

Project 4: Static Website Deployment on AWS

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CSCE 412 – Cloud Computing

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Instructor: Robert Lightfoot

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This project involved building and deploying a secure, multi-page static website using Amazon Web Services (AWS). The goal was to demonstrate real-world cloud deployment skills by registering a custom domain, configuring a public S3 bucket, linking the domain via Route 53, securing the website with an SSL certificate, and delivering content through AWS CloudFront.

My website is accessible at:
<https://csce412hchibib.me>

The services I used include:

- Amazon S3
- AWS Route 53
- AWS Certificate Manager (ACM)
- AWS CloudFront
- Namecheap for domain registration

aws

Search

[Option+S]

United States (Ohio)

hchibib @ 4900-0463-3305

Amazon S3

Buckets

csce412hchibib.me

Amazon S3

General purpose buckets

Directory buckets

Table buckets

Vector buckets

Access Grants

Access Points for general purpose buckets

Access Points for directory buckets

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

Feature spotlight

csce412hchibib.me

Objects

Metadata

Properties

Permissions

Metrics

Management

Access Points

Objects (3)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	about.html	html	July 27, 2025, 13:47:33 (UTC-05:00)	531.0 B	Standard
<input type="checkbox"/>	index.html	html	July 27, 2025, 13:47:33 (UTC-05:00)	478.0 B	Standard
<input type="checkbox"/>	style.css	css	July 27, 2025, 13:47:33 (UTC-05:00)	561.0 B	Standard

S3 bucket created with static website hosting enabled and public access configured.

aws Search [Option+S] Global hchibib @ 4900-0463-3305

Route 53 > Hosted zones > csce412hchibib.me

Route 53

- Dashboard
- Hosted zones
- Health checks
- Profiles [New](#)
- ▼ **IP-based routing**
 - CIDR collections
- ▼ **Traffic flow**
 - Traffic policies
 - Policy records
- ▼ **Domains**
 - Registered domains
 - Requests
- ▼ **Resolver**
 - VPCs
 - Inbound endpoints
 - Outbound endpoints
 - Rules
 - Query logging
 - Outposts

DNS Firewall

Public csce412hchibib.me Info

Delete zone Test record Configure query logging

► Hosted zone details Edit hosted zone

Records (5) DNSSEC signing Hosted zone tags (0)

Records (5) Info Delete record Import zone file Create record

Automatic mode is the current search behavior optimized for best filter results. [To change modes go to settings.](#)

Filter records by property or value Type Routing p... Alias

<input type="checkbox"/>	Record ...	Type	Routin...	Differ...	Alias	Value/Route
<input type="checkbox"/>	csce412hc...	A	Simple	-	Yes	dlvit3t388q
<input type="checkbox"/>	csce412hc...	AAAA	Simple	-	Yes	dlvit3t388q
<input type="checkbox"/>	csce412hc...	NS	Simple	-	No	ns-308.awsd ns-1970.awsd ns-1453.awsd ns-762.awsd
<input type="checkbox"/>	csce412hc...	SOA	Simple	-	No	ns-308.awsd
<input type="checkbox"/>	_509d602...	CNAME	Simple	-	No	_81c1ab1cel

Route 53 hosted zone created for csce412hchibib.me and linked via custom Namecheap nameservers.

us-east-1.console.aws.amazon.com/acm/home?region=us-east-1#certificates/7d934939-1aed-4579-87d1-b32f6f4b...

Relaunch to update

Search [Option+S]

United States (N. Virginia) hchibib @ 4900-0463-3305

AWS Certificate Manager

Certificates

7d934939-1aed-4579-87d1-b32f6f4b4e80

1

Q

AWS Certificate Manager (ACM)

List certificates

Request certificate

Import certificate

AWS Private CA

<

7d934939-1aed-4579-87d1-b32f6f4b4e80

Delete

Certificate status

Identifier

7d934939-1aed-4579-87d1-b32f6f4b4e80

Status

Issued

ARN

arn:aws:acm:us-east-1:490004633305:certificate/7d934939-1aed-4579-87d1-b32f6f4b4e80

Type

Amazon Issued

Domains (2)

Create records in Route 53

Export to CSV

< 1 >

Domain	Status	Renewal status	Type	CNAME name
csce412hchibib.me	Success	-	CNAME	_509d60267bd91b3f356d54a7efb8me.
*.csce412hchibib.me	Success	-	CNAME	_509d60267bd91b3f356d54a7efb8me.

Details

CloudShell Feedback

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SSL/TLS certificate for csce412hchibib.me issued through DNS validation.

us-east-1.console.aws.amazon.com/cloudfront/v4/home?region=us-east-1#/distributions/E2NRQBEZSM139U

CloudFront > Distributions > E2NRQBEZSM139U

csce412hchibib-site Standard View metrics

[General](#) [Security](#) [Origins](#) [Behaviors](#) [Error pages](#) [Invalidations](#) [Tags](#) [Logging](#)

Details

Name csce412hchibib-site ✎	Distribution domain name 🔗 dlvit3t388qwr.cloudfront.net	ARN 🔗 arn:aws:cloudfront::490004633305:distribution/E2NRQBEZSM139U	Last modified July 27, 2025 at 7:11:26 PM UTC
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Settings Edit

Description -	Alternate domain names csce412hchibib.me 🔗 Route domains to CloudFront	Standard logging Off
Price class Use all edge locations (best performance)	Custom SSL certificate 🔗 csce412hchibib.me 🔗	Cookie logging Off
Supported HTTP versions HTTP/2, HTTP/1.1, HTTP/1.0	Security policy TLSv1.2_2021	Default root object index.html

Continuous deployment [info](#)

[Create staging distribution](#)

CloudFront distribution created using the S3 static site as origin and custom domain with HTTPS.

us-east-1.console.aws.amazon.com/route53/v2/hostedzones?region=us-east-1#ListRecordSets/Z09020501XLCQJS5... Relaunch to update

Route 53 > Hosted zones > csce412hchibib.me

Route 53

- Dashboard
- Hosted zones
- Health checks
- Profiles New
- ▼ IP-based routing
 - CIDR collections
- ▼ Traffic flow
 - Traffic policies
 - Policy records
- ▼ Domains
 - Registered domains
 - Requests
- ▼ Resolver
 - VPCs
 - Inbound endpoints
 - Outbound endpoints
 - Rules
 - Query logging
 - Outposts
- DNS Firewall

Public csce412hchibib.me Info

Delete zone Test record Configure query logging

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Records (5) DNSSEC signing Hosted zone tags (0)

Records (5) Info Refresh Delete record Import zone file Create record

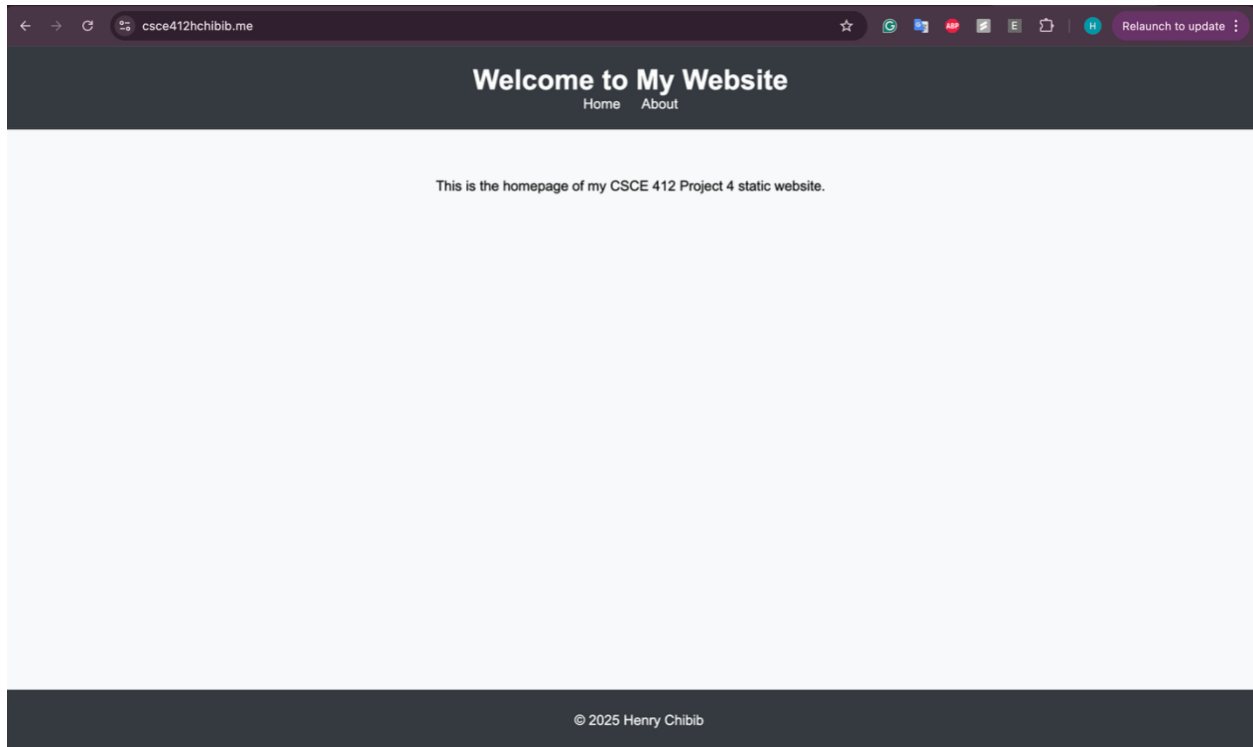
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<input type="checkbox"/>	csce412hc...	SOA	Simple	-	No	ns-308.awsc
<input type="checkbox"/>	_509d602...	CNAME	Simple	-	No	_81c1ab1cel

Route 53 routing set to direct traffic from csce412hchibib.me to the CloudFront distribution.



Live secure website with custom domain and visible HTTPS lock icon.

This project gave me hands-on experience deploying cloud-hosted content through AWS. I learned how to configure S3 buckets for static website hosting, link a custom domain through Route 53, validate and apply SSL certificates with ACM, and deliver secure content via CloudFront.

The most challenging part was configuring DNS routing and ensuring HTTPS worked end-to-end. Once I understood how each service depended on the others, the process became logical and repeatable.

This exercise mirrored real DevOps and cloud deployment workflows I could see myself using in professional settings.

Project Workflow Flowchart

