

ICC – Assignment 01

Submitted By

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22K-4504

Course Section

ICC – BSE-5A

Course Instructor

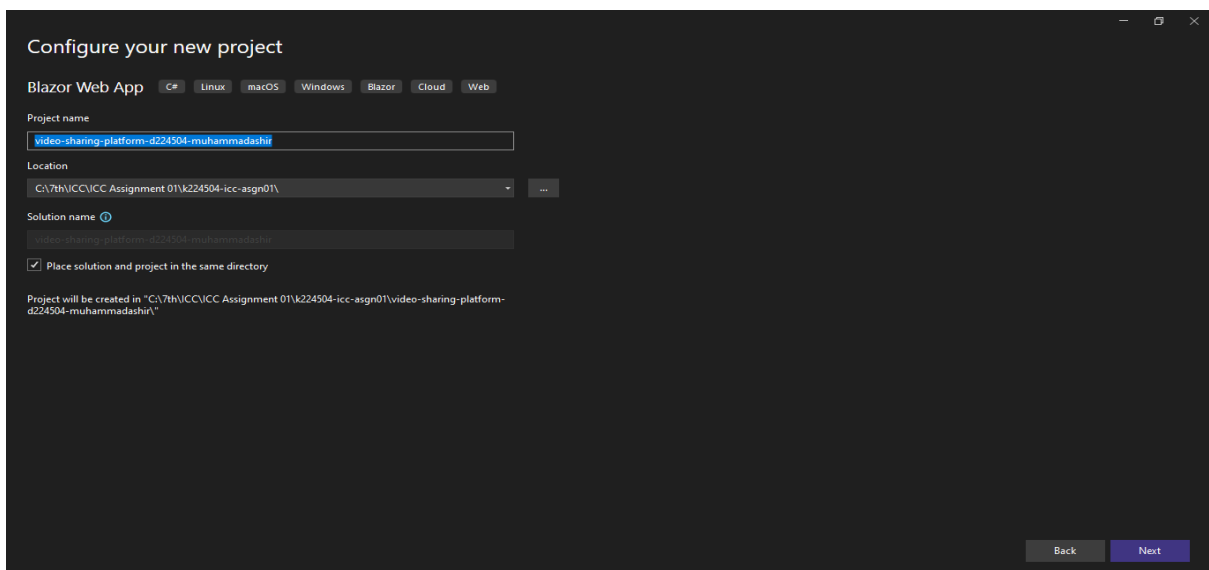
Muhammad Sudais

Project: FastTube – A Video Sharing Platform

Group: D

1. Setup and Configuration:

a) Configuring Visual Studio Project Folder – Blazor Web App



Configure your new project

Blazor Web App C# Linux macOS Windows Blazor Cloud Web

Project name
video-sharing-platform-d224504-muhammadasir

Location
C:\7th\ICC\ICC Assignment 01\k224504-icc-asgn01\

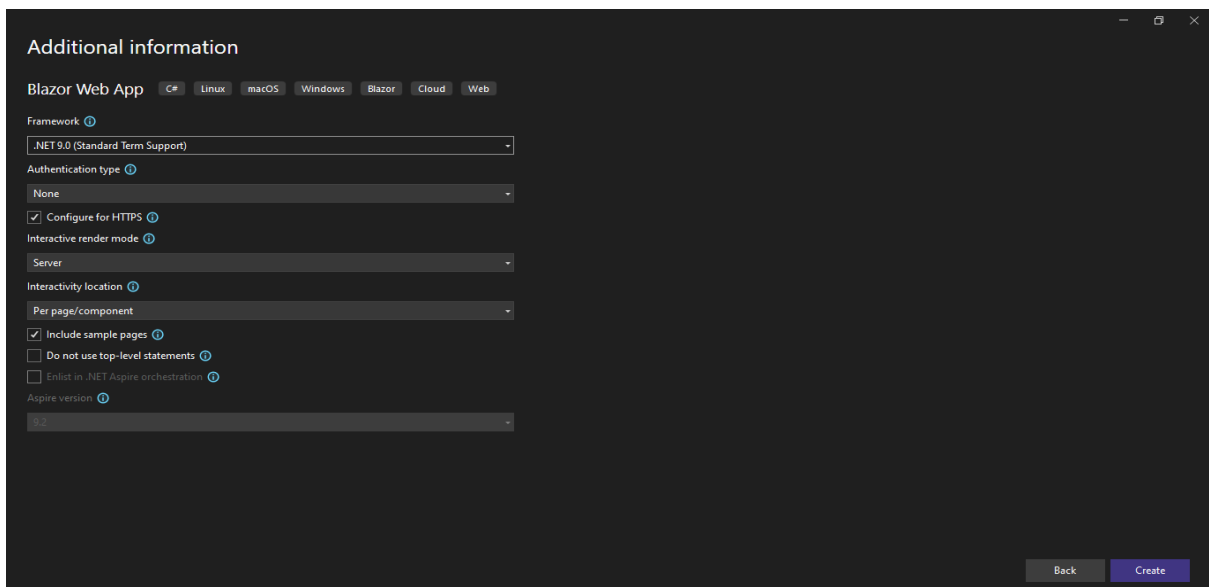
Solution name
video-sharing-platform-d224504-muhammadasir

☒ Place solution and project in the same directory

Project will be created in "C:\7th\ICC\ICC Assignment 01\k224504-icc-asgn01\video-sharing-platform-d224504-muhammadasir\."

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b) Configuring Framework & Protocol



Additional information

Blazor Web App C# Linux macOS Windows Blazor Cloud Web

Framework
.NET 9.0 (Standard Term Support)

Authentication type
None

☒ Configure for HTTPS

Interactive render mode
Server

Interactivity location
Per page/component

☒ Include sample pages

☐ Do not use top-level statements

☐ Enlist in .NET Aspire orchestration

Aspire version
3.2

Back Create

c) Adding .gitignore & making Commit

```
C:\Windows\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.14.16
** Copyright (c) 2025 Microsoft Corporation
*****

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>dotnet new gitignore
The template "dotnet gitignore file" was created successfully.

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git init
Initialized empty Git repository in C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir/.git/

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git add .
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-grid.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-grid.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-grid.rtl.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-grid.rtl.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.rtl.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.rtl.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-utilities.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-utilities.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-utilities.rtl.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/css/bootstrap-utilities.rtl.min.css', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/js/bootstrap.bundle.js', LF will be replaced by CRLF the next time Git touches it
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warning: in the working copy of 'wwwroot/lib/bootstrap/dist/js/bootstrap.js', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'wwwroot/lib/bootstrap/dist/js/bootstrap.min.js', LF will be replaced by CRLF the next time Git touches it

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git commit -m "Initial Upload - Uploading folder files"
[master (root-commit) 9d69b70] Initial Upload - Uploading folder files
 68 files changed, 61199 insertions(+)
 create mode 100644 .gitignore
 create mode 100644 Components/App razor
```

```
C:\Windows\system32\cmd.exe

 create mode 100644 wwwroot/lib/bootstrap/dist/css/bootstrap-grid.rtl.min.css
 create mode 100644 wwwroot/lib/bootstrap/dist/css/bootstrap-grid.rtl.min.css.map
 create mode 100644 wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.css
 create mode 100644 wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.css.map
 create mode 100644 wwwroot/lib/bootstrap/dist/css/bootstrap-reboot.min.css
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 create mode 100644 wwwroot/lib/bootstrap/dist/js/bootstrap.js.map
 create mode 100644 wwwroot/lib/bootstrap/dist/js/bootstrap.min.js
 create mode 100644 wwwroot/lib/bootstrap/dist/js/bootstrap.min.js.map

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git branch -M main

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git remote add origin https://github.com/Ashir-Qayyum/video-sharing-platfor
m-d224504-muhammadashir.git
```

d) Uploading Project to GitHub

```
C:\Windows\system32\cmd.exe

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git pull origin main --allow-unrelated-histories
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 1.08 KiB | 42.00 KiB/s, done.
From https://github.com/Ashir-Qayyum/video-sharing-platform-d224504-muhammadashir
 * branch          main       -> FETCH_HEAD
 * [new branch]    main       -> origin/main
Merge made by the 'ort' strategy.
 README.md | 2 ++
 1 file changed, 2 insertions(+)
 create mode 100644 README.md

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>git push -u origin main
Enumerating objects: 83, done.
Counting objects: 100% (83/83), done.
Delta compression using up to 4 threads
Compressing objects: 100% (79/79), done.
Writing objects: 100% (82/82), 824.85 KiB | 2.96 MiB/s, done.
Total 82 (delta 28), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (28/28), done.
To https://github.com/Ashir-Qayyum/video-sharing-platform-d224504-muhammadashir.git
 b6db951..79d97af main -> main
branch 'main' set up to track 'origin/main'.

C:\7th\ICC\ICC Assignment 01\k224504-icc-assign01\video-sharing-platform-d224504-muhammadashir>
```

e) Configuring Basic Azure App Service

Microsoft Azure

Search resources, services, and docs (G+/I)

Copilot

muhammadashir2004@...
DEFAULT DIRECTORY

Home > App Services >

Create Web App

Basics Database Deployment Networking Monitor + secure Tags Review + create

App Service Web Apps lets you quickly build, deploy, and scale enterprise-grade web, mobile, and API apps running on any platform. Meet rigorous performance, scalability, security and compliance requirements while using a fully managed platform to perform infrastructure maintenance. [Learn more](#)

Project Details

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure for Students

Resource Group * video-sharing-platform-d224504-ashir_group
[Create new](#)

Instance Details

Name video-sharing-platform-d224504-ashir
-b5amh2hsa4b6crd5.uenorth-01.azurewebsites.net

☒ Secure unique default hostname on. [More about this update](#)

Publish * ☒ Code ☐ Container

Runtime stack * .NET 9 (STS)

Operating System * ☐ Linux ☒ Windows

Region * UAE North

Not finding your App Service Plan? Try a different region or select your App Service Environment.

Pricing plans

App Service plan pricing tier determines the location, features, cost and compute resources associated with your app. [Learn more](#)

Windows Plan (UAE North) * (New) ASP-video-sharing-platform-d224504-ashir-83aa
[Create new](#)

Pricing plan Free F1 (Shared infrastructure)
[Explore pricing plans](#)

Zone redundancy

An App Service plan can be deployed as a zone redundant service in the regions that support it. Your initial instance count will be set based on your zone redundancy configuration. To ensure you'll be able to enable zone redundancy at any point in the lifecycle of your app, enable zone redundancy now. You can decrease the instance count after the App Service plan is created. [Learn more](#)

Zone redundancy

☐ Enabled: Your App Service plan and the apps in it will be zone redundant. The minimum App Service plan instance count will be two.

☒ Disabled: Your App Service plan and the apps in it will not be zone redundant. The minimum App Service plan instance count will be one.

Review + create

< Previous

Next : Database >

f) Configuring Deployment Azure Service

Microsoft Azure

Search resources, services, and docs (G+/I)

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DEFAULT DIRECTORY

Home > App Services >

Create Web App

Basics Database Deployment Networking Monitor + secure Tags Review + create

Continuous deployment settings

Set up continuous deployment to easily deploy code from your GitHub repository via GitHub Actions. [Learn more](#)

Continuous deployment ☐ Disable ☒ Enable

GitHub settings

Set up GitHub Actions to push content to your app whenever there are code changes made to your repository. Note: Your GitHub account must have write access to the selected repository in order to add a workflow file which manages deployments to your app.

GitHub account Ashir-Qayyum
[Change account](#)

Organization * Ashir-Qayyum

Repository * video-sharing-platform-d224504-muhammadashir

Branch * main

Workflow configuration

Click the button below to preview what the GitHub Actions workflow file will look like before setting up continuous deployment.

[Preview file](#)

Authentication settings

Choose if you would like to allow basic authentication to deploy code to your app. [Learn more](#)

Basic authentication ☒ Disable ☐ Enable

Review + create

< Previous

Next : Networking >

g) All Configuration Summary

Microsoft Azure

Search resources, services, and docs (G+/J)

Copilot

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DEFAULT DIRECTORY

Home > App Services >

Create Web App

Basics Database Deployment Networking Monitor + secure Tags **Review + create**

Summary

Web App
by Microsoft

Free sku
Estimated price - Free

Basic authentication for this app is currently disabled and may impact deployments. Click to learn more.

Details

Subscription	36ede80b-716c-41d6-8aae-ee5f2328d191
Resource Group	video-sharing-platform-d224504-ashir_group
Name	video-sharing-platform-d224504-ashir
Secure unique default hostname	Enabled
Publish	Code
Runtime stack	.NET 9 (STS)

App Service Plan (New)

Name	ASP-videosharingplatformd224504ashi-83aa
Operating System	Windows
Region	UAE North
SKU	Free
ACU	Shared infrastructure
Memory	1 GB memory

Monitor + secure

Application Insights	Not enabled
----------------------	-------------

Deployment

Basic authentication	Disabled
Continuous deployment	Enabled
GitHub account	Ashir-Qayyum
Organization	Ashir-Qayyum
Repository	video-sharing-platform-d224504-muhammadashir
Branch	main

Create < Previous Next > Download a template for automation

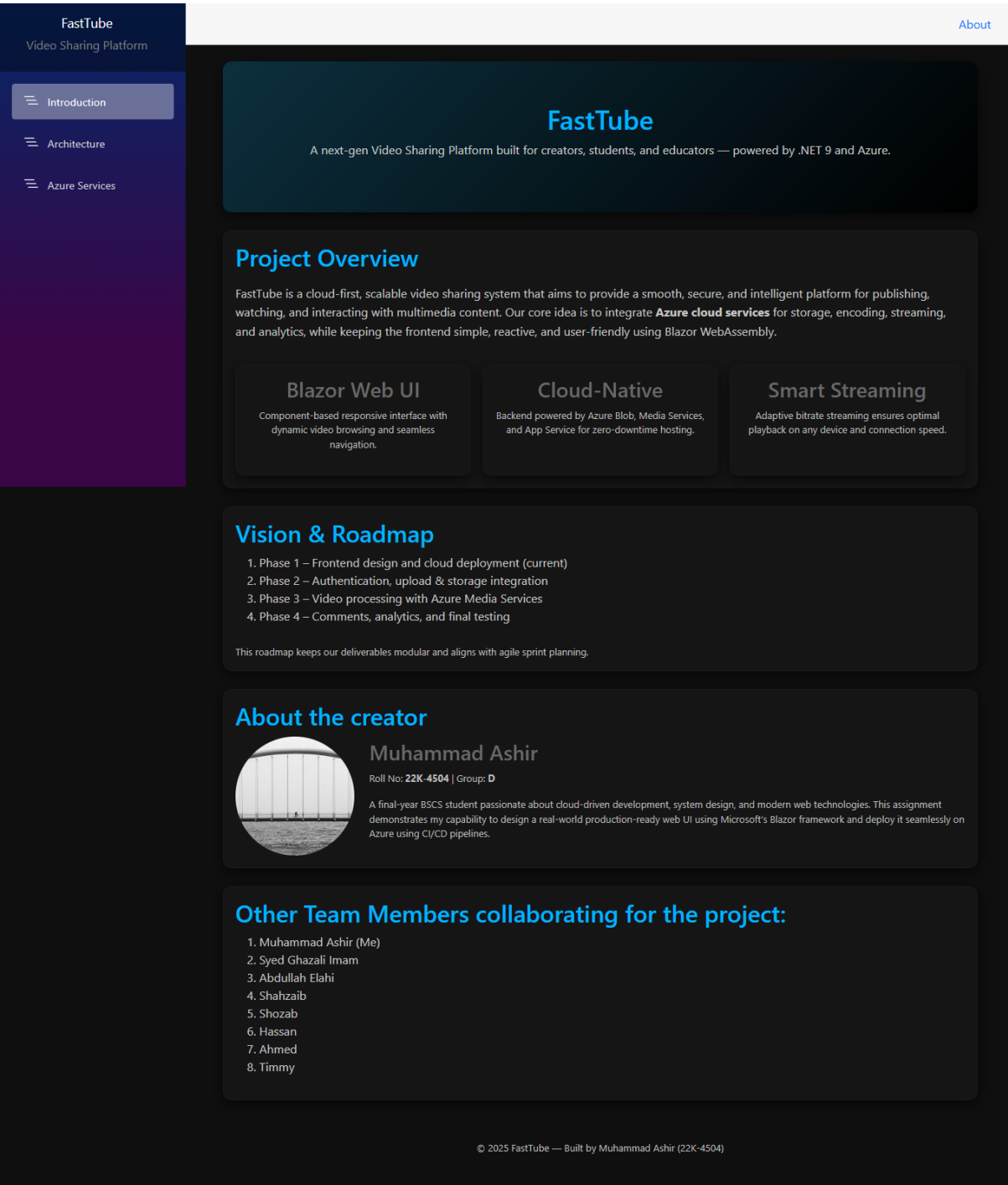
Description:

I used Microsoft Visual Studio 2022, with installing Workloads 'ASP.NET & Web Development', and 'Azure development'. Then I downloaded and installed 'dotnet-sdk-9.0.305-win-x64' for Blazor Web App Template. I created the Project with the configuration illustrated in Figures a) and b) above. For Azure Account, I used 'Azure for Students' Subscription, which provide free credits for a year. I setup an account there making new resource group, and instance. The runtime stack I used is .NET 9 Standard Term Support (STS) being the latest version released recently, and choosing Windows as OS which is normal. For region, I first tried South India being closer to my location i.e. Karachi, Pakistan, but unfortunately, it was getting failed so I ended up choosing UAE North which worked eventually. Windows Plan was generated by Azure Itself based on project name, and pricing plan was set to Free F1 as for 'Azure for Students' subscription (ref. figure 'e'). Then I integrated my GitHub account and repo (public) with azure for CI/CD Deployment. I didn't go with Basic authentication option (ref. figure 'f'). Then it provided me whole configuration summary. Upon cross-verifying all the details, I finally hit Review+Create button upon which it first created .GitHub workflow .yml file for me. This detailed configuration of the App Service, including runtime, OS, and

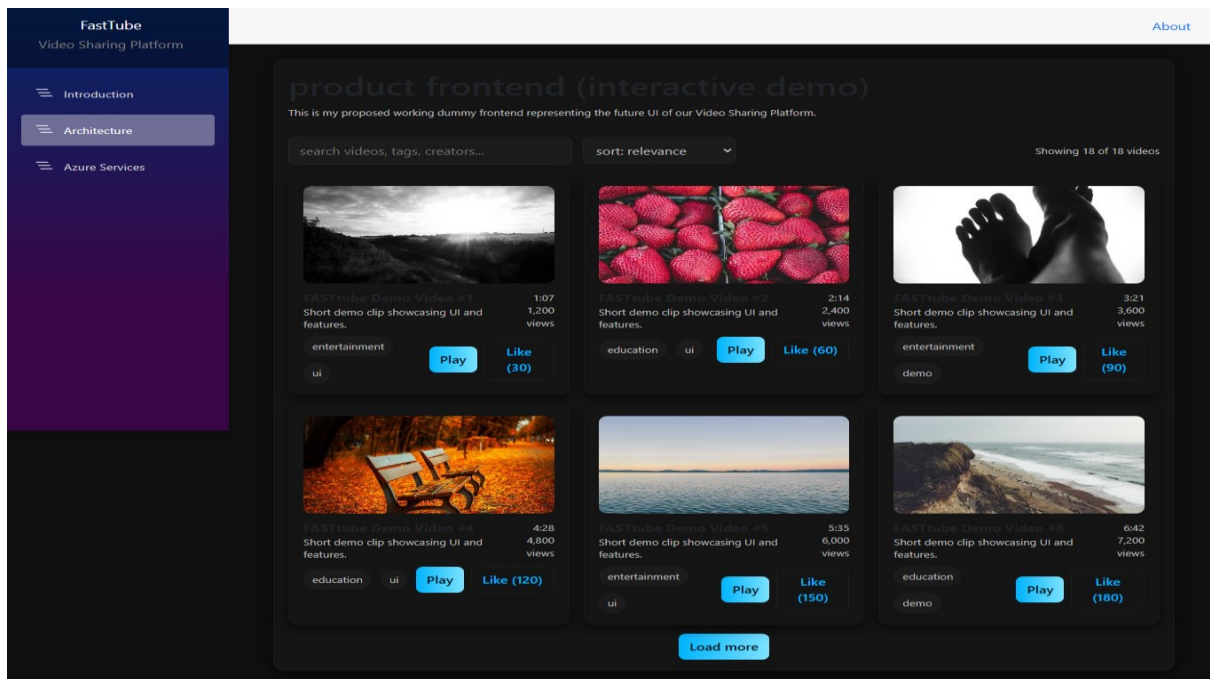
region, was paramount. Each setting played a vital role in tailoring the environment precisely for the Blazor Web App, ensuring optimal compatibility and performance.

2. Development of a Basic Web App:

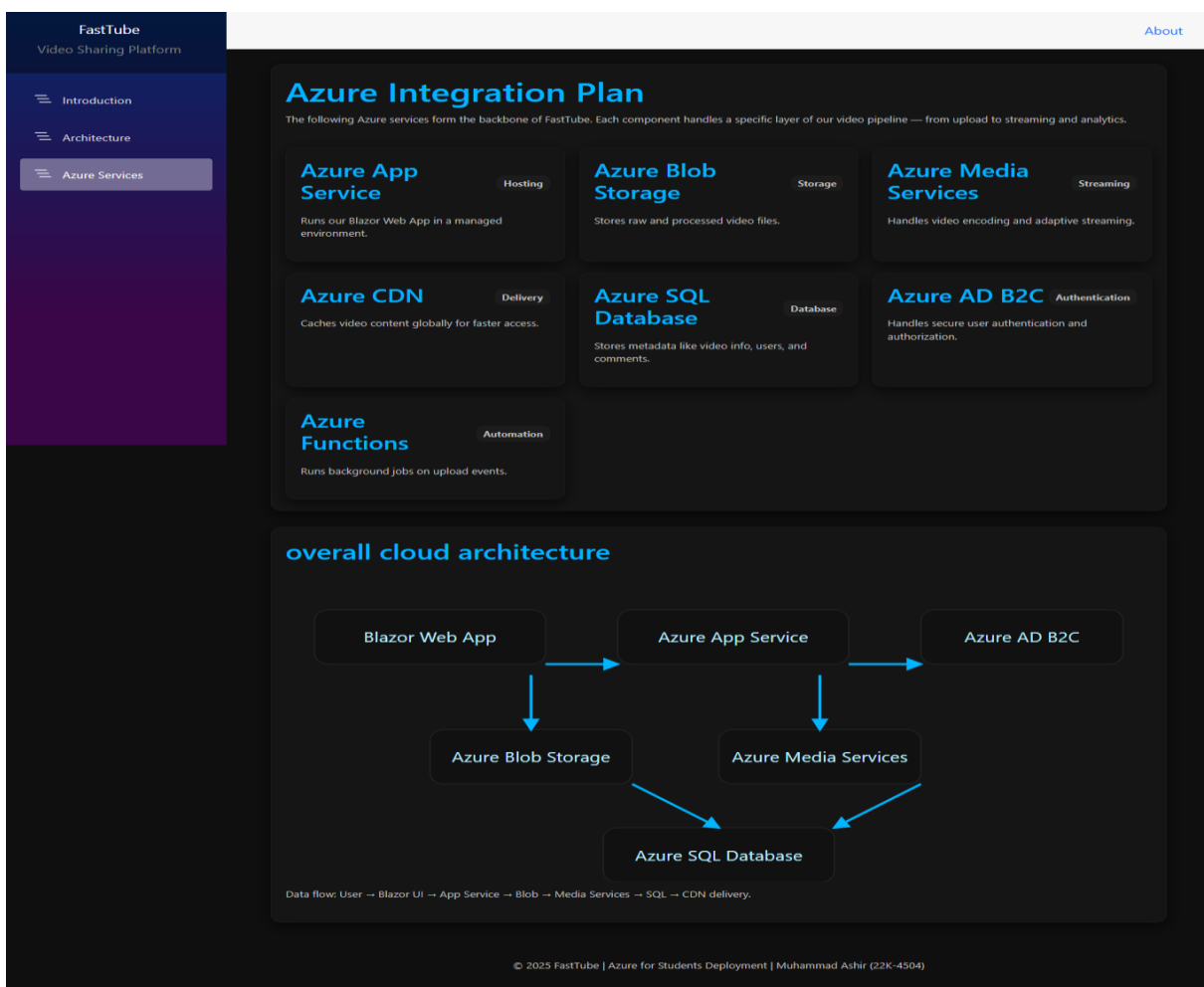
h) Introduction Full Page Capture



i) Architecture Full Page Capture



j) Azure Services Full Page Capture



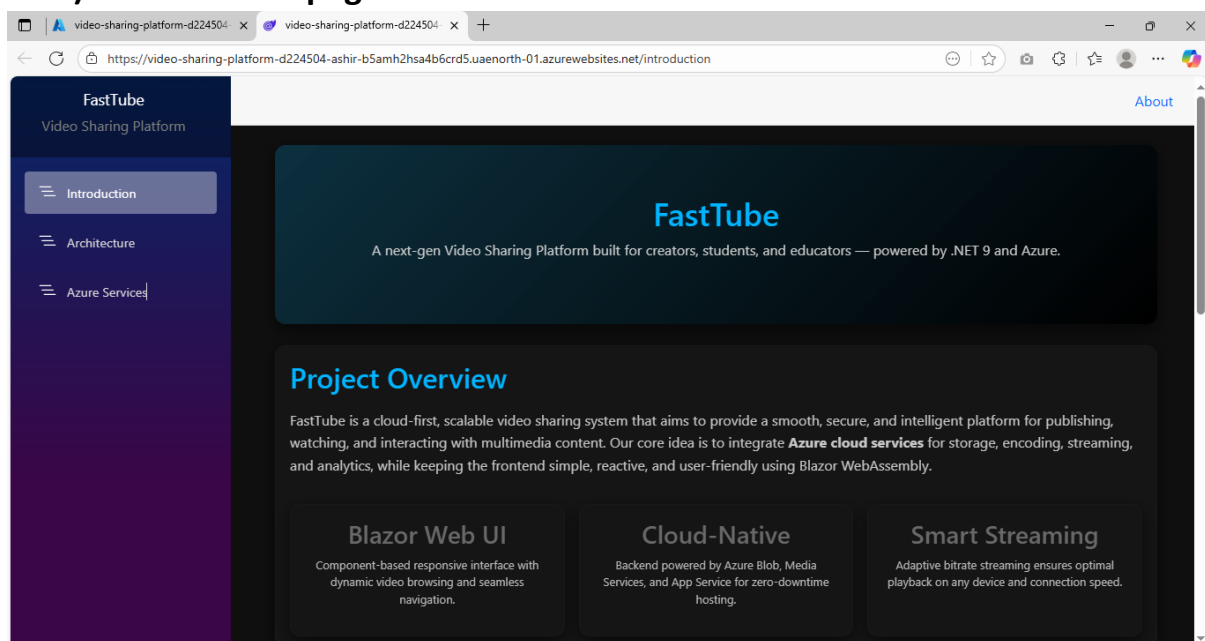
Description:

The website I've developed is a minimal, Blazor-based frontend for our video sharing platform, which I've named "FastTube." When navigating the site, I've included an Introduction page that comprehensively describes the project's vision and introduces my group members. Following this, I've designed my proposed Architecture page that provides a detailed outline of our cloud-first modular design, illustrating the planned componentization for scalability and maintainability. On this page, I also elaborate on the prospective Azure services I intend for integration, such as Azure Blob Storage for media files, Media Services for advanced streaming capabilities, and Azure Cosmos DB or SQL Database for efficient metadata management.

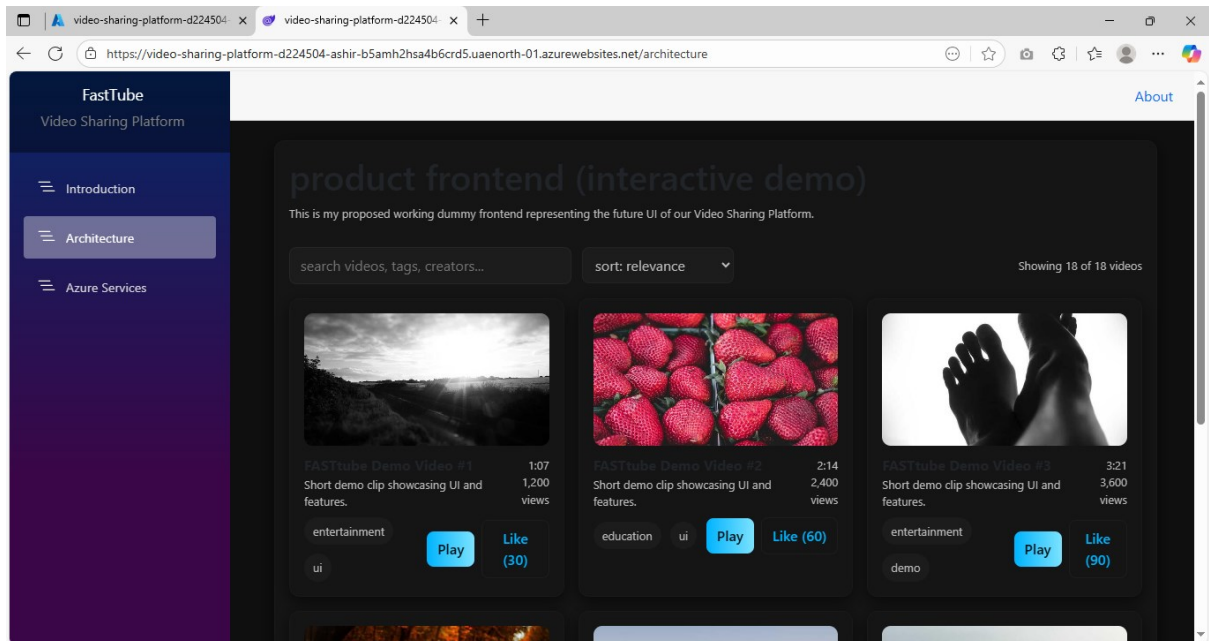
For the user interface, I've employed a sophisticated dark modern theme, enhancing visual appeal and user comfort. I've strategically utilized Blazor components to enable smooth, single-page application style navigation, eliminating full page reloads and providing a highly responsive experience. For this foundational assignment, my primary focus was on establishing a robust, deployable frontend and meticulously documenting our architectural blueprint, rather than fully implementing complex media upload and streaming pipelines. The successful deployment on Azure App Service, facilitated by an automated CI/CD pipeline using GitHub Actions, demonstrates my proficiency in scaffolding a .NET web app, crafting a distinct and appropriate user interface, and configuring modern cloud deployment workflows. These critical steps unequivocally showcase my team's readiness and capability to seamlessly integrate backend services in forthcoming development sprints.

3. Deploy the Web App to Azure App Service:

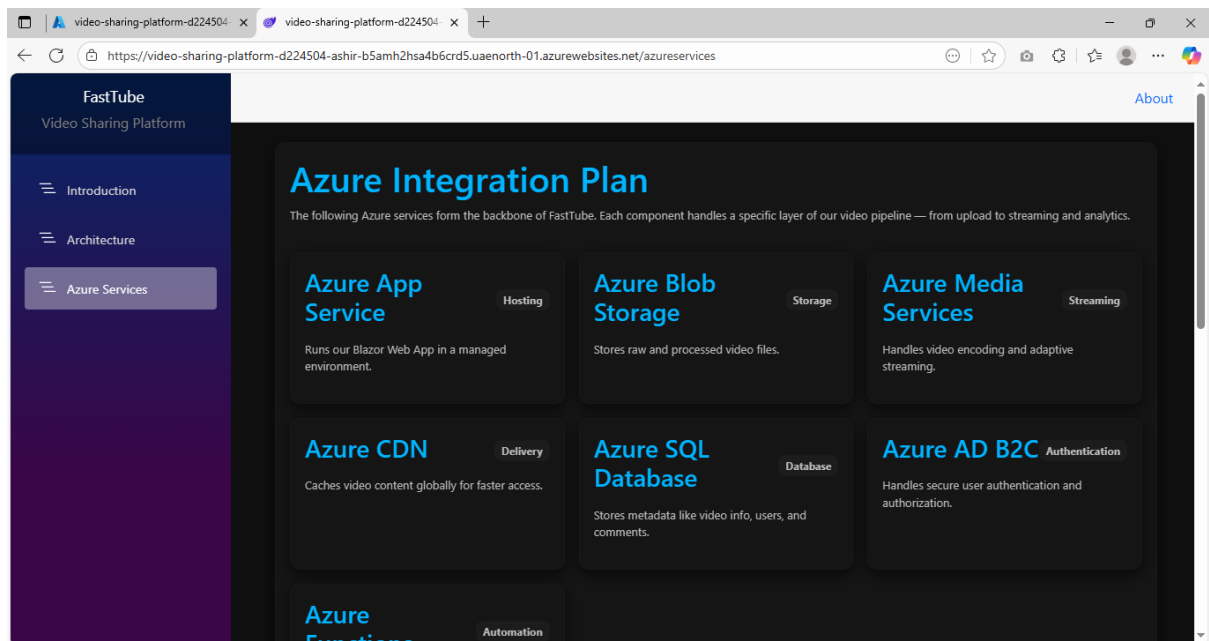
k) Introduction page Live Preview



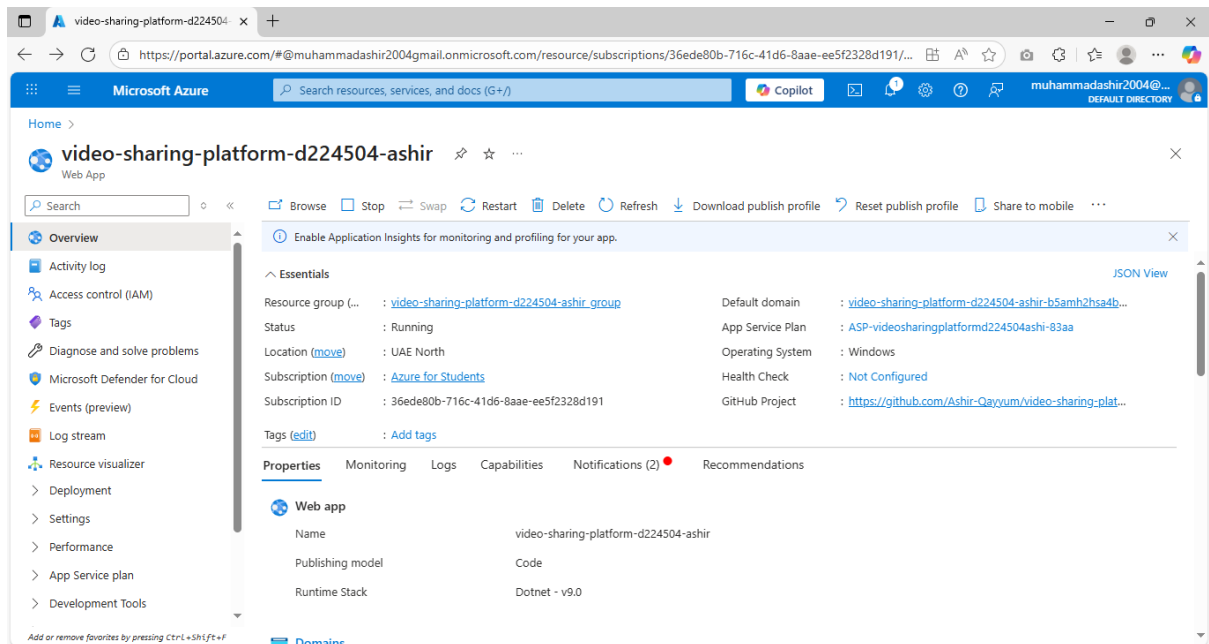
l) Architecture Page Live Preview



m) Azure Services Page Live Preview



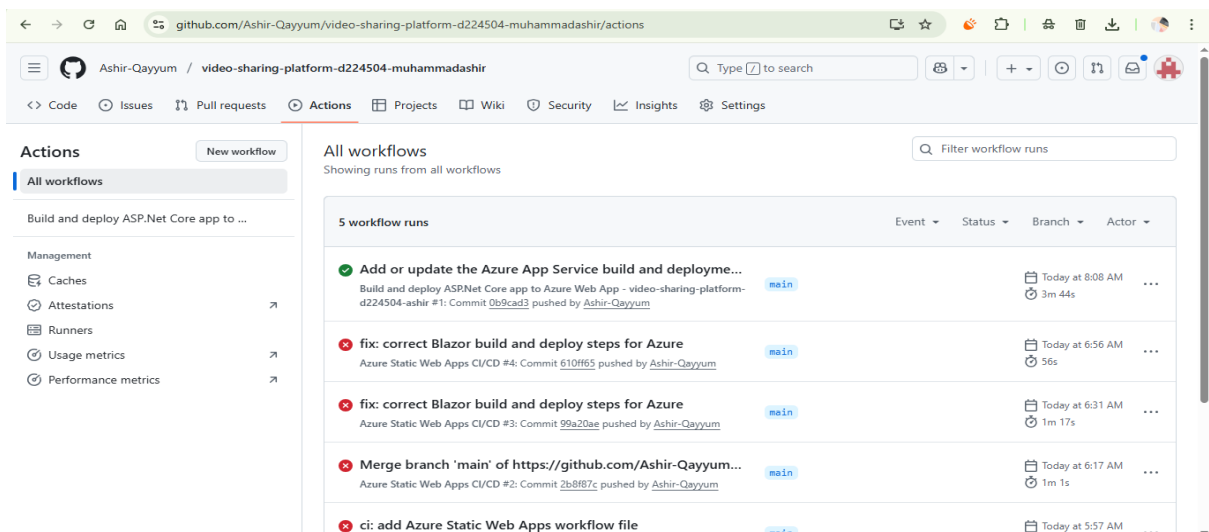
o) App Service Dashboard



Description:

My journey to deploy the "FastTube" frontend on Azure was marked by several significant challenges, requiring persistent troubleshooting and a deeper understanding of cloud deployment architectures. Initially, I mistakenly attempted to deploy my Blazor Web App (Razor) project to an Azure Static Web App service. This fundamental mismatch led to a series of frustrating failures, as the Static Web App environment, designed for purely static content, struggled to process my server-side reliant Blazor application. I encountered an Oryx build script syntax error, which was baffling at first. Even after resolving that, a subsequent error indicated a missing index.html file, clearly signaling that the service expected a client-side SPA entry point, not the ASP.NET Core hosting my Blazor app required.

My deployment attempts often crashed, as illustrated by the red 'x' marks in my GitHub Actions workflow history, indicating continuous integration failures:



After realizing the architectural incompatibility, I decided to shift to an Azure Web App (App Service), which is the correct environment for ASP.NET Core applications. This switch initially also caused hurdles, initial issues with regional capacity in South India using my 'Azure for Students' subscription. I then tried Central Asia but it also failed, then eventually UAE North. Finally, after reviewing all the files again and again multiple times including .gitignore and .yaml workflow files, it eventually started progressing and GitHub action passed the deployment, making the domain active and web got live. Overcoming these layers of complexity, from architectural choice to specific configuration details and authentication, was a significant learning experience that ultimately led to the successful deployment of my application.

Live URL for Preview:

<https://video-sharing-platform-d224504-ashir-b5amh2hsa4b6crd5.uaenorth-01.azurewebsites.net>

Please find the Codes and other Project Materials in the GitHub repo below:

<https://github.com/Ashir-Qayyum/video-sharing-platform-d224504-muhammadashir>