

ARISTOTLE UNIVERSITY OF THESSALONIKI

# SURVIVOR

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## Databases Project

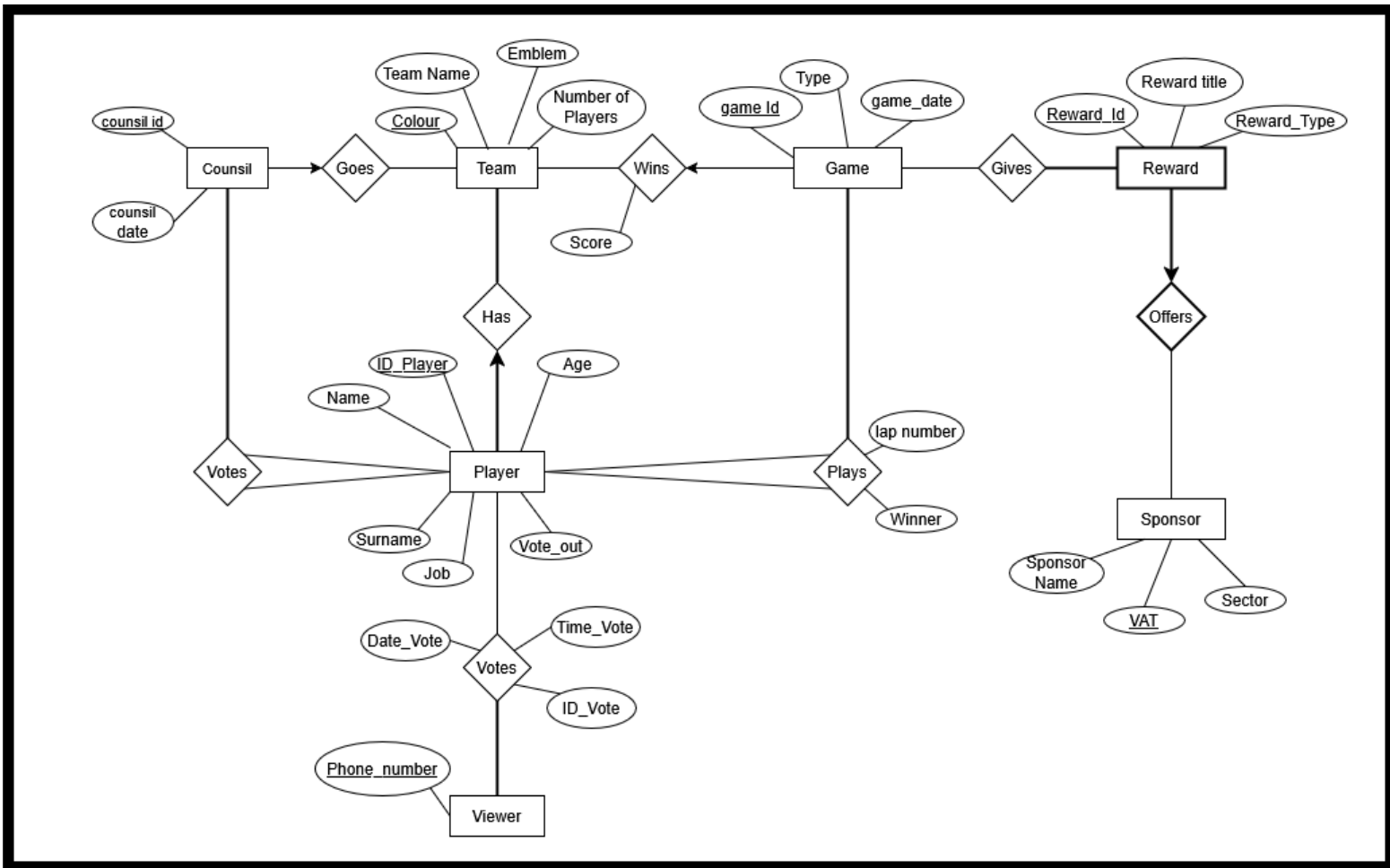
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**2/16/2018**

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Initially, the Entity/Association diagram of the SURVIVOR Database is given in its final form, so that the reader has an overall picture of the work and can easily refer to it for any questions that arise during the analysis of this specific piece of work.



## **A. Data Entry**

### ***A1. Inserting Records into Database Tables***

Initially, the data was entered into the SURVIVOR Database, with entries in all the tables implemented in the previous part of the work. It should be mentioned at this point that the names used in combination with their ages and which group they belonged to have been taken, with a relative inaccuracy, from the game show Survivor that aired in 2017 on

Greek television. The remaining entries do not correspond to real events and data (phone numbers, dates, prizes, sponsors).

## A2. Import Failures Due to Restrictions

Presentation of the snapshots that result from attempting to insert records that violate the restrictions set in the previous part of the work. What is observed is the inability of the system to complete the requested process and displays an error message.

- Restriction: No date will be accepted that does not belong to the period of time the game lasted (01-2017 to 06-2017).

The screenshots show the following SQL statements and their results:

### Screenshot 1: Insert into survivor.game

```
INSERT INTO `survivor`.`game` (`ID_Game`, `Type_Game`, `Date_Game`, `Color`, `Score`) VALUES ('4', 'reward', '2018-02-16', 'Blue', '10-9');
```

#	Time	Action	Message
1	18:16:05	INSERT INTO `survivor`.`game` (`ID_Game`, `Type_Game`, `Date_Game`, `Color`, `Score`) VALUES ('4', 'reward', '201...	Error Code: 4025. CONSTRAINT 'date_con' failed for 'survivor'.game'

### Screenshot 2: Insert into survivor.council

```
INSERT INTO `survivor`.`council` (`ID_Council`, `Date_Council`, `Color`) VALUES ('13', '2018-08-06', 'Red');
```

#	Time	Action	Message
111	20:14:57	INSERT INTO `survivor`.`plays` (`Round_ID`, `ID_Opponent1`, `ID_Game`, `ID_Opponent2`, `ID_winner`) VALUES (...)	1 row(s) affected
112	20:15:37	INSERT INTO `survivor`.`plays` (`Round_ID`, `ID_Opponent1`, `ID_Game`, `ID_Opponent2`, `ID_winner`) VALUES (...)	1 row(s) affected
113	20:16:35	INSERT INTO `survivor`.`plays` (`Round_ID`, `ID_Opponent1`, `ID_Game`, `ID_Opponent2`, `ID_winner`) VALUES (...)	Error Code: 1062. Duplicate entry '3-1' for key 'PRIMARY'
114	20:16:41	INSERT INTO `survivor`.`plays` (`Round_ID`, `ID_Opponent1`, `ID_Game`, `ID_Opponent2`, `ID_winner`) VALUES (...)	Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails ('survivor`.`plays`, CONSTRAINT 'F...
115	20:18:39	INSERT INTO `survivor`.`council` (`ID_Council`, `Date_Council`, `Color`) VALUES ('13', '2018-08-06', 'Red')	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server ...
116	20:18:48	INSERT INTO `survivor`.`council` (`ID_Council`, `Date_Council`, `Color`) VALUES ('13', '2018-08-06', 'Red')	Error Code: 4025. CONSTRAINT 'date_con' failed for 'survivor'.council'

### Screenshot 3: Insert into survivor.player

```
INSERT INTO `survivor`.`player` (`ID_Player`, `Age`, `Name`, `Surname`, `Vote_out`, `Color`) VALUES ('13', '23', 'Giorgos', 'Aggelopoulos', '2019-04-28', 'Blue');
```

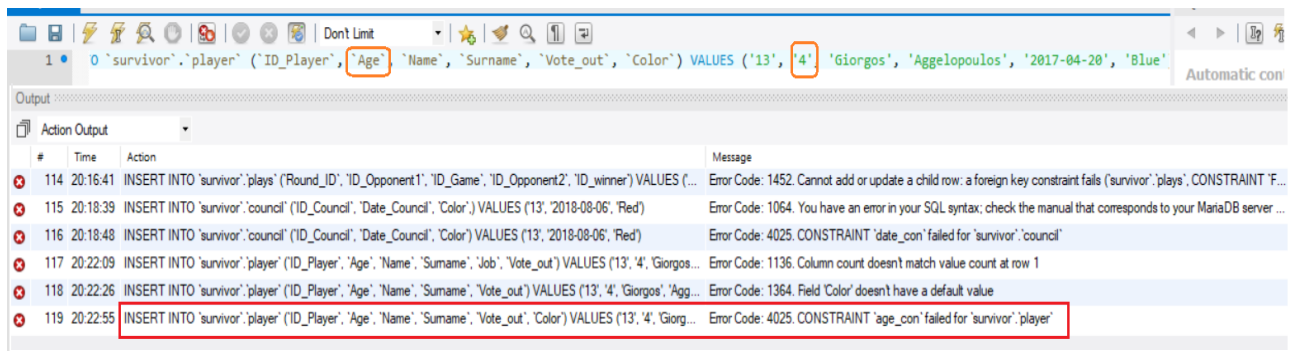
#	Time	Action	Message
115	20:18:39	INSERT INTO `survivor`.`council` (`ID_Council`, `Date_Council`, `Color`) VALUES ('13', '2018-08-06', 'Red')	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server ...
116	20:18:48	INSERT INTO `survivor`.`council` (`ID_Council`, `Date_Council`, `Color`) VALUES ('13', '2018-08-06', 'Red')	Error Code: 4025. CONSTRAINT 'date_con' failed for 'survivor'.council'
117	20:22:09	INSERT INTO `survivor`.`player` (`ID_Player`, `Age`, `Name`, `Surname`, `Job`, `Vote_out`) VALUES ('13', '4', 'Giorgos', ...)	Error Code: 1136. Column count doesn't match value count at row 1
118	20:22:26	INSERT INTO `survivor`.`player` (`ID_Player`, `Age`, `Name`, `Surname`, `Vote_out`) VALUES ('13', '4', 'Giorgos', 'Agg...	Error Code: 1364. Field 'Color' doesn't have a default value
119	20:22:55	INSERT INTO `survivor`.`player` (`ID_Player`, `Age`, `Name`, `Surname`, `Vote_out`, `Color`) VALUES ('13', '4', 'Gior...	Error Code: 4025. CONSTRAINT 'age_con' failed for 'survivor'.player'
120	20:23:20	INSERT INTO `survivor`.`player` (`ID_Player`, `Age`, `Name`, `Surname`, `Vote_out`, `Color`) VALUES ('13', '23', 'Gior...	Error Code: 4025. CONSTRAINT 'date_con' failed for 'survivor'.player'

### Screenshot 4: Insert into survivor.viewer\_votes

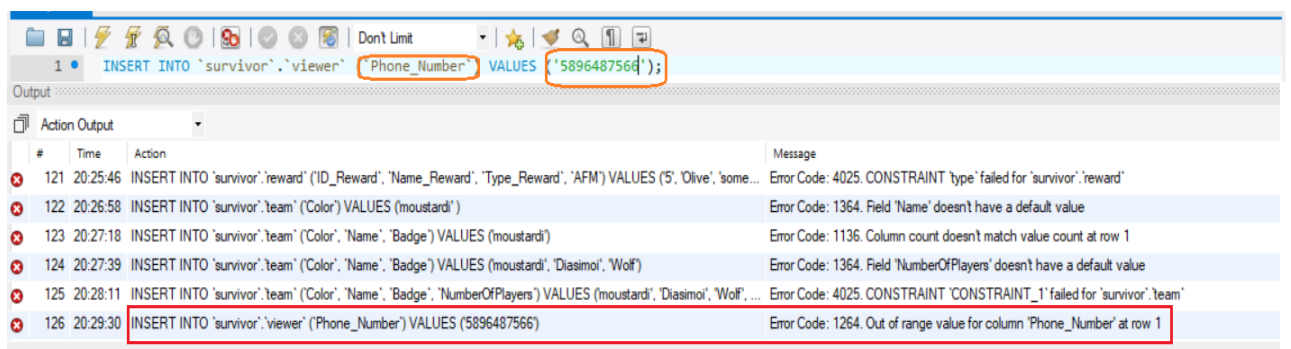
```
INSERT INTO `survivor`.`viewer_votes` (`Phone_Number`, `ID_Player`, `Time_Vote`, `Date_Vote`, `ID_vote`) VALUES ('2101236548', '4', '00:12:21', '2018-05-23', '1');
```

#	Time	Action	Message
69	19:46:07	INSERT INTO `survivor`.`player_votes` (`ID_Council`, `ID_Voter`, `ID_Voted`) VALUES ('5', '4', '2')	1 row(s) affected
70	19:46:22	2	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server ...
71	19:46:26	INSERT INTO `survivor`.`player_votes` (`ID_Council`, `ID_Voter`, `ID_Voted`) VALUES ('6', '3', '1')	1 row(s) affected
72	19:46:30	INSERT INTO `survivor`.`player_votes` (`ID_Council`, `ID_Voter`, `ID_Voted`) VALUES ('6', '4', '1')	1 row(s) affected
73	19:46:45	INSERT INTO `survivor`.`player_votes` (`ID_Council`, `ID_Voter`, `ID_Voted`) VALUES ('6', '1', '3')	1 row(s) affected
74	19:51:08	INSERT INTO `survivor`.`viewer_votes` (`Phone_Number`, `ID_Player`, `Time_Vote`, `Date_Vote`, `ID_vote`) VALUE...	Error Code: 4025. CONSTRAINT 'date_con' failed for 'survivor'.viewer_votes'

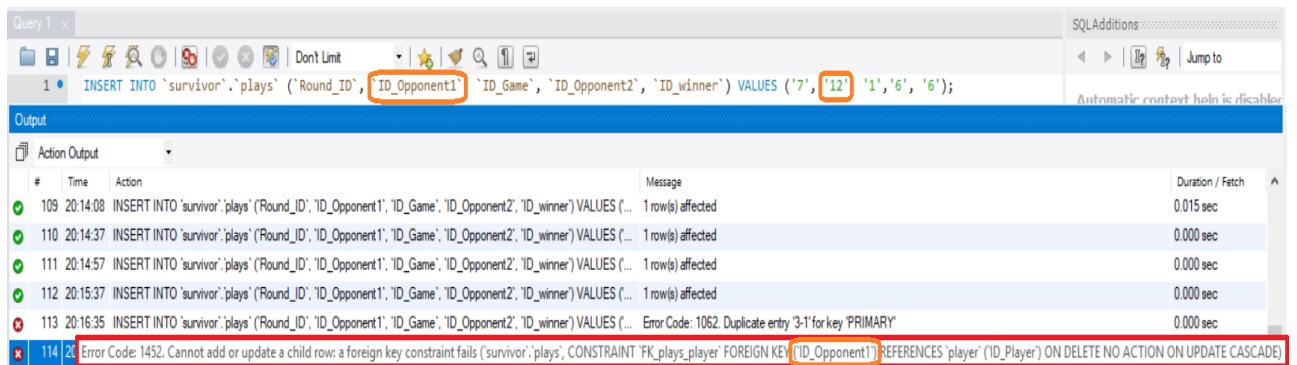
- Restriction that a player's age cannot be under 18.



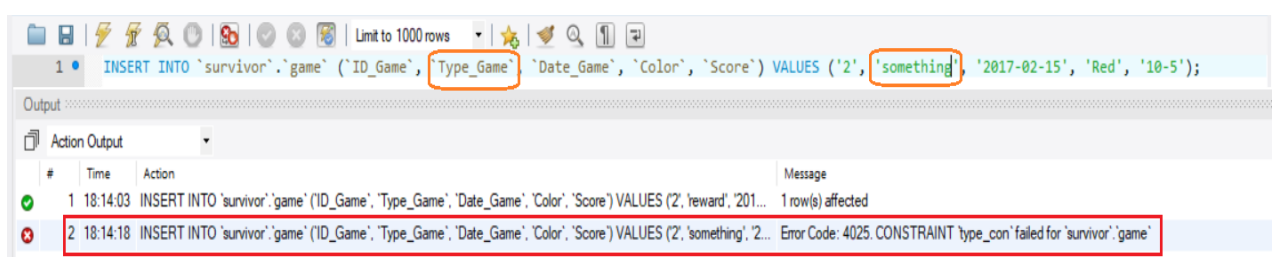
- Restriction that no phone number is accepted that does not start with either 69- or 2- and has 10 digits.



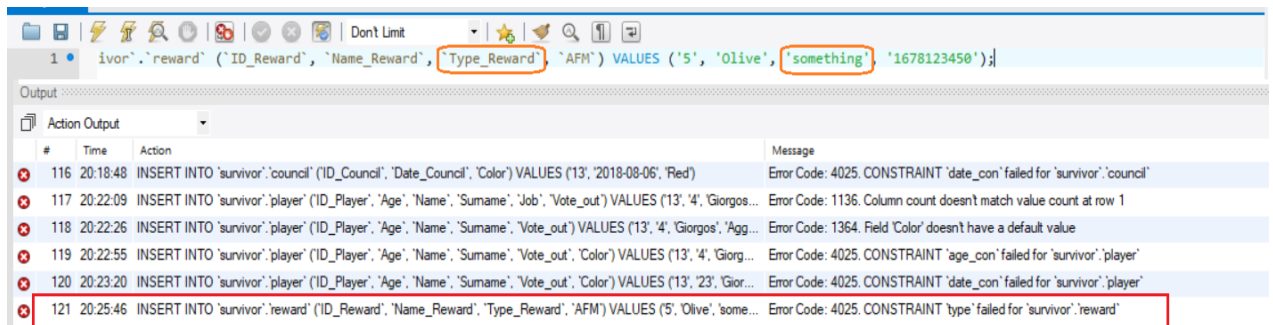
- Restriction that an ID that does not correspond to a player from the opposing team is not accepted as an opponent ID.



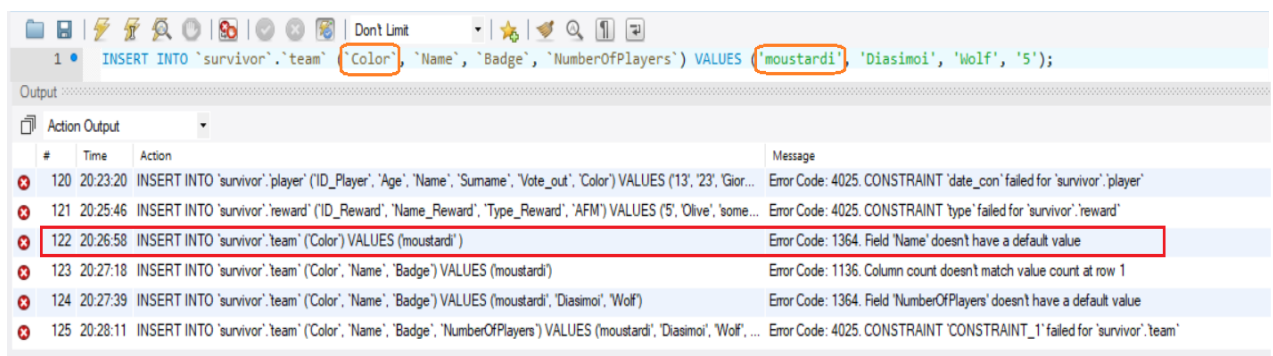
- Restriction to not accept any designations beyond the predefined ones ('Personal\_Immunity', 'Team\_Immunity', 'Communication', 'Reward') as a game type



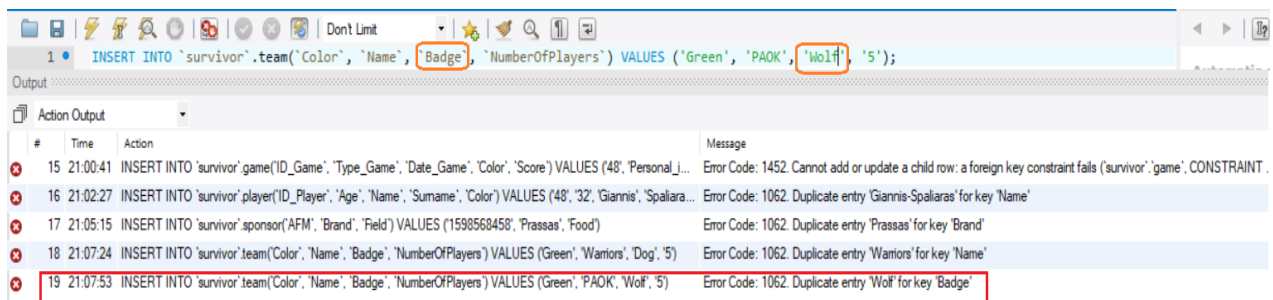
- Restriction to not accept any characterization beyond the predefined ones ('food', 'Trip', 'Communication', 'Entertainment') as a reward type



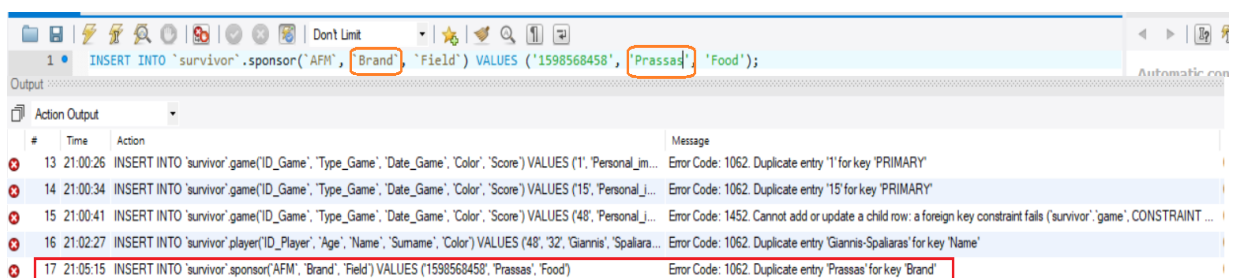
- Restriction that no other team color is accepted, except blue and red ('blue', 'red')



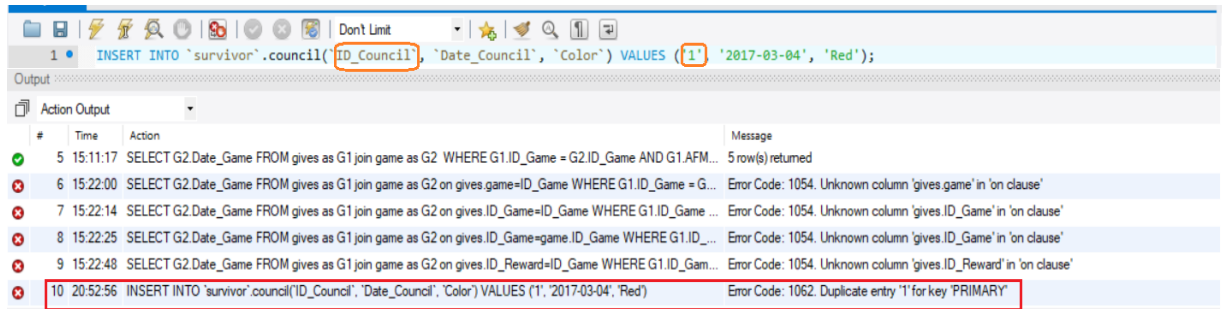
- Restriction that a team emblem that is identical to another team's emblem cannot be accepted.



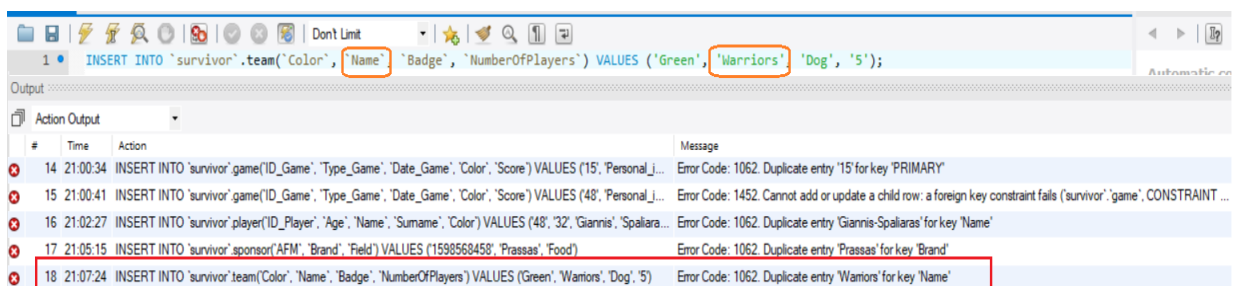
- Restriction that a sponsor name that is the same as another sponsor's name (i.e. different VAT number and same name) is not accepted.



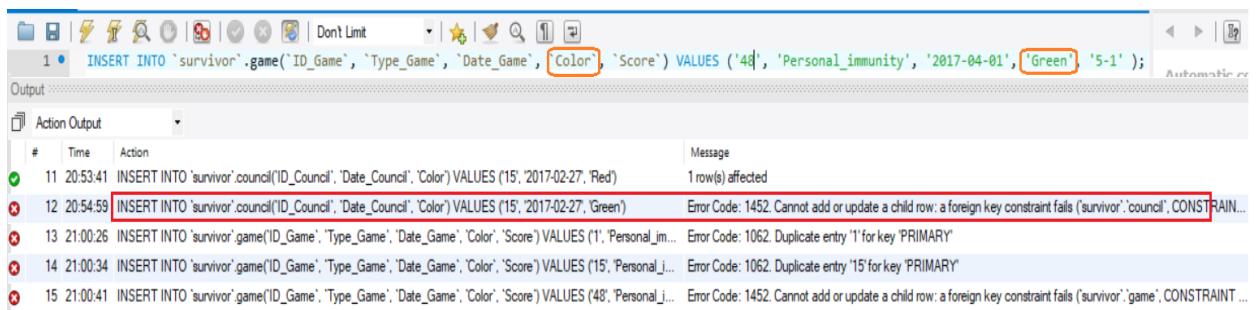
- Restriction that the same council ID as another council is not accepted as a council ID.



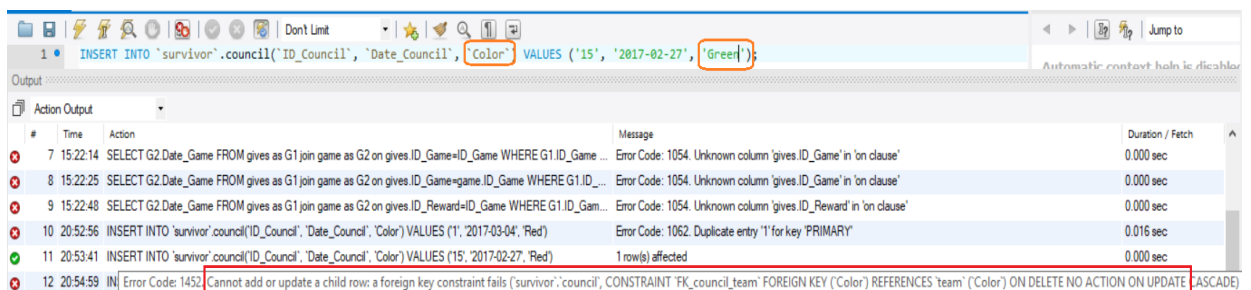
- Restriction that a group name that is the same as another group's is not accepted.



- Restriction that no other color than blue and red is accepted as the winning team's color.

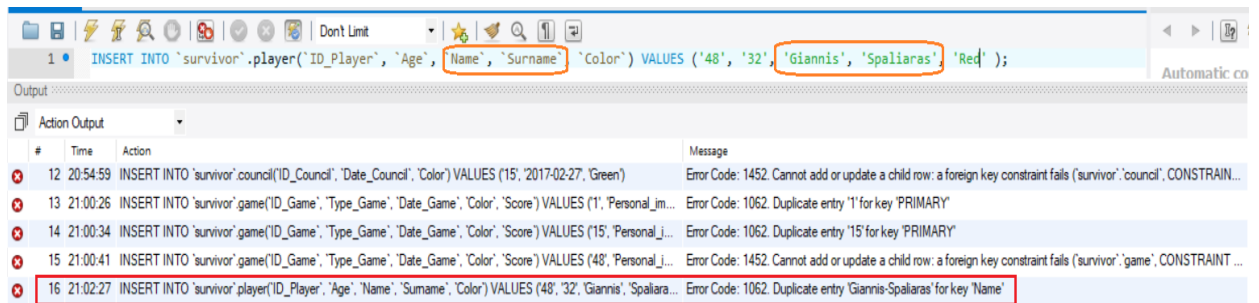


- Restriction that no other color than blue and red will be accepted as the color of a team going to a council.



- Restriction that a player's first and last name cannot be accepted as the same as another player's.





## B. SQL queries

### 1st Question

(Gives & Rewards & Games)

Display all the records of the tables that participate in the many-to-many relationship "gives".

Code:

```
SELECT *
FROM gives as G1 , Reward as R , Game as G2
WHERE G1.ID_Reward = R.ID_Reward
AND G1.AFM = R.AFM AND G1.ID_Game = G2.ID_Game
```

Snapshot:

ID_Reward	ID_Game	AFM	ID_Reward	Name_Reward	Type_Reward	AFM	ID_Game	Type_Game	Date_Game	Color	Score	Player_ID
7	14	1236665897	7	Olive	food	1236665897	14	reward	2017-03-01	Blue	5-1	NULL
7	24	1236665897	7	Olive	food	1236665897	24	reward	2017-03-13	Blue	5-3	NULL
7	26	1236665897	7	Olive	food	1236665897	26	reward	2017-03-14	Blue	5-2	NULL
6	34	1478523578	6	Nissan Car	Entertainment	1478523578	34	reward	2017-03-22	Red	5-4	NULL
1	1	1597531478	1	Rice	food	1597531478	1	reward	2017-02-14	Blue	5-1	NULL
1	14	1597531478	1	Rice	food	1597531478	14	reward	2017-03-01	Blue	5-1	NULL
1	24	1597531478	1	Rice	food	1597531478	24	reward	2017-03-13	Blue	5-3	NULL
1	26	1597531478	1	Rice	food	1597531478	26	reward	2017-03-14	Blue	5-2	NULL
4	13	1678123450	4	Phone Call	communication	1678123450	13	communication	2017-02-28	Blue	5-2	NULL
4	19	1678123450	4	Phone Call	communication	1678123450	19	communication	2017-03-07	Red	5-3	NULL
4	25	1678123450	4	Phone Call	communication	1678123450	25	communication	2017-03-14	Blue	5-3	NULL
4	33	1678123450	4	Phone Call	communication	1678123450	33	communication	2017-03-21	Red	5-3	NULL
3	2	2134567855	3	Souvlaki	food	2134567855	2	reward	2017-02-15	Red	1-5	NULL
3	9	2134567855	3	Souvlaki	food	2134567855	9	reward	2017-02-25	Red	5-3	NULL
3	15	2134567855	3	Souvlaki	food	2134567855	15	reward	2017-03-02	Red	5-2	NULL
3	32	2134567855	3	Souvlaki	food	2134567855	32	reward	2017-03-20	Red	5-3	NULL
5	9	4294967295	5	Shower	Entertainment	4294967295	9	reward	2017-02-25	Red	5-3	NULL
5	20	4294967295	5	Shower	Entertainment	4294967295	20	reward	2017-03-08	Red	5-2	NULL
5	25	4294967295	5	Shower	Entertainment	4294967295	25	communication	2017-03-14	Blue	5-3	NULL

### 2nd Question

(Player\_votes)

Display the IDs of players who received votes in a poll2council

Code:

```
SELECT DISTINCT V.ID_Voted
FROM player_votes as V
WHERE V.ID_Council = 2
```



Snapshot:

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	ID_Voted			
	8			
	7			

### 3rd Question

(Gives & Game)

Display the first 5 dates of competitions in ascending order in which the prize was awarded.1597531478VAT number.

Code:

```
SELECT G2.Date_Game
FROM gives as G1 join game as G2 on G1.ID_Game = G2.ID_Game
WHERE G1.AFM = 1597531478
LIMIT 5
```

Snapshot:

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	Date_Game			
	2017-02-14			
	2017-02-21			
	2017-03-01			
	2017-03-13			
	2017-03-14			

### 4th Question

(Player & Viewer\_votes)

Display how many votes all players on a team received in total from viewers.

Code:

```
SELECT COUNT(*)
FROM Player as P join viewer_votes as V on P.Player_ID = V.Player_ID
WHERE P.Color = 'blue'
```

Snapshot:

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	COUNT(*)			
	14			

### 5th Question

(Player & Viewer\_votes)

Display how many votes all players received from viewers for each team, whose players received more than 5 votes in total.

**Code:**

```
SELECT P.Color, COUNT(*)
FROM Player as P join viewer_votes as V on P.Player_ID = V.Player_ID
GROUP BY P.Color
HAVING COUNT(*) > 5
```

**Snapshot:**

Result Grid		Filter Rows:		Export:		Wrap Cell Content:	
	Color	COUNT(*)					
	Blue	14					
	Red	6					

## 6th Question

(Player)

Display the names of players who are older than Valavani

**Code:**

```
SELECT P.Name , P.Surname
FROM Player as P
WHERE P.Age > (SELECT P2.Age
FROM Player P2
WHERE P2.Surname = 'Valavani' AND P2.Name ='Evridiki')
```

**Snapshot:**

Result Grid		Filter Rows:		Export:		Wrap Cell Content:	
	Name	Surname					
	Kostas	Kokkinakis					
	Eirini	Papadopoulos					
	Giannis	Soaliaras					
	Gioras	Aggelopoulos					
	Panos	Argianidis					
	Marios	Ioannidis					

## 7th Question

(Player\_votes)

Show the boards where Elizabeth (ID = 8) got at least one vote, but not from Chang (ID = 9).

**Code:**

```
SELECT DISTINCT P.ID_Council
FROM player_votes as P
WHERE P.ID_Voted = 8
AND P.ID_Council NOT IN (SELECT DISTINCT P2.ID_Council
FROM player_votes as P2
WHERE P2.ID_Voted = 9)
```

```
WHERE P2.Voter ID = 9)
```

The difference operation is implemented very simply with the EXCEPT operator. However, it is not supported by many systems, such as the ones we used (Hedid, MySQL) and therefore it is implemented in an indirect way with the help of NOT IN. Normally, if we could use the EXCEPT operator, the code would be as follows:

```
SELECT P.ID_Council
FROM player_votes as P
WHERE P.ID_Voted = 8
EXCEPT P.ID_Council
SELECT P.ID_Council
FROM player_votes as P2
WHERE P.ID_Voter = 9
```

Snapshot:



In this query we do not get any results as the query asked does not apply to any of the database entries.

## 8th Question




(Viewer\_votes & Player)

To show viewers who have voted for a player from both the blue and red teams.

Code:

```
SELECT V.Phone_Number
FROM Viewer_Votes as V, Player as P
WHERE V.Player_ID = P.Player_ID AND P.Color = 'blue'
AND V.Phone_Number IN (SELECT V2.Phone_Number
FROM Viewer_Votes as V2, Player as P2
WHERE V2.Player_ID = P2.Player_ID AND
P2.Color = 'red')
```

Snapshot:

Result Grid			Filter Rows: <input type="text"/>	Export: 	Wrap Cell Content: 
	Phone_Number				
	2101236548				
	2105489645				
	2231058964				
	2238058964				
	2310569864				
	2231058964				
	2238058964				
	2310598756				
	2101236548				
	2310598756				
	2101236548				
	2231058964				
	2238058964				
	2310569864				

The intersection operation is implemented very simply with the INTERSECT operator. However, it is not supported by many systems, such as the ones we used (Hedid, MySQL) and therefore it is implemented in an indirect way with the help of IN. Normally, if we could use the INTERSECT operator, the code would be as follows:

```
SELECT V.Phone_Number
FROM Viewer_Votes as V, Player as P
WHERE V.Player_ID = P.Player_ID AND P.Color = 'blue'
INTERSECT
SELECT V2.Phone_Number
FROM Viewer_Votes as V2, Player as P2
WHERE V2.Player_ID = P2.Player_ID AND P2.Color = 'red'
```

## 9th Question

(Player)

Let the players who haven't left yet appear.

Code:

```
SELECT P.Name, P.Surname
FROM Player as P
WHERE P.Player_ID NOT IN (SELECT P2.Player_ID
FROM Player as P2
WHERE P2.Vote_out IS NULL)
```

Snapshot:

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Name	Surname
	Elisavet	Ainatsiolou
	Evridiki	Valavani
	Kostas	Kokkinakis
	Marianna	Kaleri
	Orestis	Chano
	Panos	Argianidis

## 10th Question

(Team & Council)

The team's name, badge and player number should be displayed on each board.

**Code:**

```
CREATE VIEW View1 as
SELECT T.Name , T.badge, T.NumberOfPlayers, C.Date_Council, C.Color
FROM Team as T join Council as C
WHERE C.Color = T.Color?
```

```
SELECT *
FROM View1
```

**Snapshot:**

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
Name	badge	NumberOfPlayers	
Warriors	Eagle	5	
Warriors	Eagle	5	
Warriors	Eagle	5	
Famous	Wolf	5	
Famous	Wolf	5	
Famous	Wolf	5	