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CS 438 – Internet Technologies

Project

[The Jumping Drake]

BY

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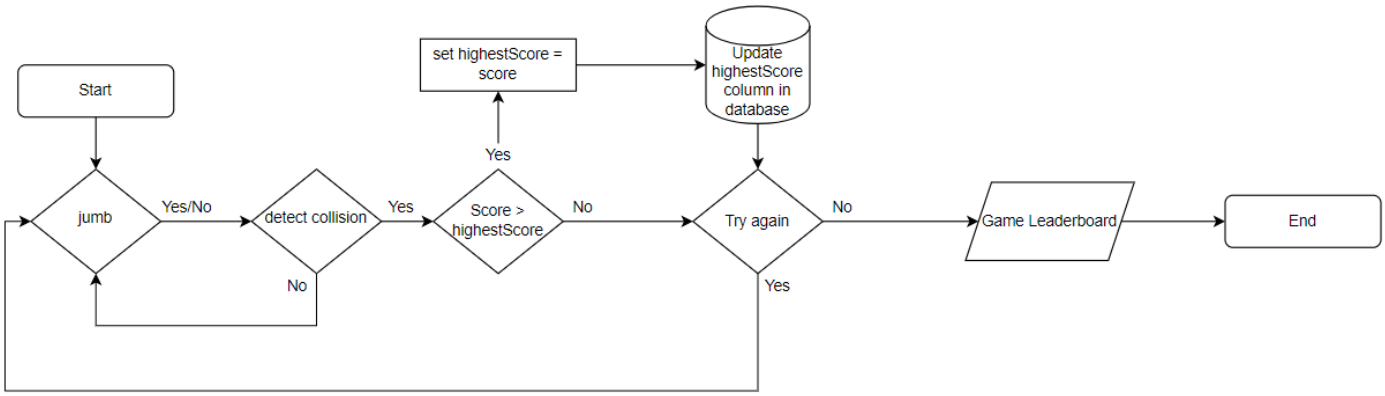
The Jumping Drake website is a game, which players compete to get the highest score. The game designed for all kind of audiences. The player is playing as the drake against the charging knights which the players need to avoid by jumping over them, if a knight contacted the drake the game will end.

1. Flow Chart



2. Look & Feel

The Jumping Drake game design was created by using CSS style sheet (DragonStyle.css). The Drake character made by a dragon GIF [1]. The background is made by a lava field GIF [2]. The lava floor was made by lavaland GIF [3]. The knights were made by a knight GIF [4]. The design was made in a way to make the drake jump over the knights who are coming to hunt him. The background and the floor are moving with the drake to make it feel real and fun.

3. Dynamic Components

We have only one script which is in the file **DragonScript.js** and the file is referenced in **game.php** file using this line: `<script src="DragonScript.js"></script>`

4. Business Logic

The database was created using XAMPP, which we implemented it the same way as studied in classes. The name of the database is “the jumping drake”, with one table named “users” and five columns, which are “id”, “username”, “email”, “password”, “HighestScore”.

In the **DragonScript.js** file we used XML to send the value of score to **game.php** to do that we wrote the following script:

In **DragonScript.js**:

```
var xhttp = new XMLHttpRequest();
xhttp.open("POST", "game.php", true);
var ourFormData = new FormData();
ourFormData.append("score", score);
xhttp.send(ourFormData);
```

and to receive the value in **game.php**:

```
$score = $_POST["score"];
```

MySQL queries are described below for each file that has queries.

server.php:

1) The query "SELECT * FROM users WHERE username='$username' OR email='$email' LIMIT 1"; was used to check whether the user is already a registered member or not.

2) The query "INSERT INTO users (username, email, password) VALUES ('$username', '$email', '$password')"; was used to add a new user in the database.

3) The query "SELECT * FROM users WHERE username='$username'; AND password='$password'"; was used to login an already registered user.

game.php:

1) The query "SELECT * FROM users WHERE username = '$username'"; was used to get access to highestScore column of the player to compare its value with his newest score value.

2) The query "UPDATE users SET HighestScore = '$score' WHERE username = '$username'"; was used to update the value of HighestScore column.

leaderboard.php:

1) The query "SELECT username, HighestScore FROM users ORDER BY HighestScore DESC"); was used to get all users HighestScores in a descending order.

References

[1] https://acegif.com/dragons-gifs/

[2]https://www.pinterest.nz/pin/385550418076972645/?amp_client_id=CLIENT_ID(_)&mweb_unauth_id=%7B%7Bdefault.session%7D%7D&simplified=true

[3] https://www.vectorstock.com/royalty-free-vector/texture-soil-burnt-earth-with-geysers-lava-vector-36918393

[4] https://imgur.com/r/animation/KvEH5Ey

[5] https://app.diagrams.net/

[6] https://www.w3schools.com/

[7] https://stackoverflow.com/

[8] https://www.youtube.com/watch?v=AiE6CDACWT4&ab_channel=CodeBoxx