

INDIEFLIX

(A CLOUD BASED WEB HOSTING OTT SYSTEM)

A PROJECT REPORT

In partial fulfilment for the award of the degree

Of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE ENGINEERING

Under the guidance of MR. SOFIKUL MOLICK

Project carried out at



ARDENT COMPUTECH PVT LTD (AN ISO 9001:2015 CERTIFIED)

SDF Bldg, Module 132, GP Block, Sector V, Bidhanagar, Kolkata- 700091

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SEPTEMBER – DECEMBER 2021

In association with



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 4. Project Version Control History :-

Version	Primary Authors	Description of Version	Date Completed
Final	<ol style="list-style-type: none"><li data-bbox="374 1078 712 1098">1. DEBRAJ MAJUMDER<li data-bbox="374 1134 625 1154">2. BIDHATRI DAS<li data-bbox="374 1190 625 1212">3. ANIKET NANDI<li data-bbox="374 1248 663 1268">4. PRIYANSHU DAS	Project Report	11 th December, 2021

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Date : -

PROJECT RESPONSIBILITY FORM

COVID-19 UPDATES

(A CLOUD BASED WEB HOSTING OTT SYSTEM)

SL NO.	NAME OF THE MEMBERS	RESPONSIBILITY GIVEN
1	Debraj Majumdar	Project Leader, Server Handling, Implementation and testing
2	Bidhatri Das	Documentation, designing and maintenance
3	Aniket Nandi	Website designing, Coding and System analysis
4	Priyanshu Das	Server Handling, System Analysis and maintenance

Each group members must participate in project development and developing the ideas for the required elements. Individual group members will be responsible for completing tasks which help to finalise the project and the performance. All group members must be assigned a task.

Group Members:

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DECLARATION

We hereby declare that the project work being presented in the project proposal entitled "INDIEFLIX (A CLOUD BASED WEB HOSTING OTT SYSTEM)" in partial fulfilment of the requirements for the award of degree of BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE ENGINEERING at ARDENT COMPUTECH PVT. LTD, BIDHANAGAR, KOLKATA, WEST BENGAL, is an authentic work carried out under the guidance of MR. Sofikul Mollick. The matter embodied in this project work has not been submitted elsewhere for the award of any degree of our knowledge and belief.

Date : 11th December, 2021

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CERTIFICATE

This is to certify that this proposal of project entitled " INDIEFLIX (A CLOUD BASED WEB HOSTING OTT SYSTEM) " is a record of bonafide work, carried out by

1. Debraj Majumder, 2. Bidhatri Das, 3. Aniket Nandi , 4. Priyanshu Das

under my guidance at Ardent Computech Pvt. Ltd. In my opinion, the report in its present form is in partial fulfilment of the requirements for the award of the degree of COMPUTER SCIENCE ENGINEERING and as per the regulations of the Ardent Computech Pvt. Ltd. To the best of my knowledge, the results embodied in this report, are original in nature and worthy of incorporation in the present version of the report.

Guides / Supervisors

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ACKNOWLEDGEMENT

Success of any project depends largely on the encouragement and guidelines of many others. We take this sincere opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project work.

Our heartfelt thanks to Mr. Sofikul Mollick , for providing us the opportunity to develop the project at Ardent Computech Pvt. Ltd.

We would like to show our greatest appreciation to Mr. Shouvik Sarkar , Project Manager at Ardent , Kolkata. We always feel motivated and encouraged every time by his valuable advice and constant inspiration ; without his encouragement and guidance , this project would not have materialized.

We wish to express our deep sense of gratitude to our Head of the Department (CSE) of our college , NSEC, Garia, for his able guidance and useful suggestions , which helped us in completing the project work in time.

Words are inadequate in offering our thanks to the other trainees , project assistants and other members at Ardent Computech Pvt. Ltd for their encouragement and cooperation in carrying out this project work. The guidance and support received from all the members and who are contributing to this project , was vital for the success of this project.



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1.1. What is OTT?

OTT stands for Over The Top, which is a platform that offers video and audio streaming of content over the internet. It has removed any interference of the cable operators, satellite connection, or broadcast mediums.

These media services can easily be accessed through mobile phones, laptops, smart TV, and other audio-visual devices with an internet connection.

Anyone with a paid subscription can register themselves and get unlimited access to the media and entertainment sources available on the various platforms. This service is synonymous with video-on-demand (SVoD) services and digital content at International level can be accessed.

One of the biggest boosts that the OTT platforms achieved was during the pandemic period of COVID-19, where this industry flourished many folds. With Indian and International content, it played an essential role in the information revolution and development.

1.2. How Do Over The Top Media Services Work?

There many ways you can access OTT platforms, including via your computer, phone, tablet, smart TV, or gaming console. You don't need a subscription to a TV service provider—but depending on the OTT platform, you may need a subscription to the OTT platform. This is the case for services like Netflix and Disney+, where users can access curated content at any time with a monthly or yearly subscription. Some OTT platforms, like Amazon and Peacock, instead don't charge any fees to customers, generating revenue by showing their viewers ads while they're watching content.

1.3. How OTT is Delivered?

The accessibility of OTT content is one of the many reasons it's so popular. To stream OTT, customers only require a high speed internet connection and a connected device that supports apps or browsers.

Mobile OTT Devices: Smartphones and tablets are able to download OTT apps to stream on-the go.

Personal Computers: Consumers can access OTT content from desktop-based apps or web browsers.

Smart TVs: The most common examples include Roku, Apple TV, Firestick and more. Game consoles, like PlayStation, also often support OTT apps.

1.4. OTT Platforms in India – A Brief Background

In India, no fixed body has ever been assigned to regulate the OTT platforms. But in 2019, amid various complaints and issues raised against the digital content on these online mediums, the Government decided to take actions against the same.

It was in October 2020 that the Supreme Court ordered the Central Government to take up the charge of the digital content showcased on these mediums and finally, the OTT platforms will now be administered by the Ministry of Information and Broadcasting (MIB).

In January 2019, eight video streaming platforms had signed a self-regulatory code that stated a set of guiding principles for the content which can be displayed online. However, there were 5 terms and conditions which had to be mandatorily followed:

- No such content shall be added on these platforms which would cause any disrespect to the national emblem or national flag
- Display of content which can hurt religious sentiments could not be streamed
- Content which is banned by the law or order of the country could not be streamed
- Terrorism of any kind cannot be promoted

However, the Union Government disapproved of this code formed by the Internet and Mobile Association of India (IAMAI), and Digital Curated Content Complaints Council (DCCC) as no specific and elaborate set of rules were released.

Thus, finally, the Government decided to undertake OTT platforms and their censorship rights under the Ministry of Information and Broadcasting.

1.5. OBJECTIVES OF THE PROJECT

There are multiple benefits of using our OTT platform :

- Cost-Effective – Anyone willing to watch online digital content, can register themselves and pay a monthly or yearly subscription amount which makes it cost-effective
- Easy Access – One can log in to our OTT platform through mobile applications, smart TV, laptops, tablets, etc. The only requirement is an internet connection
- Creative and Unusual Content – Through our website, various creative ideas will come to the forefront which can not be brought across due to censorship or regulatory laws
- An open platform for Entertainment Industry – The biggest advantage of this platform is that it will provide a medium for new talent to get more opportunities as the number of projects are much higher in comparison to television or films
- Platform for International content – Any Indian content uploaded on these platforms can be viewed internationally. This will give a broader outreach of content and talent.

1.6. SCOPE OF THIS PROJECT

High-End Efficiency

OTT platforms are competitive enough to leverage advanced utilities at a better rate. Previously, consumers had to pay for a handful of channels they didn't want to watch. The scenario has changed now; people only pay for the content they want to watch.

Easy User Segmentation

Knowing your audience is a must for any business. OTT platforms widely contribute to user segmentation, helping marketers. For example, a video streaming app by top app development companies can divide users by signups, app retention, geography, episodes searched & watched, daily usage, etc.

Ad-Free Content.

OTT has opened up the possibility for ad-free content, by enabling subscription services (SVOD), one-time purchases (TVOD) and more monetization strategies. Even if advertising (AVOD) is your preferred model, OTT provides the power of targeted advertising and control over your campaigns and inventory, including direct sponsorships.

Direct to Consumer.

OTT is the ultimate platform for reaching your targeted audience directly with your content and delivering a premium video experience that you control. With OTT, providers can get immediate user feedback through direct engagement and interaction. What's more powerful than that?

Accessibility

The accessibility of OTT content is one of the many reasons it's so popular. To stream OTT, customers only require a high speed internet connection and a connected device that supports apps or browsers. Mobile OTT Devices: Smartphones and tablets are able to download OTT apps to stream on-the go.

Technological Upperhand

The video quality, audio quality, and connectivity have improved with OTT in the picture. These platforms are great examples of internet usage to transform the culture.

2.1. AMAZON AWS EC2 INSTANCES

An EC2 instance is a virtual server in Amazon's Elastic Compute Cloud (EC2) for running applications on the Amazon Web Services (AWS) infrastructure. Amazon provides a variety of types of instances with different configurations of CPU , memory , storage , and networking resources to suit user needs. Each type is also available in two different sizes to address workload requirements.

Instance types are grouped into families based on target application profiles. These groups include general purpose , compute-optimized , GPU instances , memory optimized , storage optimized and micro instances.

Instances are created from Amazon Machine Images (AMI). The machine images are like templates that are configured with an operating system and other software , which determine the user's operating environment. Users can select an AMI provided by AWS , the user community , or through the AWS Marketplace. User can also create their own AMI's and share them.

Amazon EC2 Instances are :-

1. Reliable
2. Secure
3. Flexible
4. Cost saving
5. Complete Computing solution
6. Elastic Web-Scale Computing
7. Completely Controlled

Instances (3) Info		⟳	Connect	Instance state ▾	Actions ▾	Launch instances	▼
		Search					
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
server	i-0d1ee03a40028bac7	✓ Running QQ	t2.micro	✓ 2/2 checks passed	No alarms	+ us-east-1b	ec2-52-90-107-1
Scaled-1	i-0828fa288b1025fc4	✗ Terminated QQ	t2.micro	-	No alarms	+ us-east-1b	-
Scaled-2	i-0c10b7ba127a07a5a	✓ Running QQ	t2.micro	✓ 2/2 checks passed	No alarms	+ us-east-1a	ec2-35-170-51-1

2.2. AMAZON AWS S3 BUCKET

Amazon S3 is a cloud storage for the internet. To upload your data (photos , videos , documents , etc.) you first create a bucket in one of the AWS Regions. You can then upload any number of objects to the bucket.

In terms of implementation , buckets and objects are resources , and Amazon S3 provides APIs for you to manage them. For example , you can create a bucket and upload objects using the Amazon S3 API. You can also use the Amazon S3 Console to perform these operations. The console uses the Amazon S3 APIs to send requests to Amazon S3.

This section explains how to work with buckets. For information about working with objects , see Working with Amazon S3 Objects.

An Amazon S3 bucket name is globally unique , and the namespace is shared by all AWS accounts. This means that after a bucket is created , the name of the bucket cannot be used by another AWS account in any AWS Region until the bucket is deleted. You should not depend on specific bucket naming conventions for availability or security verification purposes. For bucket naming guidelines , see Bucket Restrictions and Limitations.

Amazon S3 creates buckets in a region you specify. To optimize Latency , minimize costs , or address regulatory requirements , choose any AWS Region that is geographically close to you.

2.3. AMAZON AWS AUTO SCALING

AWS Auto Scaling monitors your applications and automatically adjusts capacity to maintain steady , predictable performance at the lowest possible cost. Using AWS Auto Scaling , it's easy to setup application scaling for multiple resources across multiple services in minutes. The service provides powerful user interface that lets you build scaling plans for resources including Amazon EC2 instances and Spot Fleets , Amazon ECS Tasks , Amazon DynamoDB Tables and Indexes , and Amazon Aurora Replicas.

AWS Auto Scaling makes scaling simple with recommendations that allow you to optimize performances , costs , or balance between them. If you're already using Amazon EC2 Auto Scaling to dynamically scale your Amazon EC2 instances , you can now combine it with AWS Auto Scaling to scale additional resources for other AWS Services. With AWS Auto Scaling , your applications always have the right resources at the right time.

It's easy to get started with AWS Auto Scaling using the AWS Management Console , Command Line Interface (CLI) , or SDK. AWS Auto Scaling is available at no additional charge. You pay only for the AWS resources needed to run your applications and Amazon CloudWatch monitoring fees.

The screenshot shows the AWS Management Console with the URL [https://console.aws.amazon.com/ec2/v2/home?#/auto-scaling-groups/CreateAutoScalingGroup](#). The page title is "Create Auto Scaling group". On the left, a sidebar lists steps from 1 to 7: Step 1 (selected), Step 2, Step 3 (optional), Step 4 (optional), Step 5 (optional), Step 6 (optional), and Step 7. The main content area is titled "Choose launch template or configuration" with an "Info" link. It explains that a launch template contains settings common to all EC2 instances launched by the Auto Scaling group. A "Name" field is present, with "Auto Scaling group name" and "Enter a name to identify the group." instructions. Below this, a "Launch configuration" section is shown, with a "Switch to launch template" link. It displays a "NewConfiguration" entry with details: AMI ID "ami-0fcb703b0889ac35", Date created "Sat Dec 11 2021 11:36:44 GMT+0530 (India Standard Time)", Security groups "sg-016878687dc618908", Instance type "t2.micro", and Key pair name "-". At the bottom are "Cancel" and "Next" buttons.

2.4. AMAZON MACHINE IMAGE

An Amazon Machine Image (AMI) provides the information required to launch an instance. You must specify an AMI when you launch an instance. You can launch multiple instances from a single AMI when you need multiple instances with the same configuration. You can use different AMIs to launch instances when you need instances with different configurations.

An AMI includes the following:

- One or more Amazon Elastic Block Store (Amazon EBS) snapshots, or, for instance-store-backed AMIs, a template for the root volume of the instance (for example, an operating system, an application server, and applications).
- Launch permissions that control which AWS accounts can use the AMI to launch instances.
- A block device mapping that specifies the volumes to attach to the instance when it's launched.

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

- My AMIs
- AWS Marketplace
- Community AMIs
- Free tier only (i)

Image	Name	Description	Root device type	Virtualization type	ENI Enabled	Select
	Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type	ami-002068ed284fb165b (64-bit x86) / ami-0a5899928eba2e7bd (64-bit Arm)	<input checked="" type="radio"/> 64-bit (x86)	<input type="radio"/> 64-bit (Arm)	<input type="checkbox"/>	<button>Select</button>
	Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type	ami-056b1936002ca8ede (64-bit x86) / ami-0b09f36be67d32ff (64-bit Arm)	<input checked="" type="radio"/> 64-bit (x86)	<input type="radio"/> 64-bit (Arm)	<input type="checkbox"/>	<button>Select</button>
	macOS Monterey 12.0.1	ami-071bb7b6031fd9da7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<button>Select</button>

The macOS Monterey AMI is an FBS-backed AWS committed image. This AMI includes the AWS Command Line Interface, Command Line Tools for macOS, Amazon SSM.

Feedback English (US) ▾

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2.5. LOAD BALANCING

Elastic Load Balancing (ELB) is a load-balancing service for Amazon Web Services (AWS) deployments. ELB automatically distributes incoming application traffic and scales resources to meet traffic demands.

ELB helps an IT team adjust capacity according to incoming application and network traffic. Users enable ELB within a single availability zone or across multiple availability zones to maintain consistent application performance.

Historically, load balancing divides the amount of work that a computer has to do among multiple computers so that users, in general, get served faster. ELB offers enhanced features including:

- Detection of unhealthy Elastic Compute Cloud (EC2) instances.
- Spreading instances across healthy channels only.
- Flexible cipher support.
- Centralized management of Secure Sockets Layer (SSL) certificates.
- Optional public key authentication.
- Support for both IPv4 and IPv6.

A developer can integrate Amazon Route 53 and domain name system (DNS) failover to further boost application resiliency. Route 53 can route traffic to another healthy ELB and fail over across AWS regions.

Automatic scaling

A developer can use AWS' Auto Scaling feature to guarantee he or she has enough EC2 instances running behind an ELB. The developer sets Auto Scaling conditions, and when a condition is met, a new EC2 instance can spin up to meet the desired minimum. A developer can also set a condition to spin up new EC2 instances to reduce latency.

Security

ELB supports applications within an Amazon Virtual Private Cloud for stronger network security. An IT team can specify whether it wants an internet-facing or internal load balancer. The latter option enables a developer to route traffic

through an ELB using private IP addresses. A developer could also route traffic between different tiers of an application by

using multiple internet-facing and internal load balancers; this approach allows an IT team to use a security group along with private IP addresses while exposing only the web-facing tier and its public IP addresses.

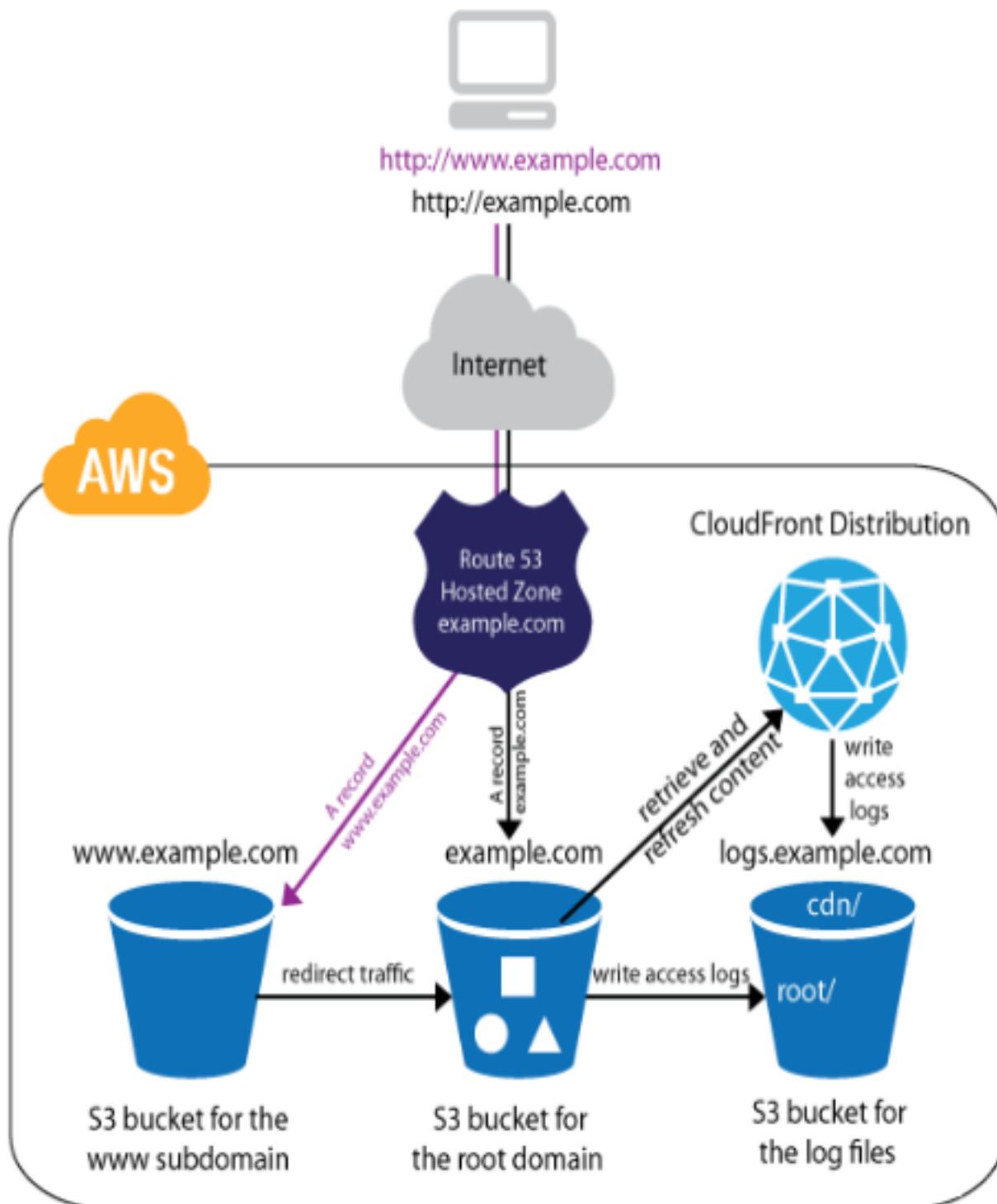
In addition to certificate management, ELB allows SSL/Transport Layer Security (TLS) decryption.

Types of load balancers

ELB offers two different load balancer features, which help provide scalable cloud computing capacity. The Application Load Balancer handles advanced traffic routing from other services or containers at the application level, while the Classic Load Balancer spreads app or network traffic across EC2 instances.

Other vendors also offer tools to load balance workloads. ScaleBase offers an ELB solution with real-time elasticity, which simplifies the ability to scale the MySQL relational database management system (RDBMS) without requiring infrastructure changes or taking services offline.

2.6 AWS ARCHITECTURAL DIAGRAM



2.7. FUNCTIONAL REQUIREMENTS OF THIS WEBSITE

MODULES

The Modules used in this website are as follows :-

1. Home :- This page contains Who are we information , along with the advertisements of the available movies/series/shows/videos as well as the upcoming ones.
2. Login :- This module is for registered users to Login. The ADMIN has the authority to Add , Delete , and Update data etc. The USER can view the details inside the page.
3. Plans and pricing :- This page contains the plans and pricing of subscriptions.
4. Coming soon:- This page includes advrtisements of all the upcoming videos/movies/shows/series which will be uploaded in our website.
5. Catalog :- This page contains the list of videos/movies/shows/series available on our platform, category wise.
6. Contact :- This page includes the contact information details inside which the user will have to fill his/her contact information like their first name , last name , their email id , the subject they want to enquire for and they have to briefly explain the issue in the comment section and will have to submit the information.
7. About us :- This page contains information and responsibilities of the respected members.

3. CODING OF BASIC HTML AND CSS

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 </head>
5 <meta charset="utf-8">
6 <meta name="viewport" content="width=device-width, initial-scale=1" id="wixDesktopViewport" />
7 <meta http-equiv="X-UA-Compatible" content="IE=edge" />
8 <meta name="generator" content="Wix.com Website Builder"/>
9
10 <link rel="icon" sizes="192x192" href="https://www.wix.com/favicon.ico">
11 <link rel="shortcut icon" href="https://www.wix.com/favicon.ico" type="image/x-icon"/>
12 <link rel="apple-touch-icon" href="https://www.wix.com/favicon.ico" type="image/x-icon"/>
13 <!-- Safari Pinned Tab Icon -->
14 <!-- Link rel="mask-icon" href="https://www.wix.com/favicon.ico" -->
15
16 <!-- Legacy Polyfills -->
17 <script src="https://static.parastorage.com/unpkc/core.js@bundle@3.2.1/minified.js" nomodule=""></script>
18 <script src="https://static.parastorage.com/unpkc/focus-within-polyfill@0.0.9/dist/focus-within-polyfill.js" nomodule=""></script>
19 <script src="https://polyfill.io/v3/polyfill_min.js?features=fetch" nomodule=""></script>
20
21 <!-- Performance API Polyfills -->
22 <script>
23   (function () {
24     var noop = function noop() {};
25     if ("Performance" in window === false) {
26       window.performance = {};
27     }
28     window.performance.mark = performance.mark || noop;
29     window.performance.measure = performance.measure || noop;
30     if ("now" in window.performance === false) {
31       var nowOffset = Date.now();
32       if (performance.timing && performance.timing.navigationStart) {
33         nowOffset = performance.timing.navigationStart;
34       }
35       window.performance.now = function now() {
36         return Date.now() - nowOffset;
37       };
38     }
39   })();
40 </script>
```

[Click here for the complete code](#)

4. IMPLEMENTATION AND TESTING

A Software System Test Plan is a document that describes the objectives , scope , approach and focus of software testing effort. The process of preparing a test plan is a usual way to think the efforts needed to validate the acceptability of a software product. The complete document will help people outside the test group , understand the "WHY" and "HOW" product validation. It should be through enough to be useful but not so through that no one outside the test group will read it.

4.1. INTRODUCTION

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system.

Testing aims at detecting error-prone areas. This helps in the prevention of the errors in a system. Testing also adds value to the product by conforming to the user's requirements.

The main purpose of Testing is to detect errors and error-prone areas in a system. Testing must be thorough and well planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training , system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The Testing involves the Testing of the developed system using various kinds of data. While testing , errors are noted and correctness is the mode.

➤ STEPS FOR SYSTEM TESTING :-

1. Test Environment Setup :- Create testing environment for the better quality of testing.
2. Create Test Case :- Generate test case for the testing process.
3. Create Test Data
4. Execute Test Case
5. Defect Reporting
6. Regression Testing
7. Log Defects
8. Retest

4.2. OBJECTIVES OF TESTING

The objective of our test plan is to find and report as many bugs as possible to improve the integrity of our program. Although exhaustive testing is not possible , we will exercise a broad range of tests to achieve our goal. Our user interface to utilize these these functions , is designed to be user-friendly and provide an easy manipulation of the tree. The application will only be used as a demonstration tool , but we would like to ensure that it could be run from a variety of platforms with little impact on performance and usability.

PROCESS OVERVIEW :-

The following represents the overall flow of the Testing Process :-

1. Identify the requirements to be tested. All Test Cases shall be derived using the current Program Specifications.
2. Identify which particular Test(s) will be used to test each module.
3. Review the test data and test cases to ensure that the unit has been thoroughly verified and that the test data and test cases are adequate to verify proper operation of the unit.
4. Identify the expected results for each test.
5. Document the test case configuration , test data , and expected results.

6. Perform the test(s).
7. Document the test data , test cases , and test configuration used during the testing process. The information shall be submitted via the Unit/System Test Report (STR).
8. Successful unit testing is required before the unit is eligible for component integration/system testing.
9. Unsuccessful testing requires a Bug Report Form to be generated. This document shall describe the test case , the problem encountered , its possible cause , and the sequence of events that led to the problem. It shall be used as a basis for the later technical analysis.
10. Test Documents and reports shall be submitted. Any specifications to be reviewed , revised , or updated shall be handled immediately.

4.3. TEST CASES

A Test case is a document that describes an input , action , or event and expected response , to determine if a feature of an application is working correctly. A Test case should contain particular such as test case identifier , test condition , test condition , input data.

Requirement expected results. The process of developing test cases can help find problems in the requirement or design of an application , since it requires completely thinking through the operation of the application.

- TESTING STEPS :-

1. UNIT TESTING :-

Unit Testing focuses efforts on the smallest unit of software design. This is known as Module Testing. The modules are tested separately. The Test is carried out during programming stage itself. In this step , each module is found to be working satisfactorily as regards to the expected output from the module.

2. INTEGRATION TESTING :-

Data can be lost across an interface. One module can have an adverse effect on another , sub functions , when combined , may not be linked in desired manner in major functions. Integration Testing is a systematic approach for constructing the program structure , while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

3. VALIDATION :-

At the culmination of the integration testing , software is completely assembled as a package. Interfacing errors have been uncovered and corrected and a final series of software test begins in Validation Testing. Validation Testing can be defined in many ways. But a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After validation test has been conducted , one of the three possible conditions exists.

- a) The function or performance characteristics confirms to specification and are accepted.
- b) A deviation from specification is uncovered and a deficiency list is created.
- c) Proposed system under consideration has been tested by using validation test and found to be working satisfactorily.

5. FEW PICTURES OF THE AWS INTERFACE

1. AMAZON AWS EC2 INSTANCE :-

The screenshot shows the AWS EC2 Management Console with the following details:

Instances (1/5) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
AMI-Template	i-0da8baa6580f9635e	Stopped	t2.micro	2/2 checks passed	No alarms	us-east-1b	-
Server-1	i-019ee696c89041e03	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-44-201-103-22
Server-2	i-02d80e7643ce94c4d	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-54-209-47-232
Server-3	i-03c09e3c0323f5e91	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-3-85-12-110.co
Server-4	i-0fa9b2379d58dedbb	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-18-214-25-29.c

Left sidebar:

- New EC2 Experience
- EC2 Dashboard
- EC2 Global View
- Events
- Tags
- Limits
- Instances
 - Instances **New**
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances **New**
 - Dedicated Hosts
 - Scheduled Instances
 - Capacity Reservations
- Images
 - AMIs **New**
 - AMI Catalog

Bottom footer:

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#instanceDetails:instanceId... © 2021, Amazon Internet Services Private Ltd. or its affiliates. Privacy Terms Cookie preferences

2. AMAZON AWS EC2 DASHBOARD :-

The screenshot shows the AWS EC2 Management console dashboard. On the left, a sidebar menu includes 'EC2 Dashboard', 'Instances' (with sub-options like 'Instances', 'Instance Types', 'Launch Templates', etc.), and 'Images'. The main content area has a 'Resources' section displaying various EC2 metrics:

Category	Value
Instances (running)	5
Dedicated Hosts	0
Elastic IPs	0
Instances	5
Key pairs	1
Load balancers	1
Placement groups	0
Security groups	2
Snapshots	1
Volumes	5

A callout box suggests using the AWS Launch Wizard for Microsoft SQL Server Always On availability groups.

The 'Account attributes' sidebar lists supported platforms (VPC), default VPC (vpc-0aed486622ddbd71), settings (EBS encryption, Zones, EC2 Serial Console), and other options (Default credit specification, Console experiments).

The 'Explore AWS' sidebar features a challenge to move workloads to AWS Graviton2 and a link to enable best price-performance.

At the bottom, the URL is https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances: and the page footer includes copyright information and links for Privacy, Terms, and Cookie preferences.

3. LOAD BALANCING :-

The screenshot shows the AWS CloudFront console with the 'Create New Distribution' wizard. The 'Standard' configuration is selected. The 'Origin' section shows a single origin pointing to an S3 bucket named 'Indieflix'. The 'Default Cache Behavior' section is set to 'Forward all bytes'.

Load balancer: IndieflixASG-1

[Description](#) [Listeners](#) [Monitoring](#) [Integrated services](#) [Tags](#)

Listeners listen for connection requests using their protocol and port. You can add, remove, or update listeners and listener rules.

To view and edit listener attributes, select the listener and choose Edit.

[Add listener](#)

[Edit](#)

[Delete](#)

<input type="checkbox"/> Listener ID	Security policy	SSL Certificate	Rules
<input type="checkbox"/> HTTP : 80 arn...024ecaabdff38c98 -	N/A	N/A	Default: forwarding to IndieflixASG-1 View/edit rules

4. AMAZON AWS AUTO SCALING :-

The screenshot shows the AWS EC2 Auto Scaling groups page. A green banner at the top indicates "ASG-001, 1 Scaling policy created successfully". The main table lists one Auto Scaling group named "ASG-001" with a launch template "NewConfiguration". The group has a desired capacity of 2, minimum of 1, and maximum of 4. The status is "Updating capacity". Below the table, the "Monitoring" tab is selected in the navigation bar. On the left, a sidebar shows various EC2 services like Instances, Images, and Security Groups.

The screenshot shows the "Create Auto Scaling group" wizard, Step 1: Choose launch template or configuration. It asks to choose a launch template or configuration. The "Name" field is populated with "ASG-001". The "Launch configuration" section shows "NewConfiguration" selected, with details: AMI ID "ami-0bfcb703b0889ac35", Date created "Sat Dec 11 2021 11:56:44 GMT+0530 (India Standard Time)", and Instance type "t2.micro". The "Security groups" field contains "sg-016878687dc618908". Navigation steps on the left include Step 1 (Choose launch template or configuration), Step 2 (Choose instance launch options), Step 3 (optional) Configure advanced options, Step 4 (optional) Configure group size and scaling policies, Step 5 (optional) Add notifications, Step 6 (optional) Add tags, and Step 7 (Review).

5. NETWORK MONITORING :-

The screenshot shows the AWS EC2 Management Console interface. On the left, there's a sidebar with various navigation links like EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances, and Images. The main area is titled 'Instances (1/5) Info' and shows a table of running instances. One instance, 'Server-2' (i-02d80e7643ce94c4d), is selected. Below the table, there's a detailed view for 'Instance: i-02d80e7643ce94c4d (Server-2)' with four line charts: Network in (bytes), Network out (bytes), Network packets in (count), and Network packets out (count). The charts show data from 09:45 to 10:30. The bottom right corner of the screenshot contains the text '© 2021, Amazon Internet Services Private Ltd. or its affiliates.'

6. AMAZON MACHINE IMAGE:

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Quick Start

- My AMIs
- AWS Marketplace
- Community AMIs
- Free tier only ⓘ

AMI Name	Description	Root device type	Virtualization type	ENAv Enabled	Action
Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-002068ed284fb165b (64-bit x86) / ami-0a5899928eba2e7bd (64-bit Arm)	Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Gilbc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.	ebs	hvm	Yes	<input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm) Select
Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type - ami-056b1936002ca8ede (64-bit x86) / ami-0b09f36be67d32ff (64-bit Arm)	Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Gilbc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.	ebs	hvm	Yes	<input checked="" type="radio"/> 64-bit (x86) <input type="radio"/> 64-bit (Arm) Select
macOS Monterey 12.0.1 - ami-071bb7b6031fd9da7	The macOS Monterey AMI is an FRS hardened AWS community image. This AMI includes the AWS Command Line Interface, Command Line Tools for macOS, Amazon SSM.				Select

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Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

AMI Details

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-0ed9277fb7eb570c9

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Gilbc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is n...
Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

Security Groups

MyASG-SG

SSH TCP 22 0.0.0.0/0

Cancel Previous Launch

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7. DETAILS OF AMAZON MACHINE IMAGE

The screenshot shows the AWS EC2 Machine Images (AMIs) page. The left sidebar includes links for New EC2 Experience, EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances (with sub-links for Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations), Images (with sub-links for AMIs and AMI Catalog), and Elastic Block Store (with sub-links for Volumes, Snapshots, and Lifecycle Manager). The main content area displays a table for 'Amazon Machine Images (AMIs) (1/1)' with one item: 'Name' (ImaGe-001), 'AMI ID' (ami-0bfcb703b0889ac35), 'AMI name' (MyImage001), 'Source' (102386479290/MyImage001), 'Owner' (102386479290), and 'Visibility' (Private). Below the table, a detailed view for 'AMI ID: ami-0bfcb703b0889ac35 (ImaGe-001)' is shown with tabs for Details, Permissions, Storage, and Tags. The Details tab displays the following information:

AMI ID	Image type	Platform details	Root device type
ami-0bfcb703b0889ac35 (ImaGe-001)	machine	Linux/UNIX	ebs
AMI name	Owner account ID	Architecture	Usage operation
MyImage001	102386479290	x86_64	RunInstances
Root device name	Status	Source	Virtualization type
/dev/xvda	Pending	102386479290/MyImage001	hvm
Boot mode	State reason	Creation date	Kernel ID
-	-	Sat Dec 11 2021 11:31:51 GMT+0530 (India Standard Time)	-
Block devices	Description	Product codes	RAM disk ID
/dev/xvda=8:true:gp2	I am creating this image for ASG	-	-
Deprecation time			
-			

At the bottom of the page, there are links for Feedback, English (US), © 2021, Amazon Internet Services Private Ltd. or its affiliates., Privacy, Terms, and Cookie preferences.

8. LINUX INTERFACE:

```
[santa@fedora Documents]$ chmod 400 indoflick.pem
[santa@fedora Documents]$ ssh -i "indoflick.pem" ec2-user@ec2-52-90-107-111.compute-1.amazonaws.com
The authenticity of host 'ec2-52-90-107-111.compute-1.amazonaws.com (52.90.107.111)' can't be established.
ED25519 key fingerprint is SHA256:UtrpT6IFlasBij1PsBrJuTFwmXyAWQfopvlKGv8CeAg.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-52-90-107-111.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

 _--| _--|_
 _| ( _ /   Amazon Linux 2 AMI
---| \---|---

https://aws.amazon.com/amazon-linux-2/
6 package(s) needed for security, out of 14 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-84-13 ~]$ sudo yum install httpd -
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                         | 3.7 kB     00:00
Resolving Dependencies
--> Running transaction check
--> Package httpd.x86_64 0:2.4.51-1.amzn2 will be installed
--> Processing Dependency: httpd-tools = 2.4.51-1.amzn2 for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem = 2.4.51-1.amzn2 for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: system-logos-httpd for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: mod_http2 for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.51-1.amzn2.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.51-1.amzn2.x86_64
```

```
Installed:
httpd.x86_64 0:2.4.51-1.amzn2

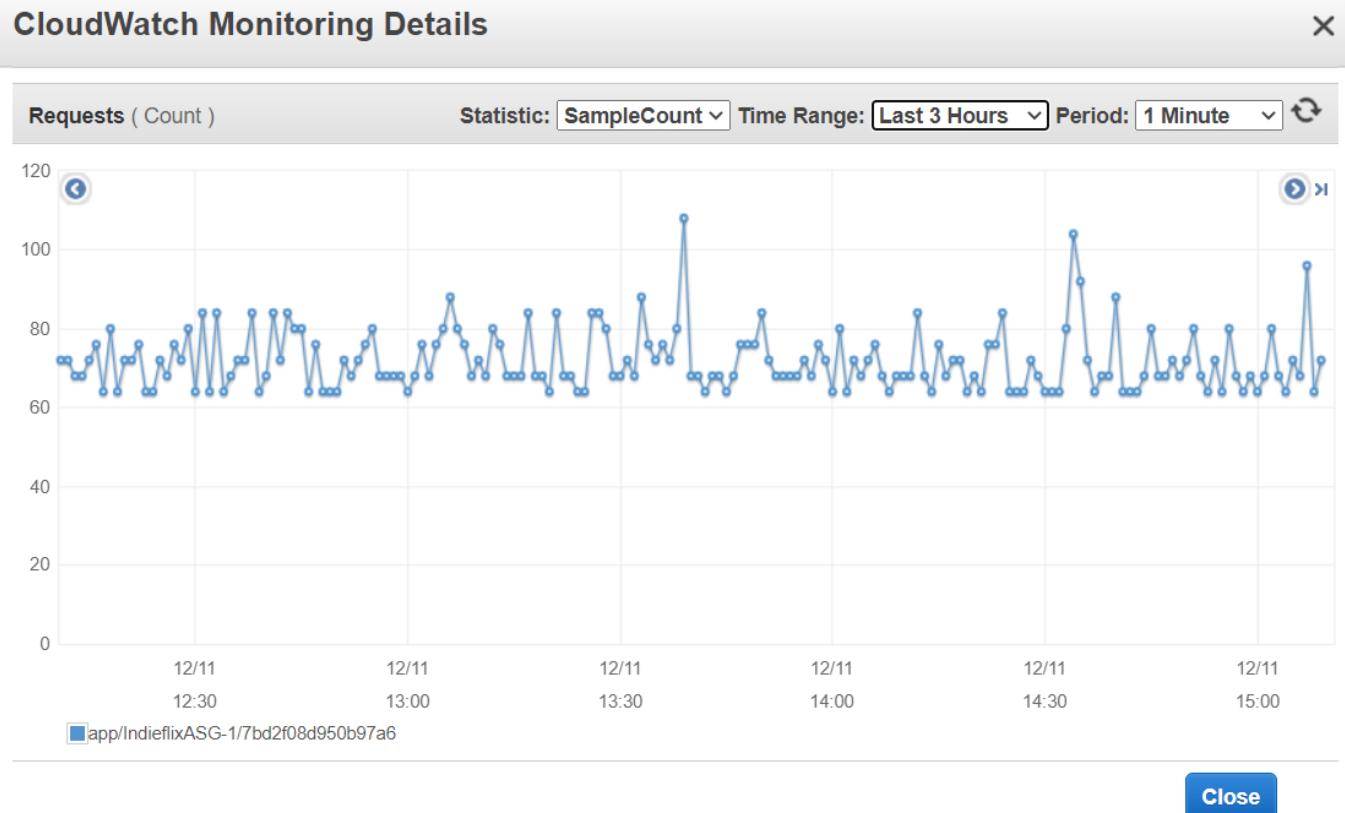
Dependency Installed:
apr.x86_64 0:1.7.0-9.amzn2
apr-util.x86_64 0:1.6.1-5.amzn2.0.2
apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
generic-logos-httpd.noarch 0:18.0.0-4.amzn2
httpd-filesystem.noarch 0:2.4.51-1.amzn2
httpd-tools.x86_64 0:2.4.51-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2
mod_http2.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
[ec2-user@ip-172-31-84-13 ~]$ sudo su
[root@ip-172-31-84-13 ec2-user]# cd /var/www/html
[root@ip-172-31-84-13 html]# wget https://indieflix.s3.us-east-2.amazonaws.com/IFtest.html
--2021-12-11 05:52:13-- https://indieflix.s3.us-east-2.amazonaws.com/IFtest.html
Resolving indieflix.s3.us-east-2.amazonaws.com (indieflix.s3.us-east-2.amazonaws.com)... 52.219.96.232
Connecting to indieflix.s3.us-east-2.amazonaws.com (indieflix.s3.us-east-2.amazonaws.com)|52.219.96.232|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 601996 (588K) [text/html]
Saving to: 'IFtest.html'

100%[=====] 601,996 --.-K/s in 0.08s

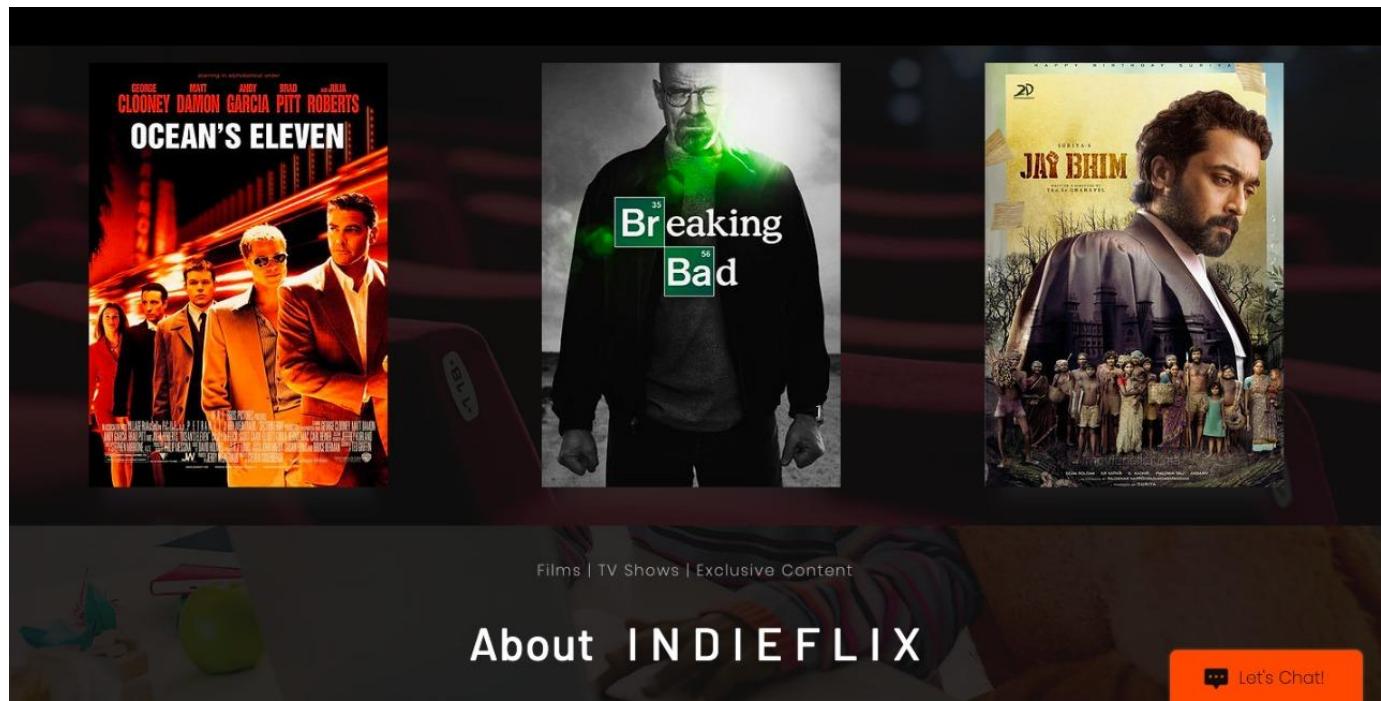
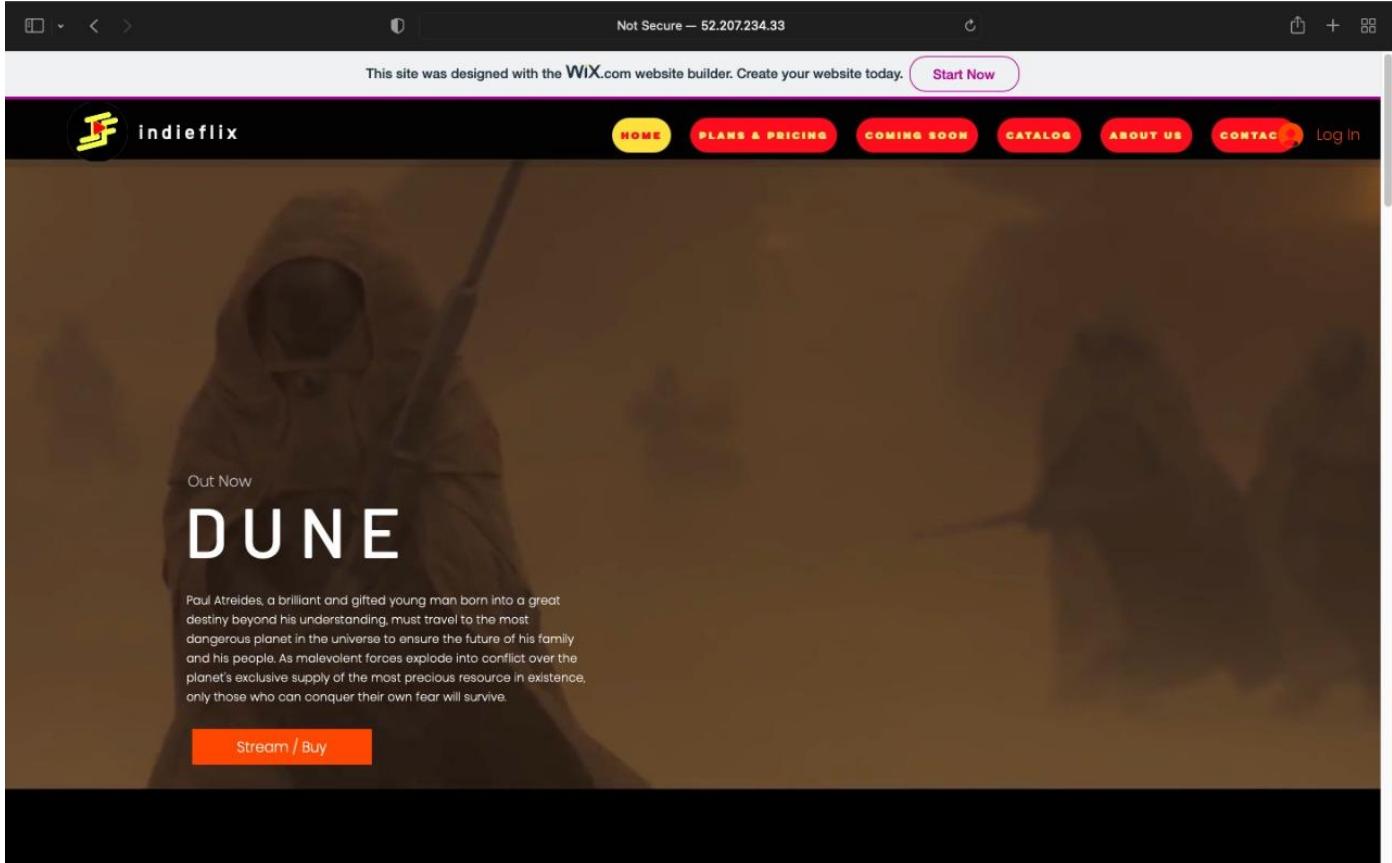
2021-12-11 05:52:13 (7.46 MB/s) - 'IFtest.html' saved [601996/601996]
```

9. CLOUDWATCH MONITORING



5.2 PAGES FROM THE WEBSITE

1. HOME PAGE 1 :-



2. PLANS & PRICING PAGE :-

The screenshot shows the 'PLANS & PRICING' section of the Indieflix website. At the top, there's a navigation bar with links for HOME, PLANS & PRICING (which is highlighted in yellow), COMING SOON, CATALOG, ABOUT US, and CONTACT. Below the navigation, a dark banner says 'Join us through one of these!'. Three pricing plans are displayed in colored boxes:

- Broze Buddy**: \$29 Every month. Perfect for someone who wants to try Indieflix! 2 day free trial. Buttons: Try it out!
- Silver Supporter**: \$49 Every month. Perfect to uplift your experience here! 7 day free trial. Buttons: Try it out!
- Golden Guest**: \$99 Every month. The All Inclusive Indieflix Experience! 30 day free trial. Buttons: Try it out!

Each plan box also includes a description of the benefits: 'Select Movies', 'Premium Movies', and 'Everything on Indieflix' respectively. A 'Super Saver' badge is placed above the Golden Guest plan. At the bottom right, there's a 'Let's Chat!' button.

3... COMING SOON PAGE :-

The screenshot shows the 'COMING SOON' section of the Indieflix website. At the top, it says 'COMING SOON' in white. Below that, three circular movie posters are shown: 'THE MATRIX RESURRECTIONS' (featuring Neo in a suit), 'TOP GUN MAVERICK' (featuring Tom Cruise in flight gear), and 'JURASSIC WORLD' (featuring a T-Rex silhouette). To the left of the posters, there's a small circular image of a person in a futuristic suit. Below the posters, a dark banner says 'Indieflix Newsletter' and features a large white text 'See it First'. At the bottom, there's a form to enter an email address ('Enter your email here*') and a 'SUBSCRIBE' button. On the far right, there's a 'Let's Chat!' button.

4. CATALOG

The screenshot shows the indieflix catalog page. At the top, there's a navigation bar with links for HOME, PLANS & PRICING, COMING SOON, CATALOG, ABOUT US, and CONTACT. A user icon with the letter 'A' is also present. Below the navigation, there are three movie posters displayed side-by-side. From left to right: 1) 'Venom' featuring Tom Hardy as Venom. 2) 'Shang-Chi and the Legend of the Ten Rings' featuring Simu Liu as Shang-Chi. 3) 'Brahmastra' featuring Ranbir Kapoor and Alia Bhatt. A 'Let's Chat!' button is located at the bottom right of the catalog area.

5. ABOUT US PAGE :-

The screenshot shows the indieflix About Us page. At the top, it says 'The Team' and 'The People of Indieflix'. Below this, there are four black and white portraits of the team members: Debraj Majumdar, Priyanshu Das, Bidhatri Das, and Aniket Nandi. Each member has a name and role listed below their photo. A 'Let's Chat!' button is located at the bottom right.

Member	Role
Debraj Majumdar	Leader Server Handling
Priyanshu Das	Server Handling
Bidhatri Das	Documentation
Aniket Nandi	Website Designing

6. CONTACT PAGE

The screenshot shows the contact page for Indieflix. At the top, there is a navigation bar with the Indieflix logo, a search icon, and links for HOME, PLANS & PRICING, COMING SOON, CATALOG, ABOUT US, and CONTACT. Below the navigation bar, there is a section titled "Contact Us" with a large button labeled "Indieflix Office". To the right of this button is an "Office Address" section containing the following text:
Netaji Subhash Engineering College
Mauza Ranabhatia, Techno City,
Garia, West Bengal 700152
aniketnandi.cse2020@nsec.ac.in

At the bottom left, there is a section titled "Indieflix Newsletter" with a large button labeled "See it First". To the right of this button is a "Let's Chat!" button with a speech bubble icon.

6. CONCLUSION

The project has been appreciated by all the users in the organization. It is easy to use , since it uses the AWS provided in the user dialog. User friendly screens are provided.

This OTT platform hosted on AWS offers video and audio streaming of content over the internet. These media services can easily be accessed through mobile phones, laptops, smart TV, and other audio-visual devices with an internet connection . And hosting the platform in AWS helps us to effectively use their servers and make our website more efficient.

The website collects all the contact information of the user to provide a secure gateway for the user's identity. The software provides a reliable platform for keeping all sensitive information.

7. REFERENCES

1. <https://www.liquidweb.com/>
2. <https://docs.aws.amazon.com/>
3. <https://www.youtube.com/>
4. <https://www.quora.com/>

THANK YOU