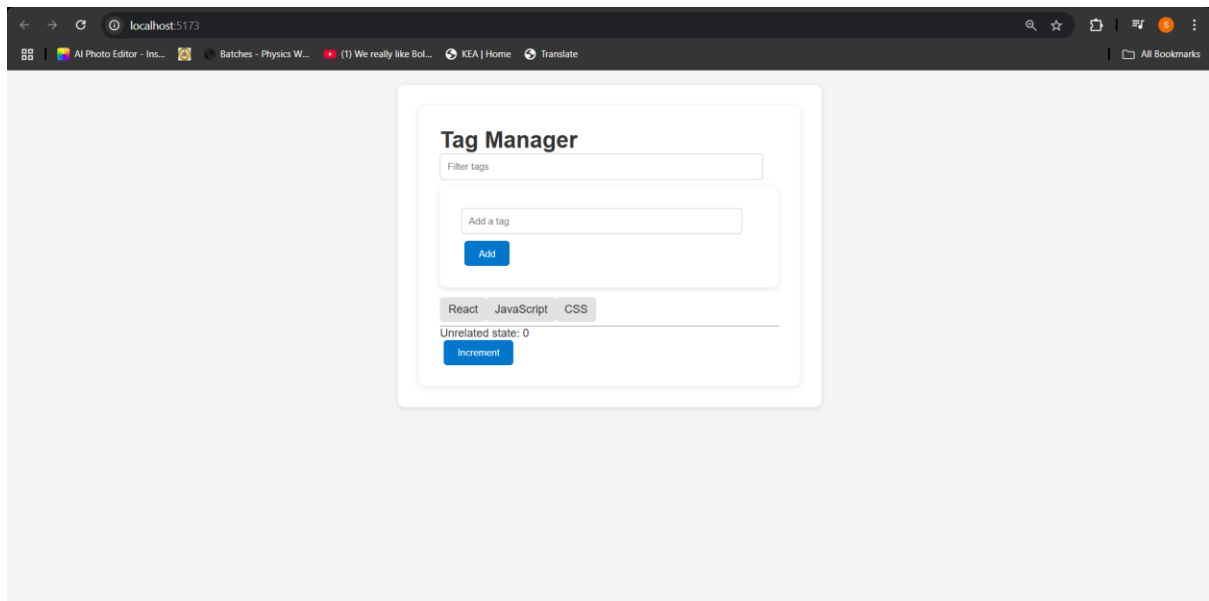


Final Day - <https://github.com/shreyas250825/finalday>

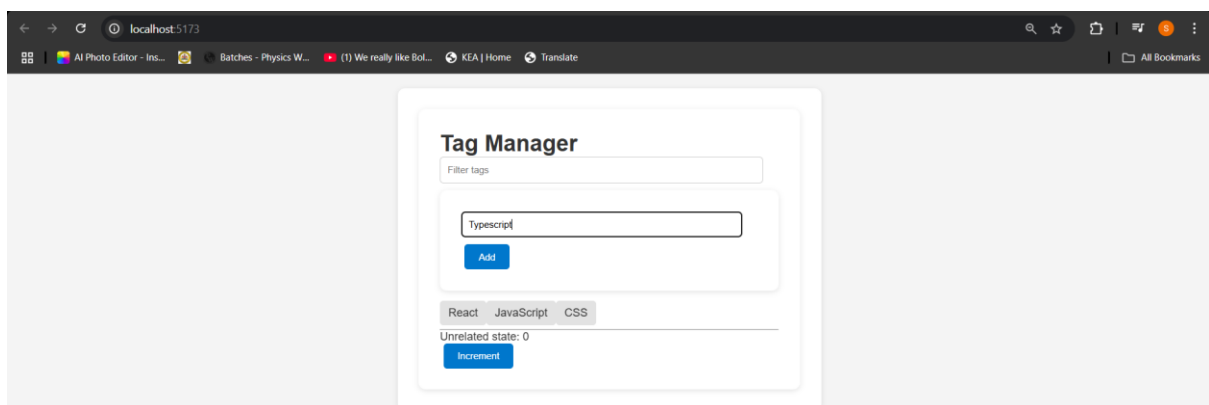
Status- Completed

1.Tag-App

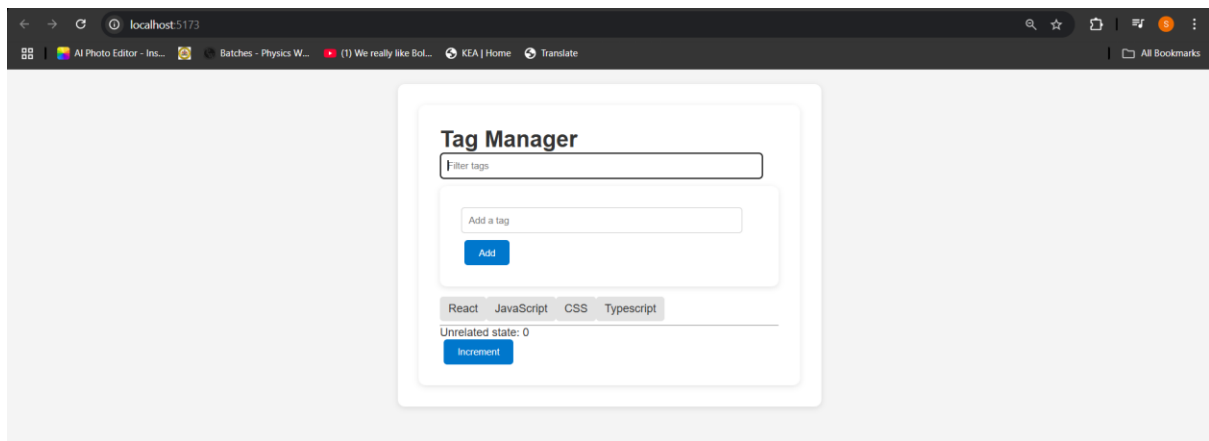
a) Tag-Manager App



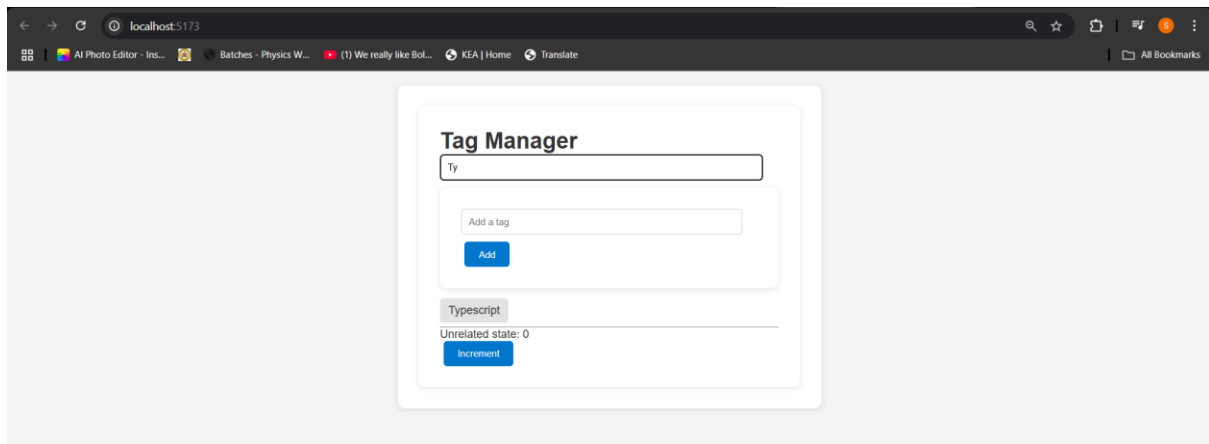
b) Adding a Tag



c) Home Page after adding a tag



d) Filtering a Tag



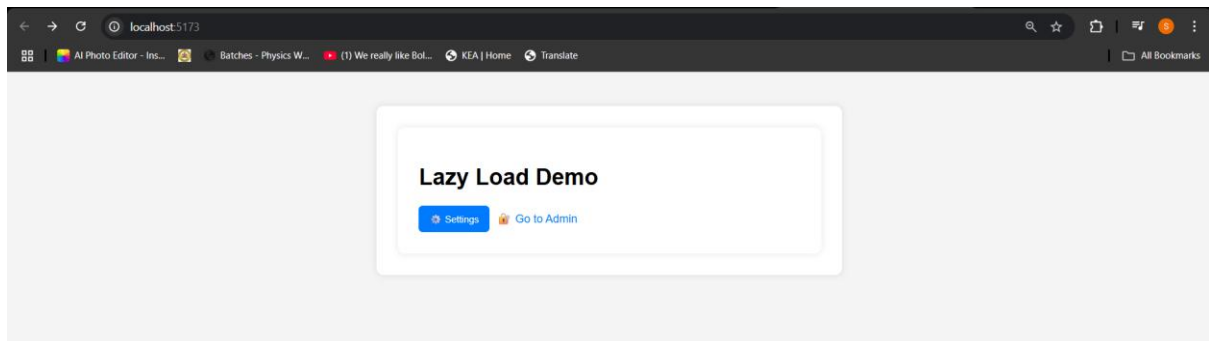
e) Terminal Output

```
PROBLEMS  OUTPUT  TERMINAL  PORTS
found 0 vulnerabilities
PS C:\practice-github\tag-app> npm run dev
> tag-app@0.0.0 dev
> vite

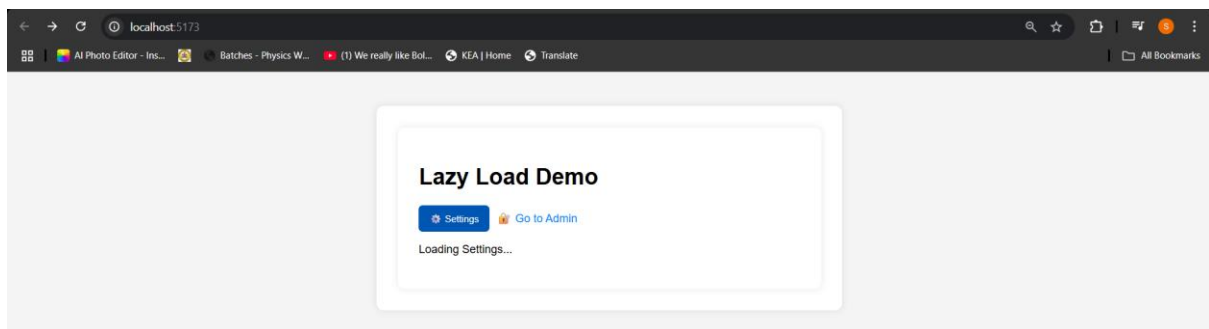
VITE v7.0.6 ready in 538 ms
  → Local: http://localhost:5173/
  → Network: use --host to expose
  → press h + enter to show help
```

2.Lazy Load Demo

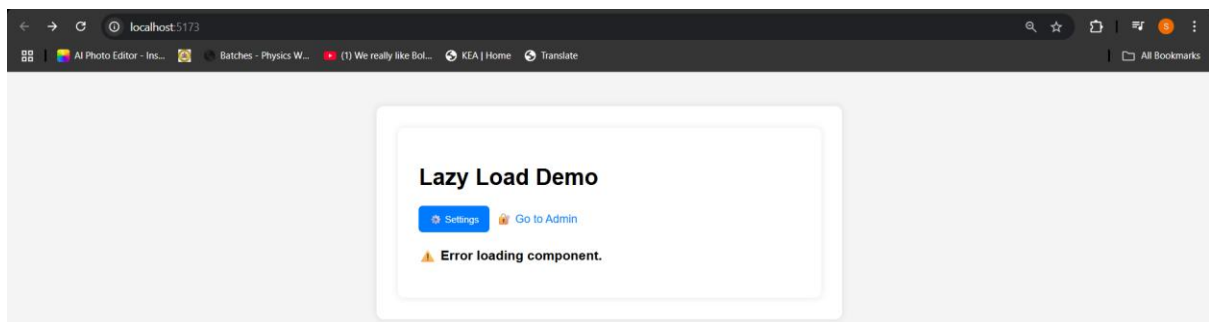
a) Profile Settings Page



b) Showing “Loading Settings” when clicked on Settings (for 1 millisecond)



c) Showing “Error loading Component” when clicked on Settings



d) Terminal Output

```
PROBLEMS OUTPUT TERMINAL PORTS
❖ PS C:\practice-github\lazy-load-app> npm run dev
> lazy-load-app@0.0.0 dev
> vite
12:18:03 pm [vite] (client) Re-optimizing dependencies because lockfile has changed
VITE v7.0.6 ready in 168 ms
→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
```

3.Bundle-Optimization-App

a) Terminal Output for the command “*npm run build*” using Lodash in App.jsx

```
PROBLEMS 1 OUTPUT TERMINAL PORTS powershell - bundle-opt-app + - [ ] [ ] [ ] [ ] x
found 0 vulnerabilities
PS C:\practice-github\bundle-opt-app> npm run build

> bundle-opt-app@0.0.0 build
> vite build

vite v7.0.6 building for production...
node_modules/react-router/dist/development/index.mjs (11:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/index.mjs" was ignored.
node_modules/react-router/dist/development/dom-export.mjs (1:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/dom-export.mjs" was ignored.
✓ 348 modules transformed.
dist/index.html                                0.32 kB | gzip: 0.23 kB
dist/assets/index-D_0MlaLR.css                 0.35 kB | gzip: 0.22 kB
dist/assets/ProfileSettings-CvjGpG2y.js        0.18 kB | gzip: 0.14 kB
dist/assets/AdminPanel-BolGWQyn.js             0.20 kB | gzip: 0.16 kB
dist/assets/index-C7yG-ZQU.js                 376.50 kB | gzip: 124.03 kB
✓ built in 1.37s
PS C:\practice-github\bundle-opt-app>
```

b) Terminal Output for the command “*npm run build*” using Lodash/uniq in App.jsx

Replacing Lodash with Lodash/uniq

```
PROBLEMS 1 OUTPUT TERMINAL PORTS powershell - bundle-opt-app + - [ ] [ ] [ ] [ ] x
✓ built in 1.38s
PS C:\practice-github\bundle-opt-app> npm run build

> bundle-opt-app@0.0.0 build
> vite build

vite v7.0.6 building for production...
node_modules/react-router/dist/development/index.mjs (11:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/index.mjs" was ignored.
node_modules/react-router/dist/development/dom-export.mjs (1:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/dom-export.mjs" was ignored.
✓ 400 modules transformed.
dist/index.html                                0.32 kB | gzip: 0.23 kB
dist/assets/index-D_0MlaLR.css                 0.35 kB | gzip: 0.22 kB
dist/assets/ProfileSettings-CvjGpG2y.js        0.18 kB | gzip: 0.14 kB
dist/assets/AdminPanel-B2VQqa7L.js             0.20 kB | gzip: 0.16 kB
dist/assets/index-DQQFby1A.js                 311.48 kB | gzip: 99.64 kB
✓ built in 1.23s
PS C:\practice-github\bundle-opt-app>
```

c) Terminal Output for the command “*npm uninstall moment*”

```
PROBLEMS 1 OUTPUT TERMINAL PORTS powershell - bundle-opt-app + - [ ] [ ] [ ] [ ] x
PS C:\practice-github\bundle-opt-app> npm uninstall moment
>>

removed 1 package, and audited 45 packages in 918ms

10 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS C:\practice-github\bundle-opt-app>
```

d) Error in Terminal after the command *npm uninstall moment*



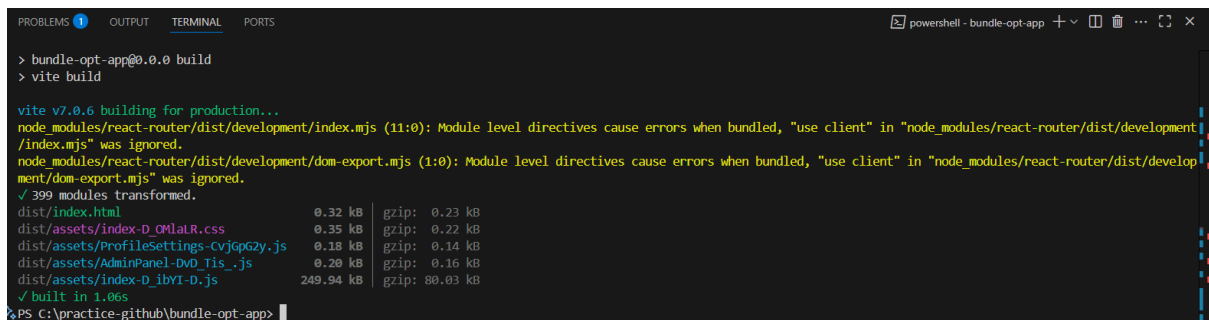
```
PROBLEMS 1 OUTPUT TERMINAL PORTS
VITE v7.0.6 ready in 128 ms

→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
(!) Failed to run dependency scan. Skipping dependency pre-bundling. Error: The following dependencies are imported but could not be resolved:

moment (imported by C:/practice-github/bundle-opt-app/src/App.jsx)

Are they installed?
  at file:///C:/practice-github/bundle-opt-app/node_modules/vite/dist/node/chunks/dep-BHkUV4Z8.js:11195:33
  at process.processTicksAndRejections (node:internal/process/task_queues:105:5)
  at async file:///C:/practice-github/bundle-opt-app/node_modules/vite/dist/node/chunks/dep-BHkUV4Z8.js:34689:15
```

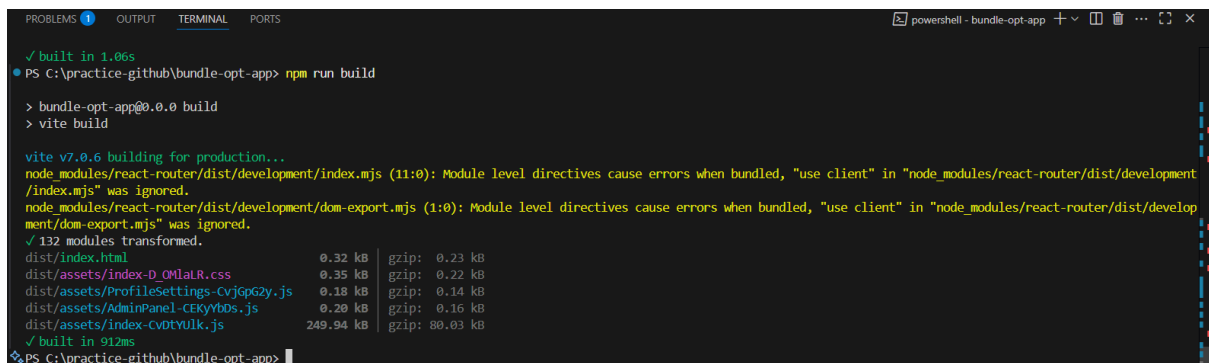
e) Inserting this command in App.jsx “*const now = new Date().toLocaleDateString();*”



```
PROBLEMS 1 OUTPUT TERMINAL PORTS
> bundle-opt-app@0.0.0 build
> vite build

vite v7.0.6 building for production...
node_modules/react-router/dist/development/index.mjs (11:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/index.mjs" was ignored.
node_modules/react-router/dist/development/dom-export.mjs (1:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/dom-export.mjs" was ignored.
✓ 399 modules transformed.
dist/index.html 0.32 kB | gzip: 0.23 kB
dist/assets/index-D_OmlaLR.css 0.35 kB | gzip: 0.22 kB
dist/assets/ProfileSettings-cvjGpG2y.js 0.18 kB | gzip: 0.14 kB
dist/assets/AdminPanel-DvD_Tis_.js 0.20 kB | gzip: 0.16 kB
dist/assets/index-D_ibYI-D.js 249.94 kB | gzip: 80.03 kB
✓ built in 1.06s
PS C:\practice-github\bundle-opt-app>
```

f) Replacing this command in App.jsx “*import { format } from 'date-fns';*” with “*import format from 'date-fns/format';*”

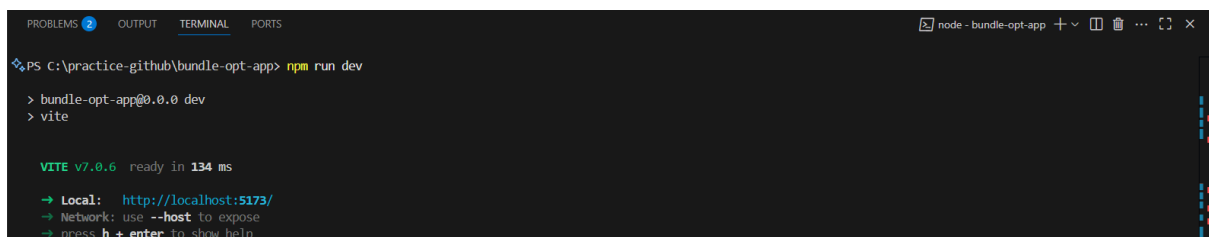


```
PROBLEMS 1 OUTPUT TERMINAL PORTS
✓ built in 1.06s
PS C:\practice-github\bundle-opt-app> npm run build

> bundle-opt-app@0.0.0 build
> vite build

vite v7.0.6 building for production...
node_modules/react-router/dist/development/index.mjs (11:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/index.mjs" was ignored.
node_modules/react-router/dist/development/dom-export.mjs (1:0): Module level directives cause errors when bundled, "use client" in "node_modules/react-router/dist/development/dom-export.mjs" was ignored.
✓ 132 modules transformed.
dist/index.html 0.32 kB | gzip: 0.23 kB
dist/assets/index-D_OmlaLR.css 0.35 kB | gzip: 0.22 kB
dist/assets/ProfileSettings-CvjGpG2y.js 0.18 kB | gzip: 0.14 kB
dist/assets/AdminPanel-CEkyYbDs.js 0.20 kB | gzip: 0.16 kB
dist/assets/index-CvDtYUlk.js 249.94 kB | gzip: 80.03 kB
✓ built in 912ms
PS C:\practice-github\bundle-opt-app>
```

i) Terminal Output



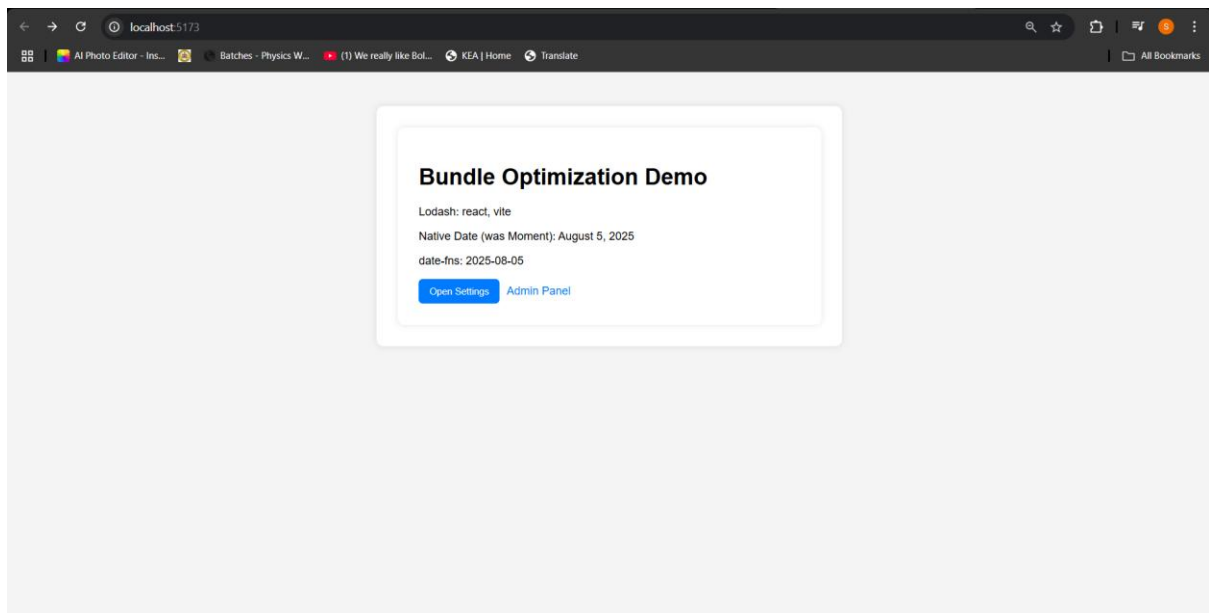
```
PROBLEMS 2 OUTPUT TERMINAL PORTS
PS C:\practice-github\bundle-opt-app> npm run dev

> bundle-opt-app@0.0.0 dev
> vite

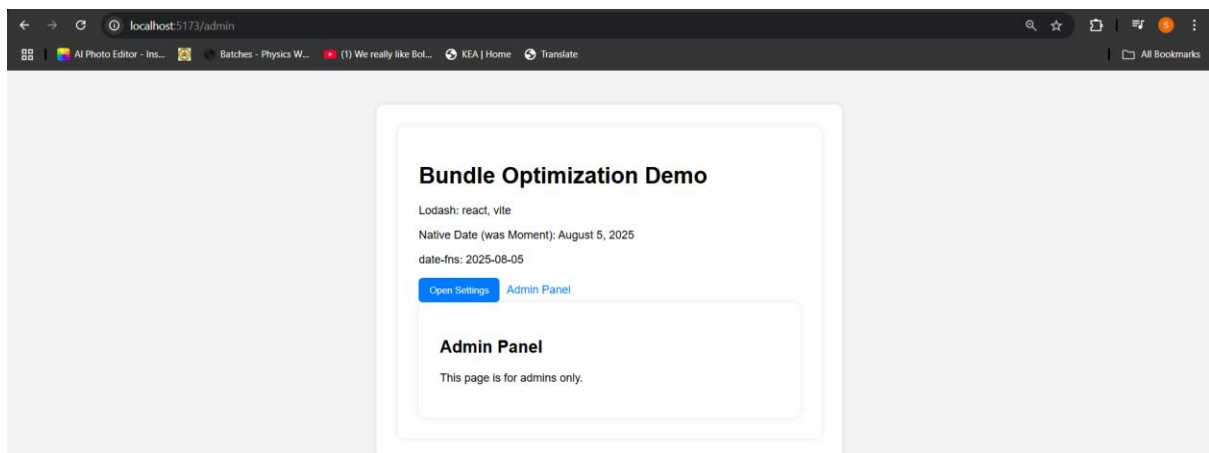
VITE v7.0.6 ready in 134 ms

→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
```

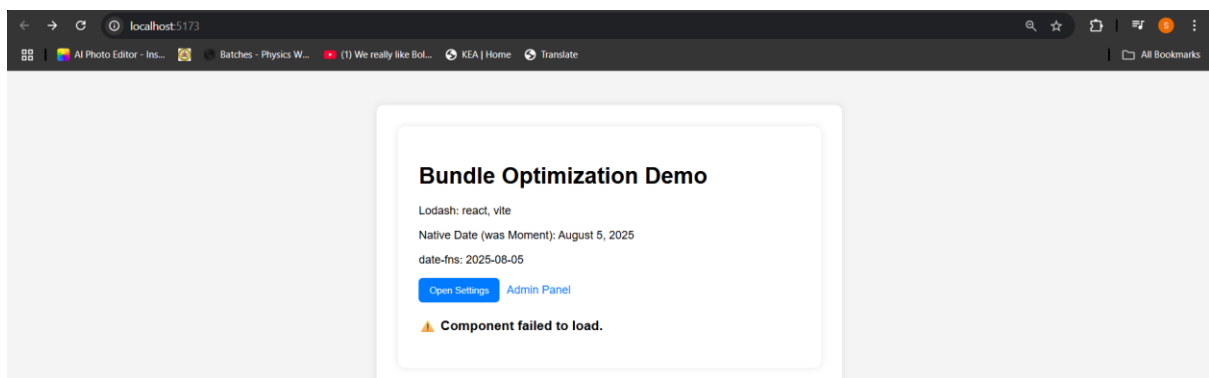
g) Final Output – Home Page



h) Admin Panel



i) Open Settings



d) Test Failed – due to expect “(screen.getByText('Approved!')).toBeInTheDocument());”

```
PS C:\practice-github\task4-app> npx vitest run

 RUN  v3.2.4 C:/practice-github/task4-app

> src/components/ApprovalBox.test.jsx (1 test | 1 failed) 29ms
  x shows Approved! after clicking approve button 28ms
    → Invalid Chai property: toBeInTheDocument
✓ src/components/CommentBox.test.jsx (1 test) 30ms

Failed Tests 1

 FAIL  src/components/ApprovalBox.test.jsx > shows Approved! after clicking approve button
Error: Invalid Chai property: toBeInTheDocument
> src/components/ApprovalBox.test.jsx:7:39
   5|     render(<ApprovalBox />);
   6|     fireEvent.click(screen.getByText('Approve'));
   7|     expect(screen.getByText('Approved!')).toBeInTheDocument(); // ❌ Fails sometimes
     |                                           ^
   8|   });
   9|

[1/1]

Test Files  1 failed | 1 passed (2)
Tests       1 failed | 1 passed (2)
Start at    13:42:08
```

e) Fixing the above error (Fails on async UI updates)

```
PROBLEMS  OUTPUT  TERMINAL  PORTS
Duration  9.72s (transform 49ms, setup 0ms, collect 429ms, tests 59ms, environment 1.28s, prepare 195ms)

PS C:\practice-github\task4-app> npx vitest run

 RUN  v3.2.4 C:/practice-github/task4-app

✓ src/components/CommentBox.test.jsx (1 test) 32ms
> src/components/ApprovalBox.test.jsx (1 test | 1 failed) 35ms
  x shows Approved! after clicking approve button 34ms
    → Invalid Chai property: toBeInTheDocument

Failed Tests 1

 FAIL  src/components/ApprovalBox.test.jsx > shows Approved! after clicking approve button
Error: Invalid Chai property: toBeInTheDocument
> src/components/ApprovalBox.test.jsx:8:22
   6|     fireEvent.click(screen.getByText('Approve'));
   7|     const approvedText = await screen.findByText('Approved!');
   8|     expect(approvedText).toBeInTheDocument(); // Works reliably now
     |                             ^
   9|   });
  10|

[1/1]
[1/1]

Test Files  1 failed | 1 passed (2)
Tests       1 failed | 1 passed (2)
Start at    13:45:22
Duration    10.47s (transform 52ms, setup 0ms, collect 433ms, tests 67ms, environment 1.27s, prepare 216ms)
```

g) Final Terminal Output – Fixing it Completely

```
PROBLEMS  OUTPUT  TERMINAL  PORTS
Duration  10.06s (transform 64ms, setup 0ms, collect 500ms, tests 67ms, environment 1.26s, prepare 211ms)

PS C:\practice-github\task4-app> npx vitest run

 RUN  v3.2.4 C:/practice-github/task4-app

✓ src/components/CommentBox.test.jsx (1 test) 29ms
✓ src/components/ApprovalBox.test.jsx (1 test) 39ms

Test Files  2 passed (2)
Tests       2 passed (2)
Start at    13:49:32
Duration    9.92s (transform 63ms, setup 0ms, collect 1.03s, tests 68ms, environment 1.23s, prepare 203ms)
```

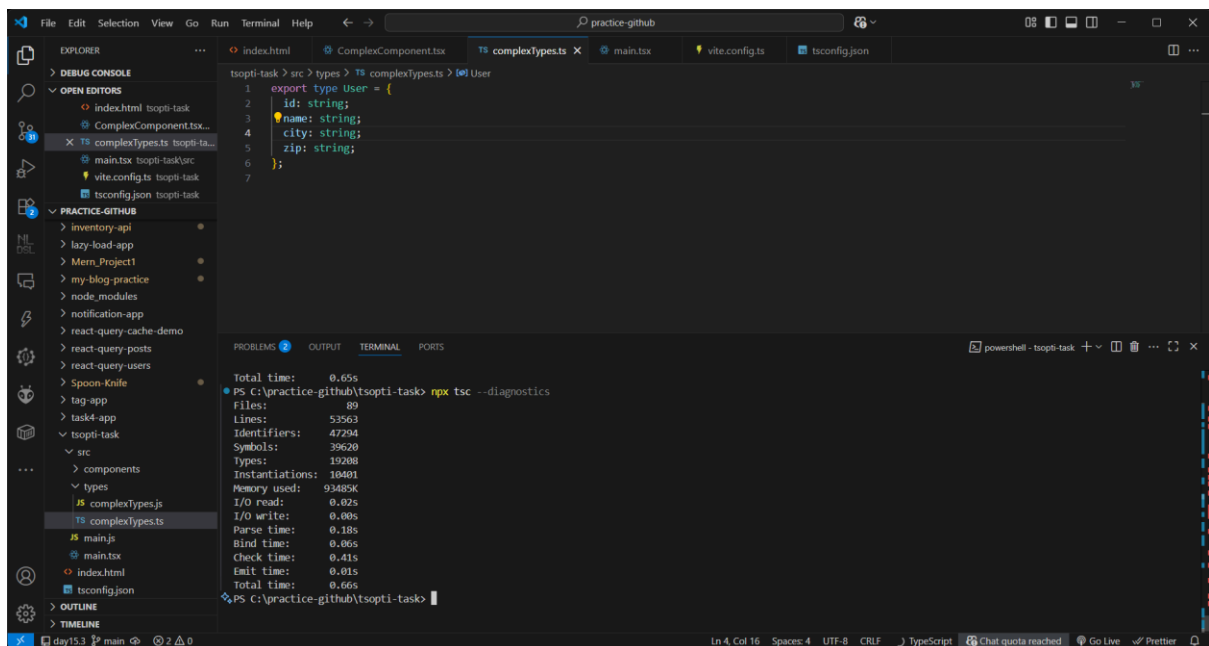

5. TSOptiTask: A TypeScript Build Optimization Suite

a) Terminal Output of Running Diagnostics “*npx tsc --diagnostics*”



```
added 1 package, and removed 27 packages in 2s
PS C:\practice-github\tsopti-task> npx tsc --diagnostics
>>
Files:            89
Lines:           53557
Identifiers:     47289
Symbols:        39612
Types:          19207
Instantiations: 10401
Memory used:    94115K
I/O read:       0.02s
I/O write:      0.00s
Parse time:     0.18s
Bind time:      0.07s
Check time:     0.40s
Emit time:      0.01s
Total time:     0.65s
PS C:\practice-github\tsopti-task>
```

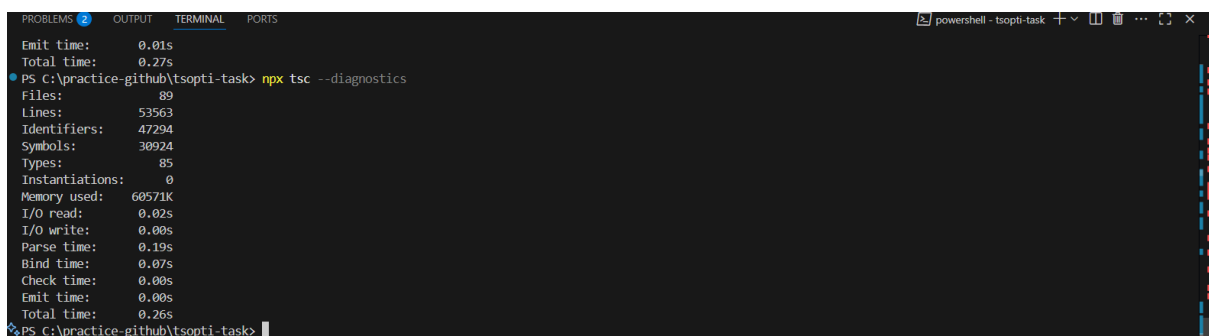
b) Terminal Output of Running Diagnostics after Flattened (Comparing Nodes, Check time, and Types.)



```
1 export type User = {
2   id: string;
3   name: string;
4   city: string;
5   zip: string;
6 };
7

Total time: 0.65s
PS C:\practice-github\tsopti-task> npx tsc --diagnostics
Files:            89
Lines:           53563
Identifiers:     47294
Symbols:        39620
Types:          19208
Instantiations: 10401
Memory used:    93485K
I/O read:       0.02s
I/O write:      0.00s
Parse time:     0.18s
Bind time:      0.06s
Check time:     0.41s
Emit time:      0.01s
Total time:     0.66s
PS C:\practice-github\tsopti-task>
```

c) Terminal Output of Running Diagnostics after editing tsconfig.json



```
Emit time: 0.01s
Total time: 0.27s
PS C:\practice-github\tsopti-task> npx tsc --diagnostics
Files:            89
Lines:           53563
Identifiers:     47294
Symbols:        30924
Types:           85
Instantiations:  0
Memory used:    60571K
I/O read:       0.02s
I/O write:      0.00s
Parse time:     0.19s
Bind time:      0.07s
Check time:     0.00s
Emit time:      0.00s
Total time:     0.26s
PS C:\practice-github\tsopti-task>
```

d) Terminal Output - Build with esbuild



```
PS C:\practice-github\tsopti-task> npx esbuild src/main.tsx --bundle --outfile=out.js --minify --tree-shaking=true
>>

  out.js  62b

Done in 5ms
PS C:\practice-github\tsopti-task>
```

When removed some functions from the expression for example, subtract and multiply, and re-run build — file size will reduce.

e) Final Terminal Output After Split Project using Project References



```
PS C:\practice-github\tsopti-task>
PS C:\practice-github\tsopti-task> npx tsc --build
>>
PS C:\practice-github\tsopti-task> npx tsc --build --verbose
>>
[6:39:26 pm] Projects in this build:
* packages/core/tsconfig.json
* packages/app/tsconfig.json
* tsconfig.json

[6:39:26 pm] Project 'packages/core/tsconfig.json' is up to date because newest input 'packages/core/math.ts' is older than output 'packages/core/dist/tsconfig.tsbuildinfo'

[6:39:26 pm] Project 'packages/app/tsconfig.json' is up to date because newest input 'packages/app/main.ts' is older than output 'packages/app/tsconfig.tsbuildinfo'
PS C:\practice-github\tsopti-task>
```