

# DEVOPS PROJECT

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## Deploying Web App Using Docker & GitHub

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### Overview:

This project demonstrates how to containerize and deploy a simple Typing Speed Test web application using Docker and GitHub. The steps below detail the entire process, from setting up the application to deploying it via Docker.

### Prerequisites

**Git Installed:** Check with `git --version`

**Docker Installed:** Verify with `docker --version`

**GitHub Account:** Ensure you have a GitHub account and know how to create repositories.

**Text Editor/IDE:** Preferably VS Code or similar.

# Step 1: Create the Web App

## 1. Set Up the Project

Open **VS Code** or any text editor.

Create a folder named **TypingSpeedApp**

Inside the folder, create the following three files:

- `index.html`
- `style.css`
- `script.js`

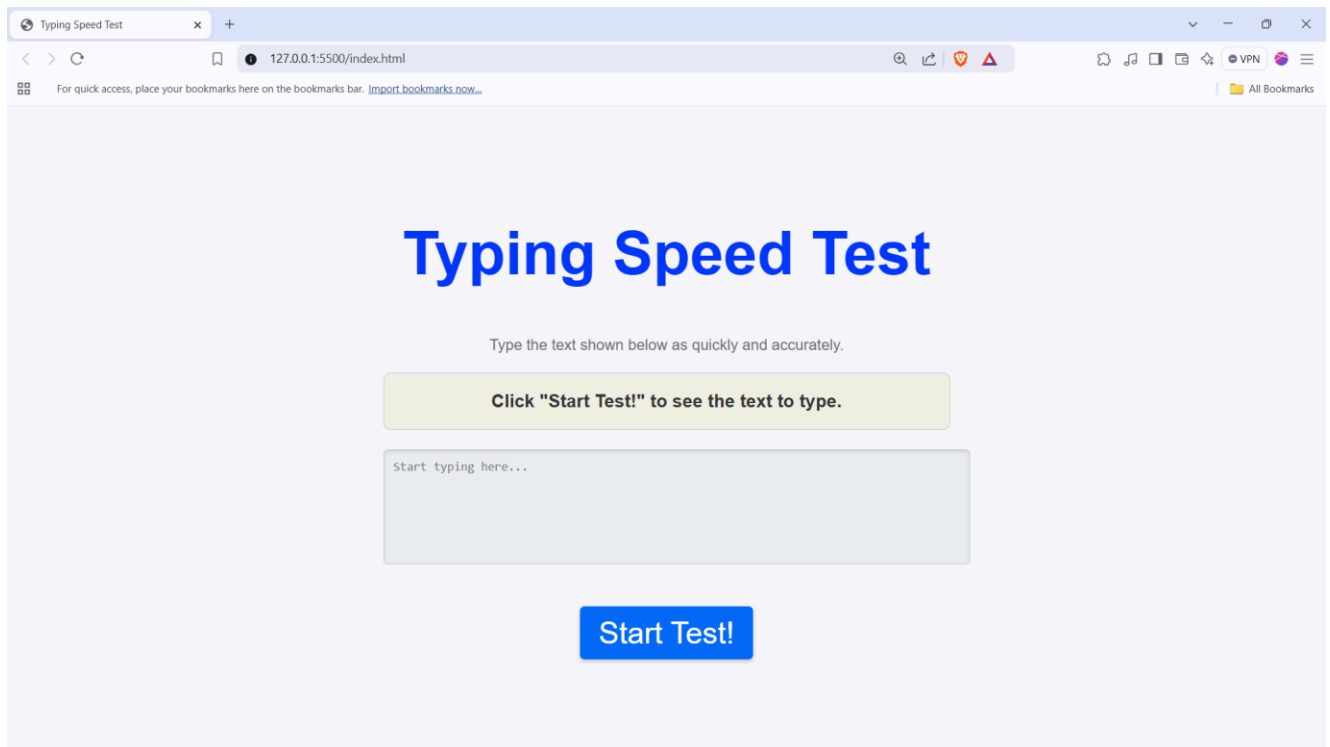
Copy the respective content into each file from my **GitHub Repository**:

<https://github.com/abhiram0a/TypingSpeedApp>

## 2. Test the App Locally

Open `index.html` in your browser or use a **Live Server** extension in VS Code.

Ensure the app works correctly.



## Step 2: Set Up a GitHub Repository

### 1. Initialize Git Repository

Open a terminal in VS Code.

Navigate to the project folder:

```
cd TypingSpeedApp
```

Initialize a **Git repository**:

```
git init
```

## 2. Create a GitHub Repository

Go to your **GitHub account**.

Create a new repository named **TypingSpeedApp**


**Do Not initialize with a README** (since Git is already initialized locally).

### Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (\*).

Owner \*

 abhiram0a



Repository name \*

TypingSpeedApp

TypingSpeedApp is available.

Great repository names are short and memorable. Need inspiration? How about [refactored-guide](#) ?

Description (optional)

- ☒  **Public**  
Anyone on the internet can see this repository. You choose who can commit.
- ☐  **Private**  
You choose who can see and commit to this repository.

Initialize this repository with:

- ☐ Add a README file  
This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: None

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

 You are creating a public repository in your personal account.

Create repository

### 3. Push Code to GitHub

Open terminal in **VS Code**

Add the **remote URL** (after replacing placeholder with your **GitHub username**):

```
git remote add origin https://github.com/<your-username>/TypingSpeedApp.git
```

**Add and Commit files:**

```
git add .
```

```
git commit -m "Initial commit: Typing Speed Test App"
```

**Push to GitHub:**

```
git branch -M main
```

```
git push -u origin main
```

```
abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (master)
$ git remote add origin https://github.com/abhiram0a/TypingSpeedApp.git

abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (master)
$ git add .

abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (master)
• $ git commit -m "Initial commit: Typing Speed Test App"
[master (root-commit) b38b33c] Initial commit: Typing Speed Test App
3 files changed, 176 insertions(+)
create mode 100644 index.html
create mode 100644 script.js
create mode 100644 style.css

abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (master)
$ git branch -M main

abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (main)
• $ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 2.09 KiB | 2.09 MiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/abhiram0a/TypingSpeedApp.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

## Step 3: Write a Dockerfile

Create a file named **Dockerfile** in the **project folder**

Add the following content & Save:

```
FROM nginx:latest

COPY index.html /usr/share/nginx/html/index.html

COPY style.css /usr/share/nginx/html/style.css

COPY script.js /usr/share/nginx/html/script.js

EXPOSE 80
```

## Step 4: Build and Run the Docker Container

Ensure that Docker Desktop is running

Build the **Docker Image**:

```
docker build -t typing-speed-test .
```

## Run the Container:

```
docker run -d -p 8080:80 --name typing-speed-app typing-speed-test
```

U

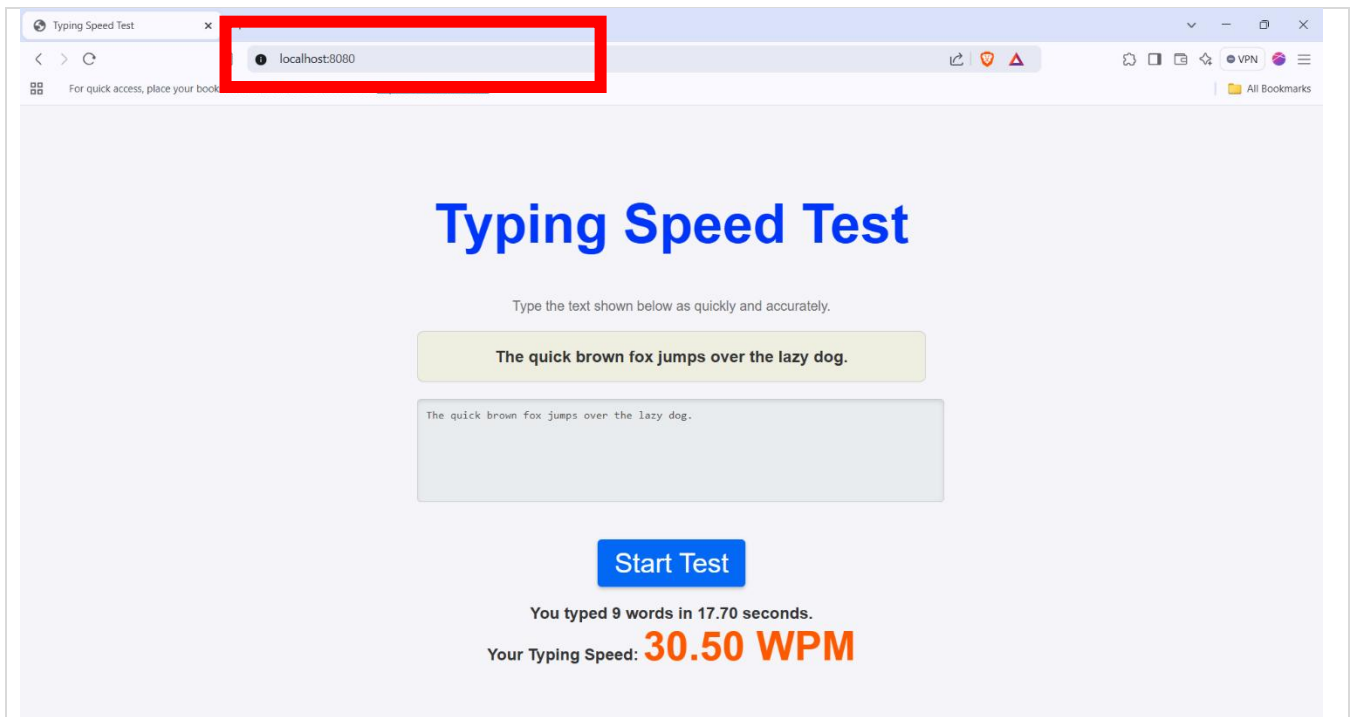
```
abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (main)
• $ docker build -t typing-speed-test .
[+] Building 65.3s (9/9) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 347B
=> [internal] load metadata for docker.io/library/nginx:latest
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/4] FROM docker.io/library/nginx:latest@sha256:0a399eb16751829e1af26fea27b20c3ec28d7ab1fb72182879dcae1cca21206a
=> => sha256:9bea9f2796e236cb18c2b3ad561ff29f655d1001f9ec7247a0bc5e08d25652a1 8.58kB / 8.58kB
=> => sha256:207b812743af01771d6c94b3ebc59543bf3c6fefe5d4d9ebfa6e5e5558801d34 43.84MB / 43.84MB
=> => sha256:2426c815287ed75a3a33dd28512eba4f0f783946844209ccf3fa8990817a4eb9 2.29kB / 2.29kB
=> => sha256:af302e5c37e9dc1dbe2eadc8f5059d82a914066b541b0d1a6daa91d0cc55057d 28.21MB / 28.21MB
=> => sha256:841e383b441eda86c164d8e833da080b951c951d612853cac2fd44eed0d72226 627B / 627B
=> => sha256:0a399eb16751829e1af26fea27b20c3ec28d7ab1fb72182879dcae1cca21206a 10.27kB / 10.27kB
=> => sha256:0256c04a8d84ab5ae434b607055df8fdfe0278dba43f3e603a861dc7e26da395 957B / 957B
=> => sha256:38e992d287c563d332ed8c9bdefec32a84f50f94cc39bb4729a3e73cefde88eb 406B / 406B
=> => sha256:9e9aab598f58e86706b73c23e0ff33fc4eb60a5e69424147f9cb7c02e853323b 1.21kB / 1.21kB
=> => sha256:4de87b37f4ad0b499be3db4cc6831db3d8158867f12dabc0bf42046b56784d3b 1.40kB / 1.40kB
=> => extracting sha256:af302e5c37e9dc1dbe2eadc8f5059d82a914066b541b0d1a6daa91d0cc55057d
=> => extracting sha256:207b812743af01771d6c94b3ebc59543bf3c6fefe5d4d9ebfa6e5e5558801d34
=> => extracting sha256:841e383b441eda86c164d8e833da080b951c951d612853cac2fd44eed0d72226
=> => extracting sha256:0256c04a8d84ab5ae434b607055df8fdfe0278dba43f3e603a861dc7e26da395
=> => extracting sha256:38e992d287c563d332ed8c9bdefec32a84f50f94cc39bb4729a3e73cefde88eb
=> => extracting sha256:9e9aab598f58e86706b73c23e0ff33fc4eb60a5e69424147f9cb7c02e853323b
=> => extracting sha256:4de87b37f4ad0b499be3db4cc6831db3d8158867f12dabc0bf42046b56784d3b
=> [internal] load build context
=> => transferring context: 4.70kB
=> [2/4] COPY index.html /usr/share/nginx/html/index.html
=> [3/4] COPY style.css /usr/share/nginx/html/style.css
=> [4/4] COPY script.js /usr/share/nginx/html/script.js
=> exporting to image
=> => exporting layers
=> => writing image sha256:169017d902f6d51fd28965511557d24e91378fb53f345f720fdae86353805b31
=> => naming to docker.io/library/typing-speed-test

abhiram@LAPTOP-NL5C21F3 MINGW64 ~/Downloads/DevOps/Project/TypingSpeedDocker/TypingSpeedApp (main)
• $ docker run -d -p 8080:80 --name typing-speed-app typing-speed-test
ee9e14a6da5af6479ebae678008792f1ddab21bb8decca1b70b9a0dc0a62dd1f
```

## Test the App

Open browser and **search**:

```
http://localhost:8080
```



## Step 5: Push the Dockerfile to GitHub

Add the **Dockerfile** to the **repository**:

```
git add Dockerfile
```

```
git commit -m "Added Dockerfile for Typing Speed Test App"
```

```
git push origin main
```

Check the **GitHub repository**



abhiram0a / TypingSpeedApp

TypingSpeedApp Public

main 1 Branch 0 Tags

Go to file Add file Code

abhiram0a Added Dockerfile for Typing Speed Test App 8ed64c · now 2 Commits

File	Commit Message	Time
Dockerfile	Added Dockerfile for Typing Speed Test App	now
index.html	Initial commit: Typing Speed Test App	1 hour ago
script.js	Initial commit: Typing Speed Test App	1 hour ago
style.css	Initial commit: Typing Speed Test App	1 hour ago

README

Add a README

Add a README

About

No description, website, or topics provided.

Activity

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Languages

JavaScript 44.5% CSS 32.8% HTML 16.4% Dockerfile 6.3%

## Stop the Container (Optional)

If you no longer need the container running, stop it with this command:

```
docker stop typing-speed-app
```

## Conclusion

This project demonstrated how to containerize and deploy a Typing Speed Test web application using Docker and GitHub. By following these steps, you learned to set up version control with Git, write a Dockerfile, build and run Docker containers, and push your project to GitHub.