Project Report: Cloud Gaming Platform

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1. Introduction

Cloud gaming is an emerging technology that allows users to play games directly from a cloud server without requiring high-end hardware. This project implements a cloud gaming platform where users can launch and play online games with a single click. The platform is deployed using **AWS CloudFront** for improved performance, scalability, and reliability.

2. Objectives

- Develop a simple and interactive cloud gaming website.
- Enable users to play games directly through the platform.
- Implement an intuitive UI with modern styling.
- Deploy the platform using AWS CloudFront for low-latency content delivery.

3. Technology Stack

- **Frontend:** HTML, CSS, JavaScript
- **Storage:** S3 Bucket
- **Deployment:** AWS CloudFront

4. Implementation Details

4.1. Frontend Development

The frontend is built using **HTML, CSS, and JavaScript**. It features a modern and responsive design using the following components:

- **Game Cards:** Displaying different game options with a title, description, and "Play Now" button.
- **Navigation & Layout:** A simple yet effective layout with a header, main content area, and footer.
- **Game Integration:** Clicking on a game card launches an online game from platforms like **Poki or Crazy Games** in a new tab.

4.2. JavaScript Implementation

The JavaScript file maps each game title to its respective online game link and opens the game in a new tab when clicked.

5. Deployment Using AWS CloudFront

AWS CloudFront is used as a **Content Delivery Network (CDN)** to improve load times and reduce latency.

Steps to Deploy on CloudFront:

1. **Create an S3 Bucket:**
    - Store website files (HTML, CSS, JS) in an S3 bucket.
    - Enable **public access** and configure static website hosting.
2. **Set Up CloudFront Distribution:**

- In AWS CloudFront, create a new distribution.
- Set the **origin** as the S3 bucket (or GitHub Pages URL).
- Enable **caching** for optimized performance.

3. **Configure Domain Name (Optional):**
   - Use **Amazon Route 53** to set up a custom domain for the platform.
4. **Test and Deploy:**
   - Verify that the CloudFront URL correctly loads the gaming platform.
   - Ensure low latency and fast content delivery.

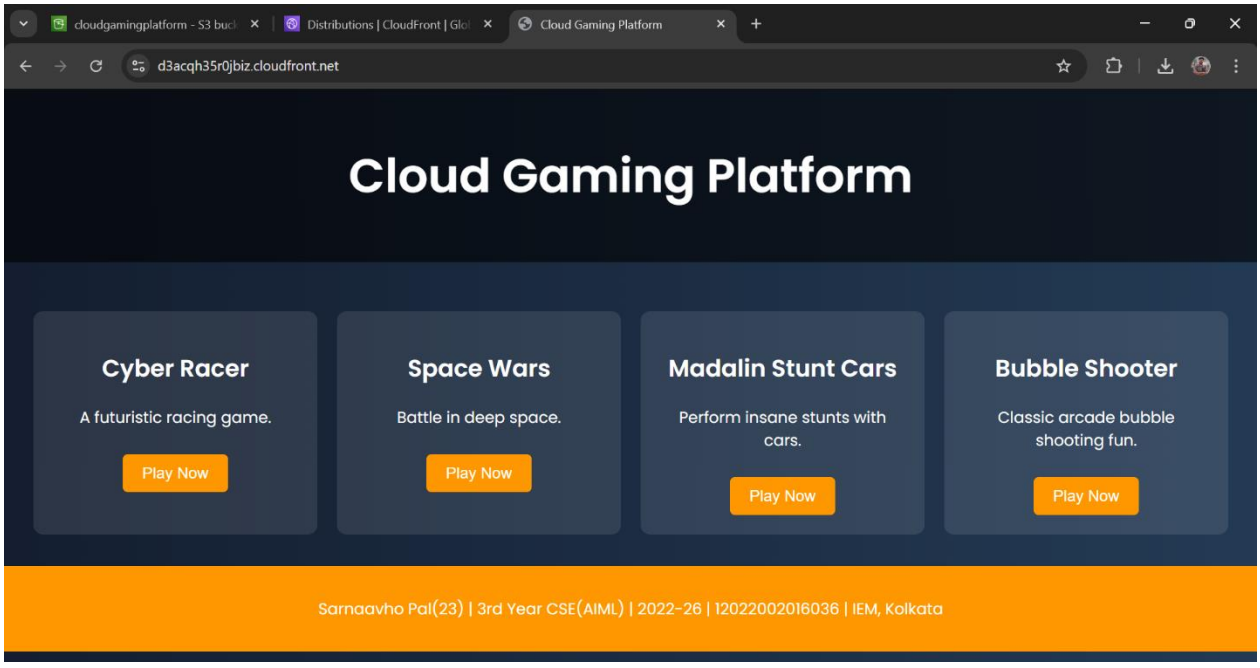
6. Results & Observations

- The platform provides a seamless gaming experience with **one-click game access**.
- Using **AWS CloudFront**, the website loads significantly faster across different regions.

CloudFront Link:- https://d3acqh35r0jbiz.cloudfront.net

(Will not work after the demonstration as I will cleanup all the resources to avoid AWS billing)

Demonstration and Code GitHub Link:- https://github.com/SARNAAVHO/CloudGamingPlatform.git



7. Conclusion

This project successfully implements a **cloud gaming platform** with a user-friendly interface and **fast game loading** using AWS CloudFront. The deployment strategy ensures **scalability, speed, and accessibility** for users worldwide. Future improvements could include **adding multiplayer support**, **real-time game streaming**, and **user authentication for personalized game recommendations**.

8. References

- AWS CloudFront Documentation:- https://docs.aws.amazon.com/cloudfront/
- AWS S3 Bucket:- https://docs.aws.amazon.com/s3/