

**Project Report: Cloud Gaming Platform**

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Year & Stream:- 3rd Year CSE (AIML)

Academic Year:- 2024-25

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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/>