IFT544: Middleware Prog & Database Security

Module 2 Assignment : Exploring JavaScript Topics with EJS, Node.js, and Express

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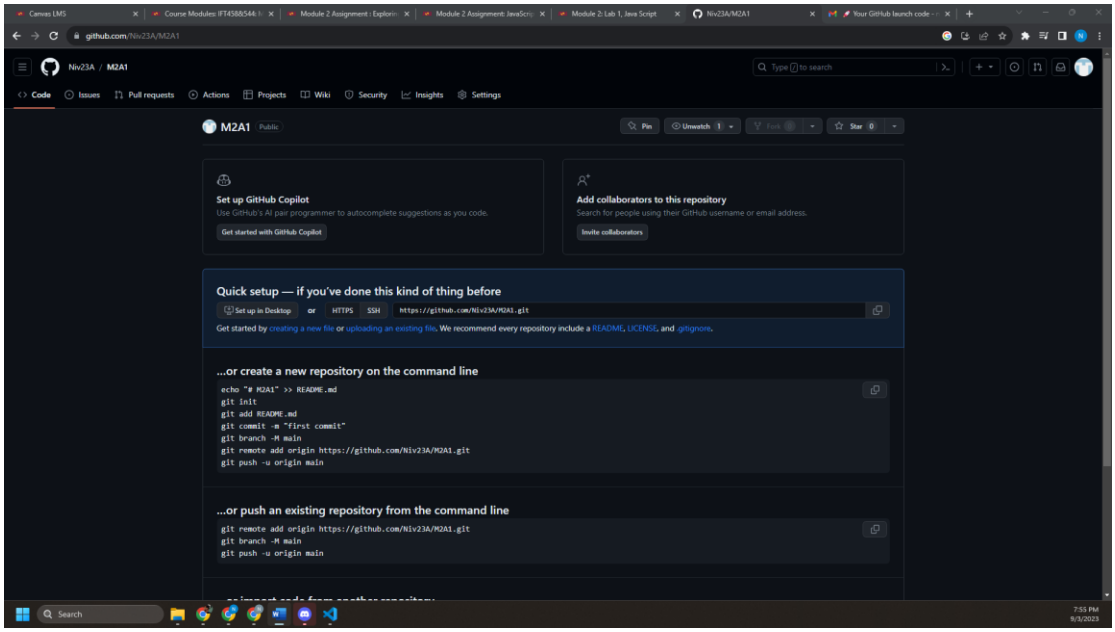
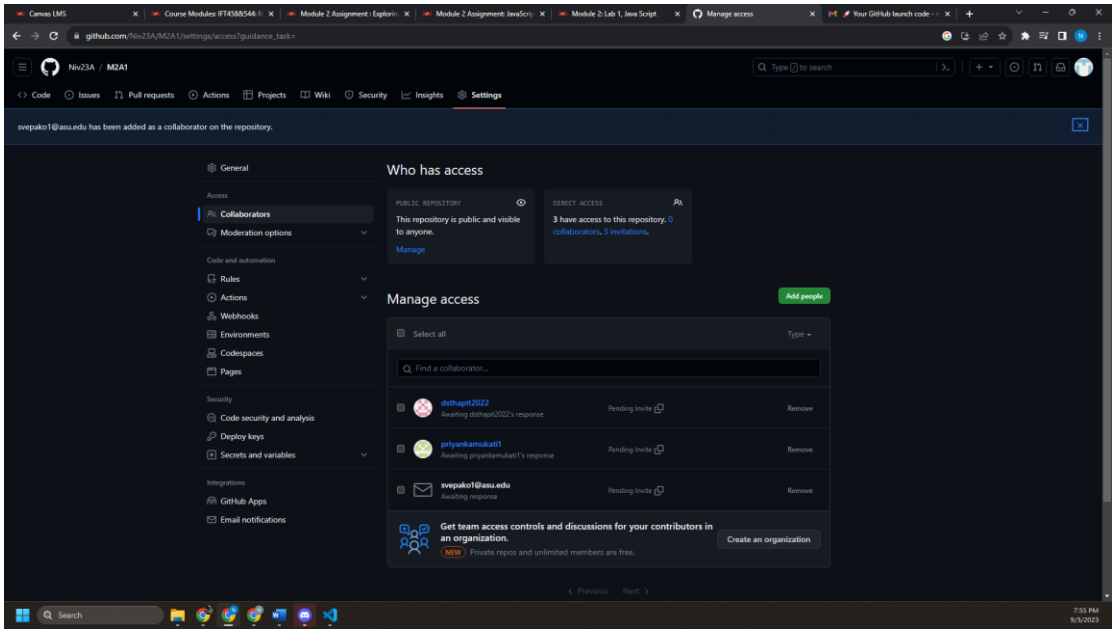
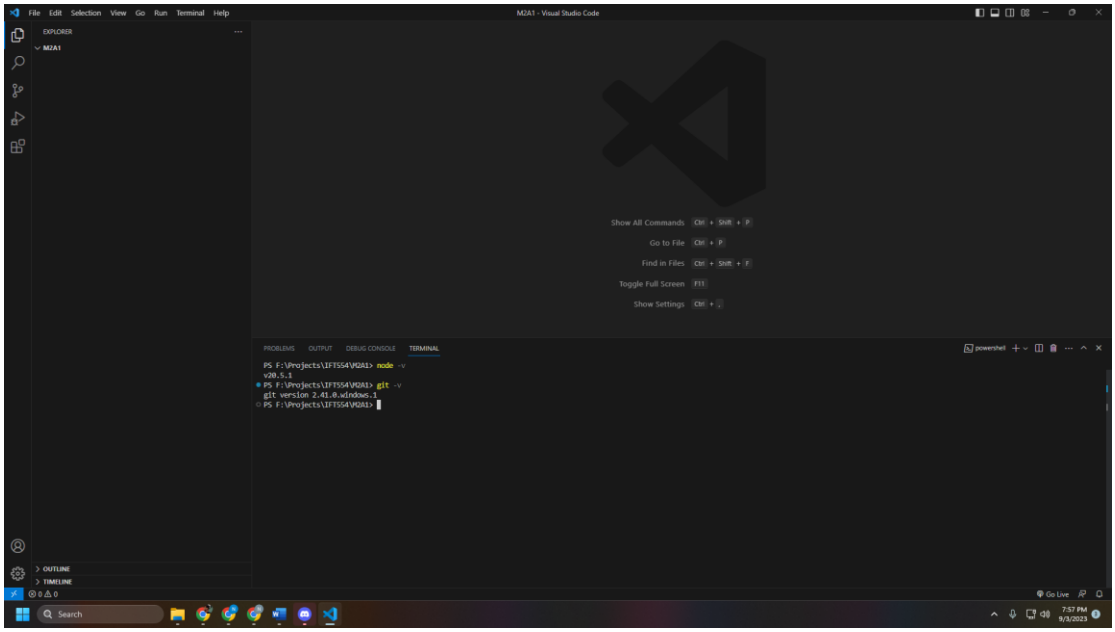
Date of Submission: September 3, 2023

Github:

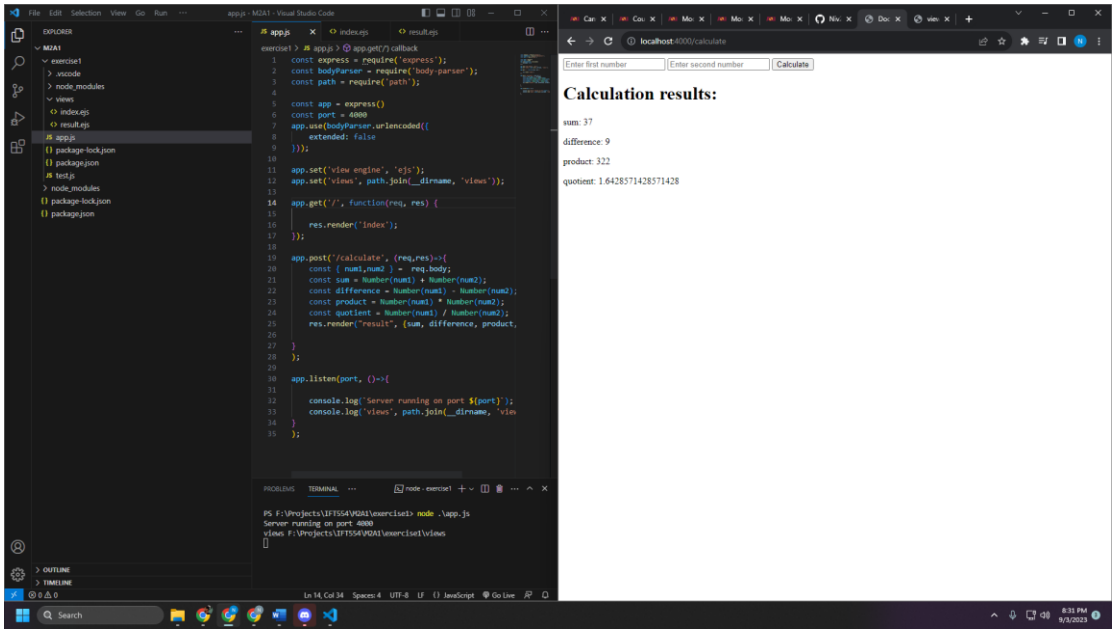

Niv23A / M2A1
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
M2A1
Public
Set up GitHub Copilot
Use GitHub's AI pair programmer to autocomplete suggestions as you code.
Get started with GitHub Copilot
Add collaborators to this repository
Search for people using their GitHub username or email address.
Invite collaborators
Quick setup — if you've done this kind of thing before
Set up in Desktop
or
HTTPS
SSH
https://github.com/Niv23A/M2A1.git
Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.
...or create a new repository on the command line
echo "# M2A1" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/Niv23A/M2A1.git
git push -u origin main
...or push an existing repository from the command line
git remote add origin https://github.com/Niv23A/M2A1.git
git branch -M main
git push -u origin main


Niv23A / M2A1
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
svepako1@asu.edu has been added as a collaborator on the repository.
General
Access
Collaborators
Moderation options
Code and automation
Rules
Actions
Webhooks
Environments
Codespaces
Pages
Security
Code security and analysis
Deploy keys
Secrets and variables
Integrations
GitHub Apps
Email notifications
Who has access
PUBLIC REPOSITORY
This repository is public and visible to anyone.
Manage
DIRECT ACCESS
3 have access to this repository. 0 collaborators, 3 invitations.
Manage access
Add people
Select all
Type
Find a collaborator...
dsthapit2022
Awaiting dsthapit2022's response
Pending Invite
Remove
priyankamukati1
Awaiting priyankamukati1's response
Pending Invite
Remove
svepako1@asu.edu
Awaiting response
Pending Invite
Remove
Get team access controls and discussions for your contributors in an organization.
NEW
Private repos and unlimited members are free.
Create an organization
Previous
Next

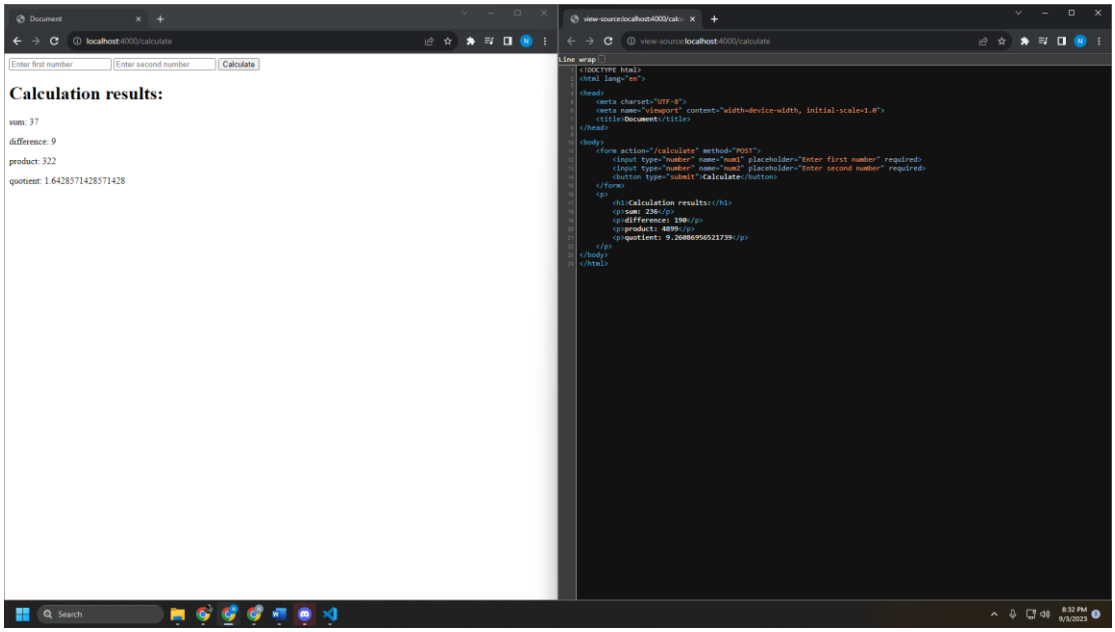
Node.js, Visual; Studio Code, Git:



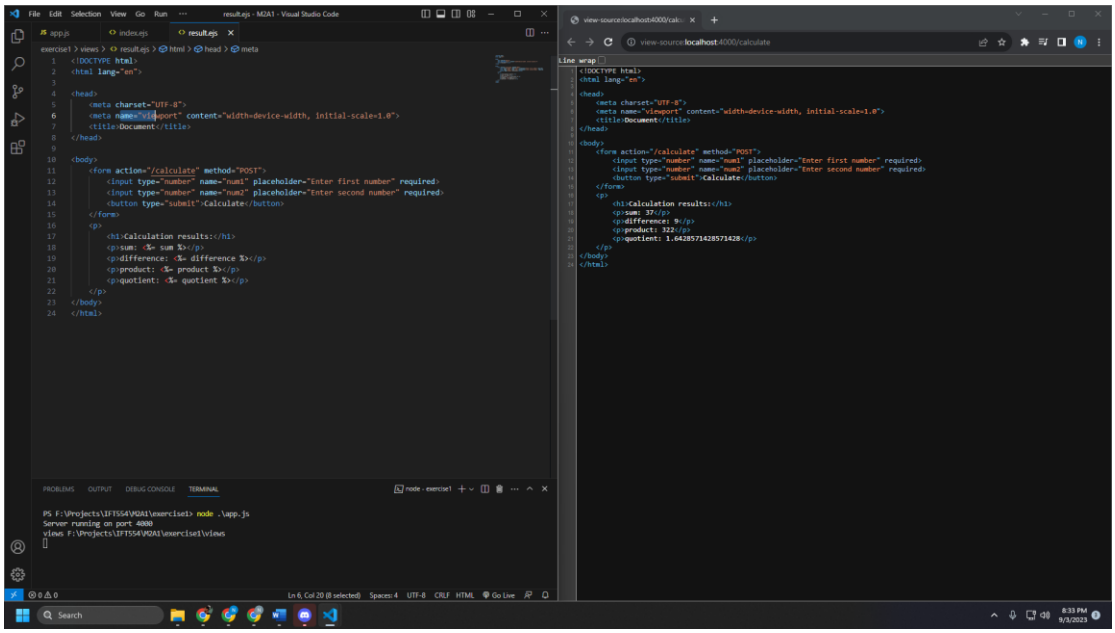
Code and working:



Output and page source:



Ejs vs html:



- .ejs Code:
    - .ejs templates consist of HTML combined with embedded JavaScript code, denoted by <% %> or <%= %> tags. These tags allow for the insertion of dynamic data and logic into the HTML structure.
- .html Code:
    - When a client (e.g., a web browser) requests a page that uses .ejs templates, the server processes the template,

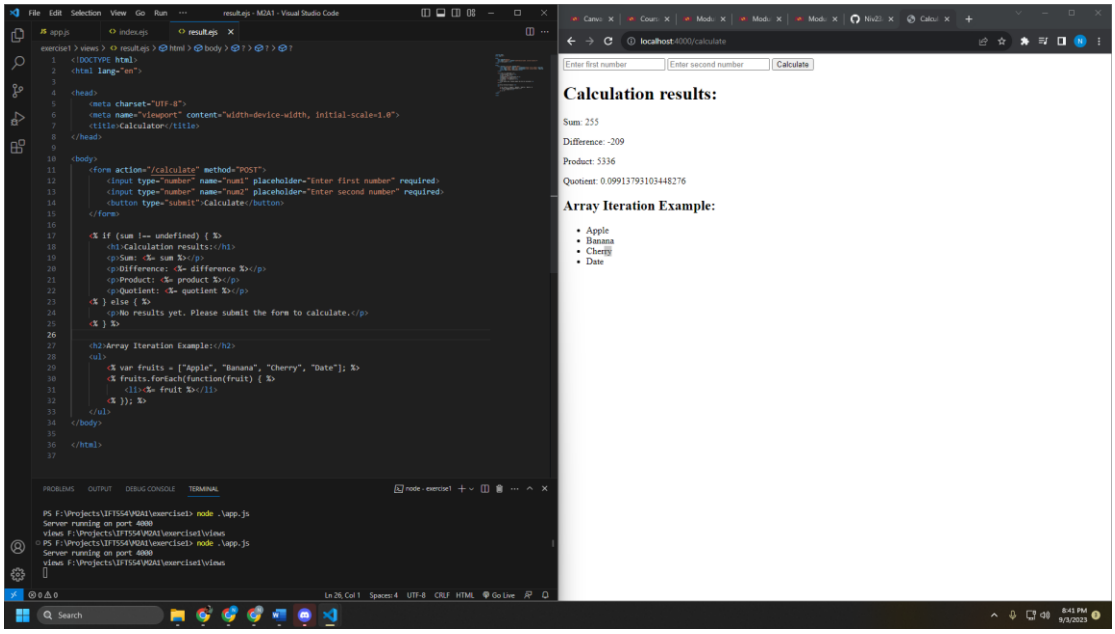
substitutes variables with actual data, executes embedded logic, and sends the resulting HTML to the client

- Observations and Differences
    - Dynamic Content: .ejs templates allow dynamic content generation, while static HTML remains fixed, necessitating manual updates.
    - Code Reusability: .ejs separates logic from HTML, enhancing maintainability, whereas static HTML lacks this separation.
    - Complex Logic: .ejs handles complex logic, ideal for user-driven or database-based content. Static HTML may require additional client-side scripting.
    - Performance: .ejs pre-processes templates for efficient rendering; static HTML can impact performance due to additional content requests.

- Benefits of .ejs Templates
    - Dynamic Content: Ideal for personalized user experiences based on input, sessions, or databases.
    - Code Maintainability: Separation of HTML and JavaScript simplifies development and maintenance.
    - Reusable Components: Supports component reuse, reducing redundancy and promoting consistency.
    - SEO Optimization: Enhances SEO with server-side rendering, improving search rankings.

- Use Cases
    - User Profiles: .ejs templates for dynamic user-specific data like names, profile pictures, and recent activity.
    - E-commerce Listings: For real-time product updates and price changes.
    - News Websites: To ensure the latest content, such as article titles, authors, and publication dates, is always displayed.
    - Dashboards: For real-time data display without full page reloads, offering a seamless user experience.

Conditional rendering and Array iteration:



- Conditional Rendering:
  - In the modified .ejs file, conditional rendering is added to display calculation results only when sum is defined. If sum is undefined, it displays a message to submit the form for calculation.
  - In the rendered HTML code, the presence or absence of the calculation results depends on the condition defined in the .ejs file. If sum is defined, the calculation results section is included; otherwise, the message about submitting the form is displayed.
- Array Iteration:
  - An array called fruits is created in the .ejs file, and a loop iterates over it using the forEach method.
  - In the rendered HTML code, a list (<ul>) is generated with individual list items (<li>) for each element in the fruits array. This demonstrates how .ejs templates can be used to iterate over an array and generate dynamic HTML content based on the array's elements.