click the send report button. They can also see previous tasks. Status info is displayed in the top right corner. Status info says if it is newly assigned or finished.

**input:** @s\_id, @report\_id, @task\_id, @new\_status

### SQL Statement:

```
CREATE VIEW scout_tasks AS
SELECT *
FROM task NATURAL JOIN assignment
WHERE scout_id = @s_id;
```

### To update task status:

UPDATE task

SET status = 'finished'

WHERE task\_id = @task\_id;


## Scouts Report Page

ScoutingListPage

# TRANSFERMAP

Home About Contact Exclusive User Panel

### Report for X Club



Name: William

Position: Forward

Nationality: Holland


Club: Dortmund

Comment:

He is a very good player etc.

Edit Comment Remove

Rating: \_\_\_\_\_



Name: William

Position: Forward

Nationality: Holland


Club: Dortmund

Comment:

He is a very good player etc.

Edit Comment Remove

Rating: \_\_\_\_\_



Name: William

Position: Forward

Nationality: Holland

Club: Dortmund

Comment:

Rating: \_\_\_\_\_

Scouts can enter comments and a rating on selected footballers. Also, remove them from the report.

**input:** @report\_id, @club\_id, @player\_id, @scout\_id, @rating, @comment

**SQL Statement:**

```
CREATE VIEW scout_reports AS  
SELECT *  
FROM final_report  
WHERE scout_id = @scout_id;
```

**To add a footballer report:**

```
INSERT INTO scout_reports  
VALUES(@report_id, @player_id, @club_id, @scout_id, @rating, @comment);
```

**To delete a footballer report:**

```
DELETE FROM scout_reports  
WHERE report_id = @report_id;
```

**To update rating:**

```
UPDATE scout_reports  
SET rating = @rating  
WHERE report_id = @report_id;
```

**To update comment:**

```
UPDATE scout_reports  
SET comment = @comment  
WHERE report_id = @report_id;
```

## Task Page for Clubs

tasksPageForClubs

TRANSFERMAP

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contract\_content

Tasks Assigned

Assigned Agency: Agency A

Status: Approved

Height: 150cm-170cm  
Weight: 75kg-120kg  
Age: 17-19  
Position: Center Back  
Time: 2 Weeks  
Scout Number: 6  
Preferred foot: Right  
Salary: 250k-350k  
Transfer Price: 500k-2M

Show Report

Agency did not send a report yet.

Assigned Agency: Agency B

Status: Finished

Height: 150cm-170cm  
Weight: 75kg-120kg  
Age: 17-19  
Position: Center Back  
Time: 2 Weeks  
Scout Number: 6  
Preferred foot: Right  
Salary: 250k-350k  
Transfer Price: 500k-2M

Show Report

Assigned Agency: Agency B

Status: Declined by Agency

Height: 150cm-170cm  
Weight: 75kg-120kg  
Age: 17-19  
Position: Center Back  
Time: 2 Weeks  
Scout Number: 6  
Preferred foot: Right  
Salary: 250k-350k  
Transfer Price: 500k-2M

Choose another Agency

Show Reports

Clubs can see the tasks they create from this page. Also, they can see previous tasks. If a task is rejected by the agency, there is a button to assign the same task immediately to another agency. This will open the agency selection page again. If reports are sent by the scouts, Show report button turns yellow and clubs can see the reports.

**input:** @club\_id

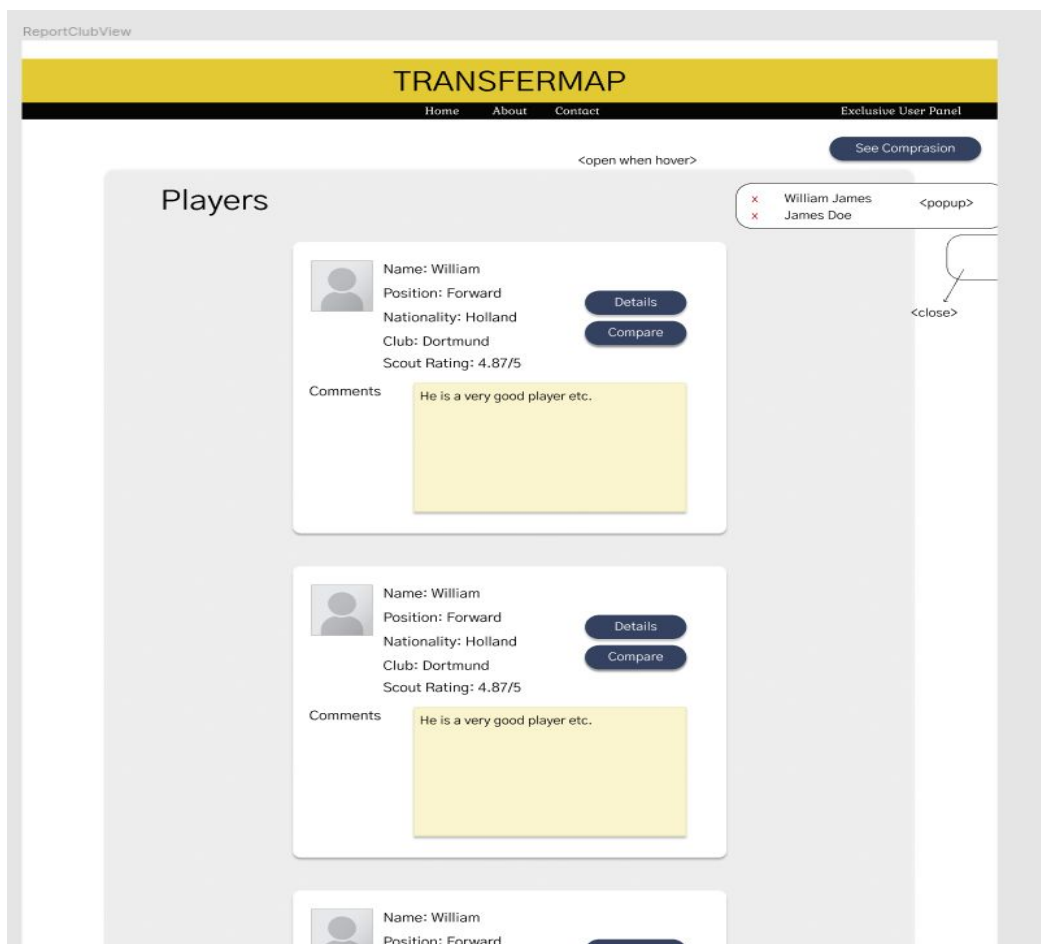
**SQL Statement:**

```
CREATE VIEW club_tasks AS
SELECT *
FROM task
WHERE club_id = @club_id;
```

**To get task details:**

```
CREATE VIEW task_reports AS
SELECT *
FROM final_report
WHERE task_id = @task_id;
```

## Clubs Report Details Page





All the footballers that scouts sent are shown together here. A club can see details of the player by clicking details, they can see scout comments, also they can compare footballers. To make an offer, they click on details, then make an offer button on that page.

**input:** @report\_id, @offer\_id

**SQL Statements:**

```
CREATE VIEW report AS
```

```
SELECT *
```

```
FROM final_report NATURAL JOIN footballer
```

```
WHERE report_id = @report_id;
```

## 4. Website

After the feedback of the proposal, we have prepared a website using github.io to publish our reports.

❖ URL: [https://aybukeertekin.github.io/Bilkent\\_CS353\\_Database\\_Project/](https://aybukeertekin.github.io/Bilkent_CS353_Database_Project/)