



American International University-Bangladesh
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
Dhaka, Bangladesh

00892 ADVANCE DATABASE MANAGEMENT SYSTEM
PROJECT Report
[B][SUMMER 22-23]

E-Sports Management System

Submitted by

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Ideas	25%	25%	25%	25%	100(%)

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Introduction

1.1 Project Proposal

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1.1.1 What is eSports?

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1.1.2 What is the problem?

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1.1.3 What is the solution?

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1.2 Project Scenario

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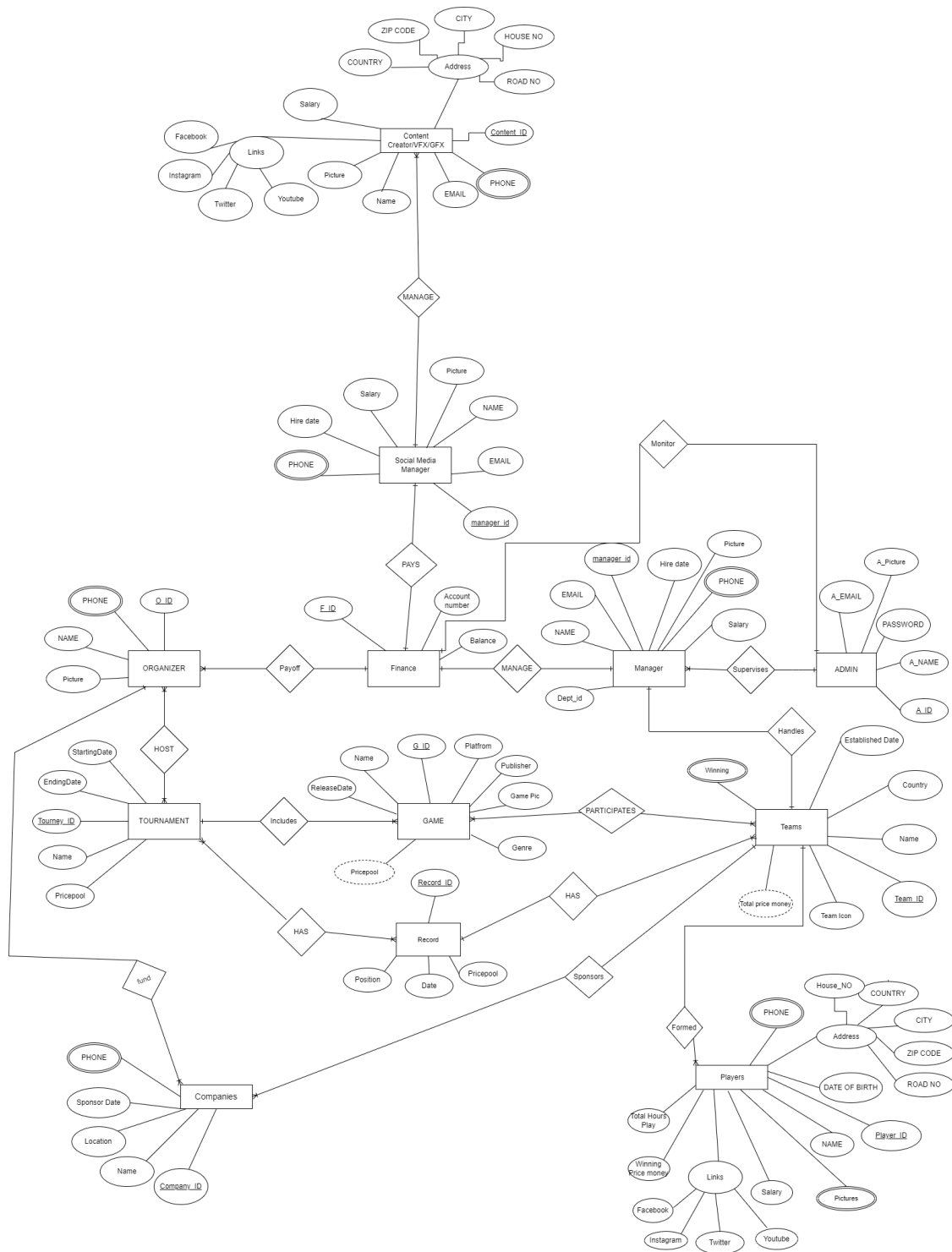
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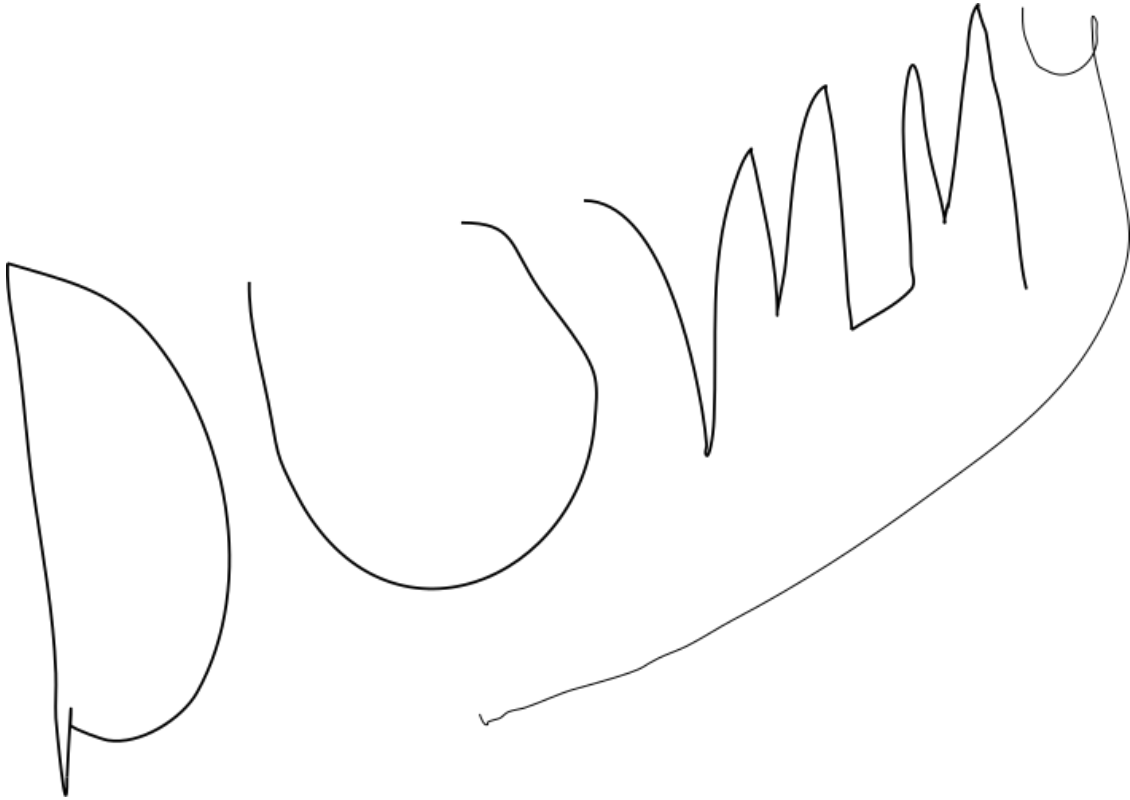
Diagrams

2.1 ER Diagram



ER Diagram

2.2 Class Diagram



Class Diagram

2.3 Use Case Diagram



Use Case Diagram

2.4 Activity Diagram



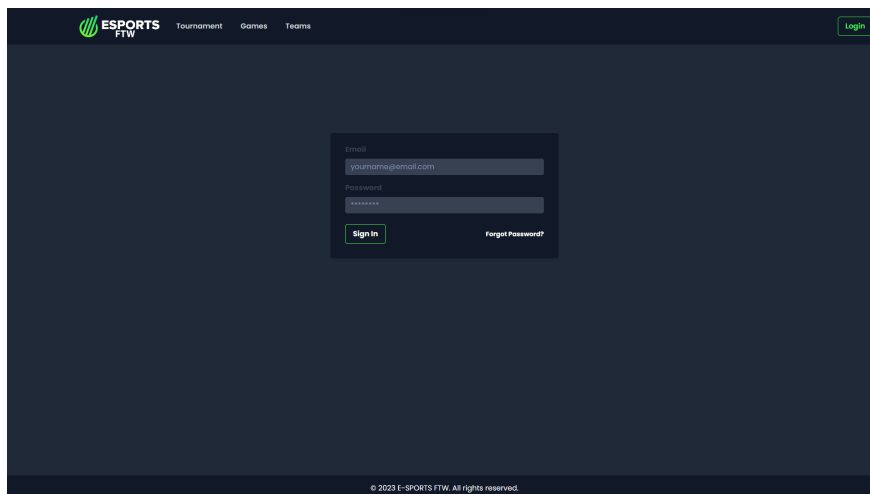
Activity Diagram

User Interface

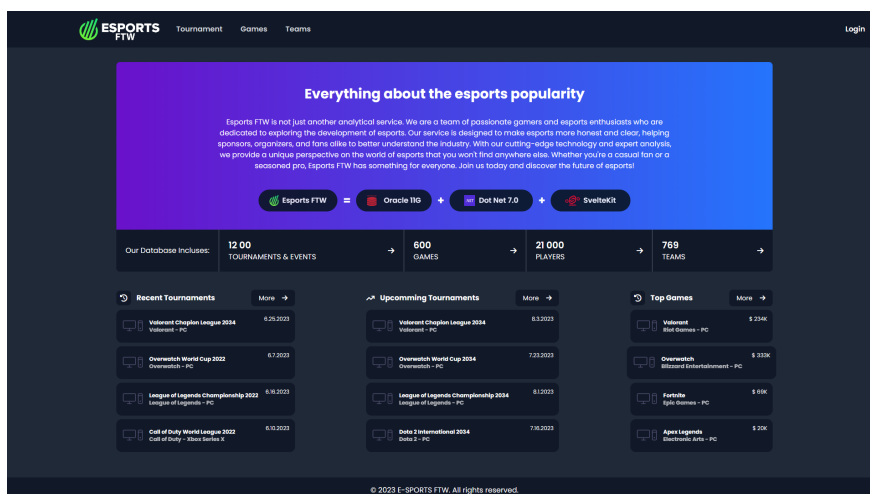
3.1 Technologies Used

- SvelteKit
 - Tailwind CSS
-

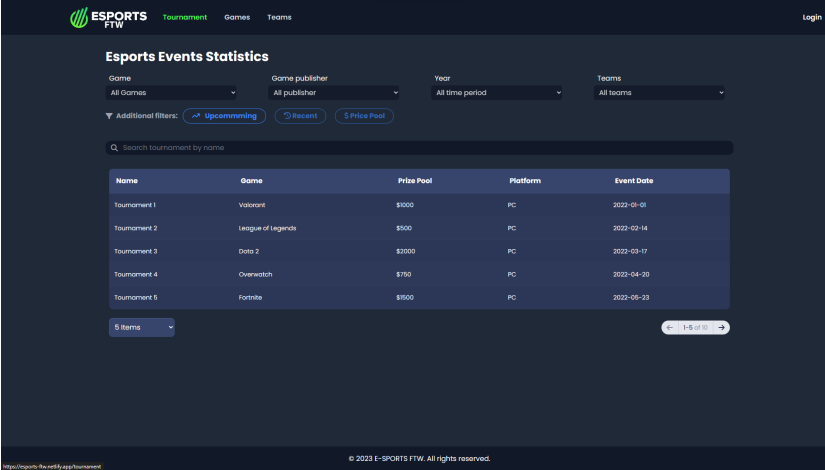
3.1.1 Login Page



3.1.2 Home Page



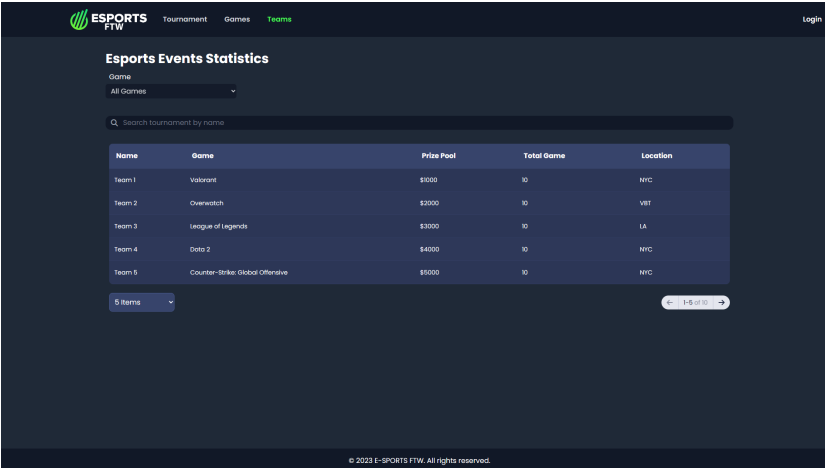
3.1.3 Tournament Page



The screenshot shows the 'Esports Events Statistics' page. It features a navigation bar with 'ESPORTS FTW', 'Tournament', 'Games', and 'Teams'. Below the navigation bar, there are filters for 'Game' (All Games), 'Game publisher' (All publisher), 'Year' (All time period), and 'Teams' (All teams). There are also buttons for 'Upcoming', 'Recent', and '5 Price Pool'. A search bar is present with the text 'Search tournament by name'. The main table lists tournaments with columns: Name, Game, Prize Pool, Platform, and Event Date. The table shows 5 items, with a pagination control at the bottom right.

Name	Game	Prize Pool	Platform	Event Date
Tournament 1	Valorant	\$1000	PC	2022-01-01
Tournament 2	League of Legends	\$500	PC	2022-02-14
Tournament 3	Dota 2	\$2000	PC	2022-03-17
Tournament 4	Overwatch	\$750	PC	2022-04-20
Tournament 5	Fortnite	\$1500	PC	2022-05-23

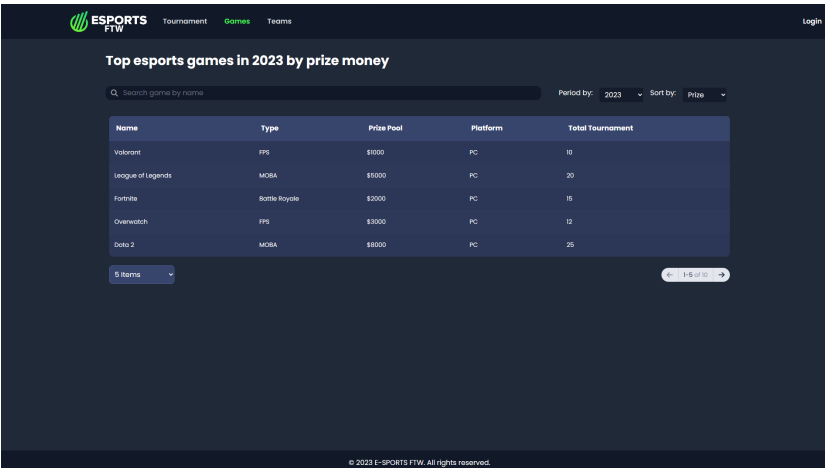
3.1.4 Team Page



The screenshot shows the 'Esports Events Statistics' page. It features a navigation bar with 'ESPORTS FTW', 'Tournament', 'Games', and 'Teams'. Below the navigation bar, there are filters for 'Game' (All Games). There is a search bar with the text 'Search tournament by name'. The main table lists teams with columns: Name, Game, Prize Pool, Total Game, and Location. The table shows 5 items, with a pagination control at the bottom right.

Name	Game	Prize Pool	Total Game	Location
Team 1	Valorant	\$1000	10	NYC
Team 2	Overwatch	\$2000	10	VBT
Team 3	League of Legends	\$3000	10	LA
Team 4	Dota 2	\$4000	10	NYC
Team 5	Counter-Strike: Global Offensive	\$5000	10	NYC

3.1.5 Game Page



The screenshot shows the 'Esports Events Statistics' page. It features a navigation bar with 'ESPORTS FTW', 'Tournament', 'Games', and 'Teams'. Below the navigation bar, there is a title 'Top esports games in 2023 by prize money'. There are filters for 'Period by' (2023) and 'Sort by' (Prize). There is a search bar with the text 'Search games by name'. The main table lists games with columns: Name, Type, Prize Pool, Platform, and Total Tournament. The table shows 5 items, with a pagination control at the bottom right.

Name	Type	Prize Pool	Platform	Total Tournament
Valorant	FPS	\$1000	PC	10
League of Legends	MOBA	\$1000	PC	20
Fortnite	Battle Royale	\$2000	PC	15
Overwatch	FPS	\$3000	PC	12
Dota 2	MOBA	\$8000	PC	25

Normalization and Schema Design

4.1 Normalization

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4.1.1 First Normal Form

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4.1.2 Second Normal Form

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4.1.3 Third Normal Form

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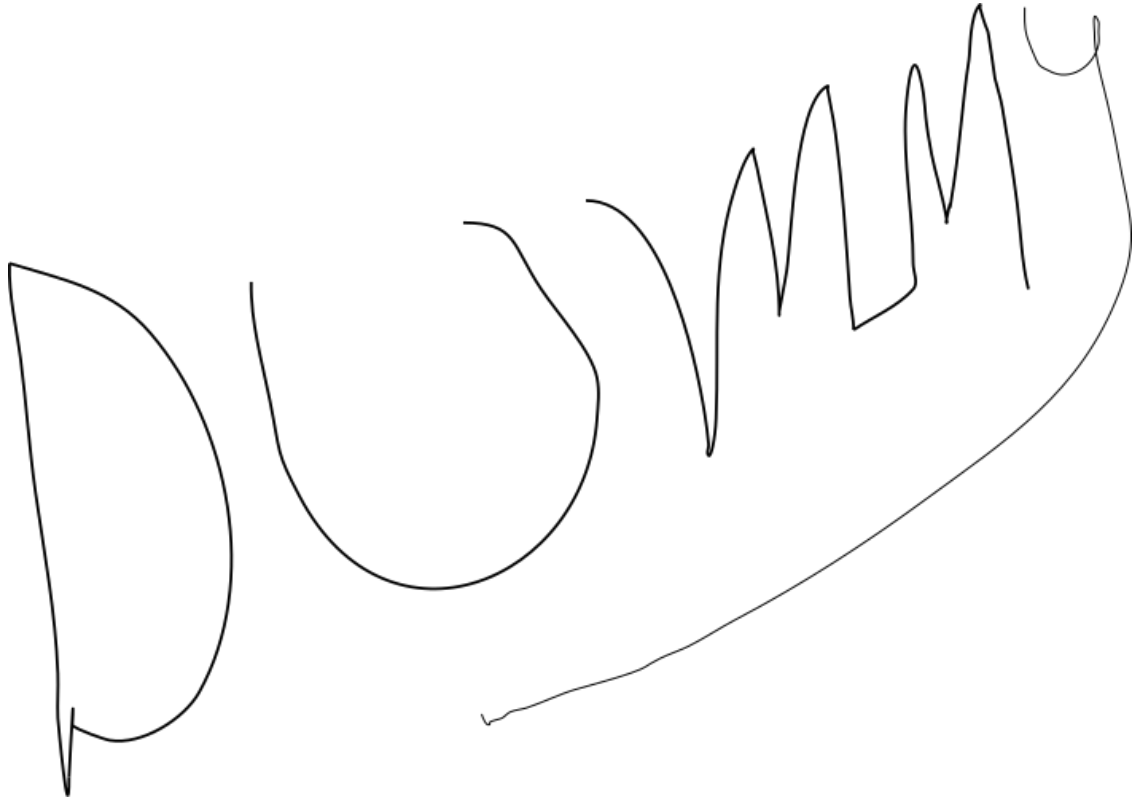
4.1.4 Final Table

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4.2 Schema Diagram



Schema Diagram

SQL Queries

5.1 Sequence

```
1  -- A Sample query for Creating a Sequence
2  CREATE SEQUENCE sequence_name
3  START WITH 1000
4  INCREMENT BY 1
5  NOCACHE
6  NOCYCLE;
```

Sample Sequence

5.2 Table Creation

```
1  -- A Sample query for Creating a table
2  CREATE TABLE table_name (
3      column1 datatype,
4      column2 datatype,
5      column3 datatype,
6      ....
7  );
```

Sample one Table

5.3 Data Insertion

```
1  -- A Sample query for Inserting data into a table
2  INSERT INTO table_name (column1, column2, column3, ...)
3  VALUES (value1, value2, value3, ...);
```

Sample one Table

5.4 Data Selection

```
1  -- A Sample query for Selecting data from a table
2  SELECT column1, column2, ...
3  FROM table_name;
```

Sample one Table

5.5 Data Update

```
1  -- A Sample query for Updating data in a table
2  UPDATE table_name
3  SET column1 = value1, column2 = value2, ...
4  WHERE condition;
```

Sample one Table

5.6 Data Deletion

```
1  -- A Sample query for Deleting data from a table
2  DELETE FROM table_name WHERE condition;
```

Sample one Table

5.7 Functions and Joins

5.7.1 Single Row Functions

```
1  -- A Sample query for Single Row Functions
2  SELECT function_name(column_name)
3  FROM table_name;
```

Sample one Table

5.7.2 Group Functions

```
1  -- A Sample query for Group Functions
2  SELECT function_name(column_name)
3  FROM table_name
4  WHERE condition
5  GROUP BY column_name;
```

Sample one Table

5.7.3 Joins

```
1  -- A Sample query for Joins
2  SELECT table1.column1, table2.column2...
3  FROM table1, table2
4  WHERE table1.column_name = table2.column_name;
```

Sample one Table

Relational Algebra

6.1 Selection

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