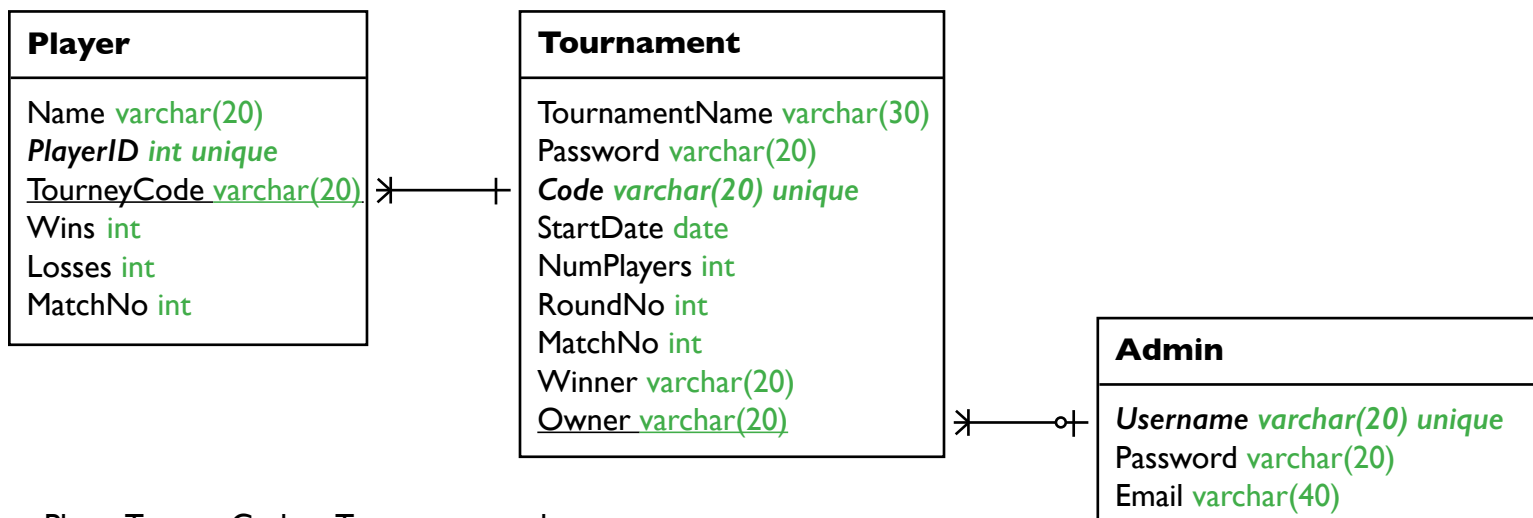For this project, we are using a web framework program called Django. This program utilizes MySQL, however the SQL queries are done in a way different from MySQL queries. For the sake of legibility of what we intend for our SQL commands to do, we made a sample SQL query file with all of the appropriate commands that Django will be replicating. This PDF additionally has examples and snippets of what is going to be updated in our database during a tournament. <u>The actual link to our model file where this will occur can be found in a separate text file in this directory.</u>

Player

Name varchar(20)
PlayerID int unique
<u>TourneyCode</u> varchar(20)
Wins int
Losses int
MatchNo int

Tournament

TournamentName varchar(30)
Password varchar(20)
Code varchar(20) unique
StartDate date
NumPlayers int
RoundNo int
MatchNo int
Winner varchar(20)
<u>Owner</u> varchar(20)

Admin

Username varchar(20) unique
Password varchar(20)
Email varchar(40)

Player.TourneyCode = Tournament.code
Tournaent.Owner = Admin.Username
* Italicized Fields are Primary Keys
* <u>Underlined Fields are Foreign Keys</u>

Sample Data For Each Table:

```
SELECT * FROM Player;


+------------+----------+------------+------+--------+---------+
| Name       | PlayerID | TourneyCode | Wins | Losses | MatchNo |
+------------+----------+------------+------+--------+---------+
| Player 1   |        1 | Tourney1   |    0 |      0 |       1 |
| Player 2   |        2 | Tourney1   |    0 |      0 |       1 |
| Player 3   |        3 | Tourney1   |    0 |      0 |       2 |
| Player 4   |        4 | Tourney1   |    0 |      0 |       2 |
| Player 5   |        5 | Tourney1   |    0 |      0 |       3 |
| Player 6   |        6 | Tourney1   |    0 |      0 |       3 |
| Player 7   |        7 | Tourney1   |    0 |      0 |       4 |
| Player 8   |        8 | Tourney1   |    0 |      0 |       4 |
| Player 9   |        9 | Tourney2   |    0 |      0 |       1 |
| Player 10  |       10 | Tourney2   |    0 |      0 |       4 |
| Player 11  |       11 | Tourney2   |    0 |      0 |       1 |
| Player 12  |       12 | Tourney2   |    0 |      0 |       2 |
| Player 13  |       13 | Tourney2   |    0 |      0 |       2 |
| Player 14  |       14 | Tourney2   |    0 |      0 |       3 |
| Player 15  |       15 | Tourney2   |    0 |      0 |       3 |
| Player 16  |       16 | Tourney2   |    0 |      0 |       4 |
+------------+----------+------------+------+--------+---------+
16 rows in set (0.00 sec)
```

```
SELECT * FROM Tournament;

+------------------+----------+----------+------------+------------+---------+---------+--------+--------------+
| TournamentName   | Password | Code     | StartDate  | NumPlayers | RoundNo | MatchNo | Winner | Owner        |
+------------------+----------+----------+------------+------------+---------+---------+--------+--------------+
| Test Tournament 1 | passw   | Tourney1 | 2018-04-08 |          8 |       1 |       1 | NULL   | TourneyAdmin1 |
| Test Tournament 2 | passw   | Tourney2 | 2018-04-08 |          8 |       1 |       1 | NULL   | TourneyAdmin2 |
+------------------+----------+----------+------------+------------+---------+---------+--------+--------------+
2 rows in set (0.00 sec)

SELECT * FROM Admin;

+--------------+-------------+--------------------+
| Username     | Password    | Email              |
+--------------+-------------+--------------------+
| TourneyAdmin1 | password123 | name@gmail.com     |
| TourneyAdmin2 | password123 | diffname@gmail.com |
+--------------+-------------+--------------------+
2 rows in set (0.00 sec)
```

Example of How We Would Pull Player Info For Each Tournament:

```
SELECT Name AS 'Participants of Test Tournament 1', Player.MatchNo
    FROM Player
    LEFT JOIN Tournament
        ON Player.TourneyCode = Tournament.Code
    RIGHT JOIN Admin
        ON Admin.Username = Tournament.Owner
    WHERE Admin.Username = 'TourneyAdmin1'
        AND TournamentName = 'Test Tournament 1'
    ORDER BY Player.MatchNo ASC;

+-----------------------------------+---------+
| Participants of Test Tournament 1 | MatchNo |
+-----------------------------------+---------+
| Player 2                          |       1 |
| Player 1                          |       1 |
| Player 3                          |       2 |
| Player 4                          |       2 |
| Player 5                          |       3 |
| Player 6                          |       3 |
| Player 7                          |       4 |
| Player 8                          |       4 |
+-----------------------------------+---------+
8 rows in set (0.01 sec)
```

Example of How We Would Update Wins, Losses, and Next Matches for Round 1

```
UPDATE Player
     SET Wins = Wins + 1, MatchNo = CEIL(MatchNo/2) + 4
     WHERE PlayerID = 1
          OR PlayerID = 2
          OR PlayerID = 6
          OR PlayerID = 7;

UPDATE Player
     SET Losses = Losses + 1
     WHERE PlayerID = 3
          OR PlayerID = 4
          OR PlayerID = 5
          OR PlayerID = 8;

SELECT Name AS 'Participants of Test Tournament 1', Player.MatchNo, Wins,
Losses
     FROM Player
     LEFT JOIN Tournament
          ON Player.TourneyCode = Tournament.Code
     RIGHT JOIN Admin
          ON Admin.Username = Tournament.Owner
     WHERE Admin.Username = 'TourneyAdmin1'
          AND Code = 'Tourney1'
     ORDER BY Player.MatchNo DESC;
```

```
+----------------------------------+---------+------+--------+
| Participants of Test Tournament 1 | MatchNo | Wins | Losses |
+----------------------------------+---------+------+--------+
| Player 6                         |       6 |    1 |      0 |
| Player 7                         |       6 |    1 |      0 |
| Player 1                         |       5 |    1 |      0 |
| Player 2                         |       5 |    1 |      0 |
| Player 4                         |       4 |    0 |      1 |
| Player 5                         |       3 |    0 |      1 |
| Player 8                         |       2 |    0 |      1 |
| Player 3                         |       1 |    0 |      1 |
+----------------------------------+---------+------+--------+
8 rows in set (0.00 sec)
```

Example of How Data is Updated After Final Round is Complete

```
UPDATE Player
     SET Wins = Wins + 1
     WHERE PlayerID = 7;

UPDATE Player
     SET Losses = Losses + 1
     WHERE PlayerID = 1;

SELECT Name AS 'Participants of Test Tournament 1', Player.MatchNo, Wins,
Losses
     FROM Player
     LEFT JOIN Tournament
         ON Player.TourneyCode = Tournament.Code
     RIGHT JOIN Admin
         ON Admin.Username = Tournament.Owner
     WHERE Admin.Username = 'TourneyAdmin1'
         AND Code = 'Tourney1'
     ORDER BY Player.MatchNo DESC, Player.Wins DESC;

UPDATE Tournament
     INNER JOIN Player
         ON Player.TourneyCode = Tournament.Code
     SET Winner = (
         SELECT Name
             FROM Player
             WHERE TourneyCode = 'Tourney1'
             ORDER BY Wins DESC
             LIMIT 1
     )
     WHERE TourneyCode = 'Tourney1';

SELECT * FROM Tournament;
```

```
+----------------------------------+---------+------+--------+
| Participants of Test Tournament 1 | MatchNo | Wins | Losses |
+----------------------------------+---------+------+--------+
| Player 7                         |       7 |    3 |      0 |
| Player 1                         |       7 |    2 |      1 |
| Player 6                         |       6 |    1 |      1 |
| Player 2                         |       5 |    1 |      1 |
| Player 4                         |       4 |    0 |      1 |
| Player 5                         |       3 |    0 |      1 |
| Player 8                         |       2 |    0 |      1 |
| Player 3                         |       1 |    0 |      1 |
+----------------------------------+---------+------+--------+
8 rows in set (0.00 sec)
```

```
+------------------+----------+----------+------------+------------+---------+---------+----------+---------------+
| TournamentName   | Password | Code     | StartDate  | NumPlayers | RoundNo | MatchNo | Winner   | Owner         |
+------------------+----------+----------+------------+------------+---------+---------+----------+---------------+
| Test Tournament 1 | passw    | Tourney1 | 2018-04-08 |          8 |       1 |       1 | Player 7 | TourneyAdmin1 |
| Test Tournament 2 | passw    | Tourney2 | 2018-04-08 |          8 |       1 |       1 | NULL     | TourneyAdmin2 |
+------------------+----------+----------+------------+------------+---------+---------+----------+---------------+
2 rows in set (0.00 sec)
```