

CLOUD COMPUTING LAB



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LAB NO 10

DEPLOYING A SERVERLESS API USING VERCEL TEMPLATES

1. Deploy

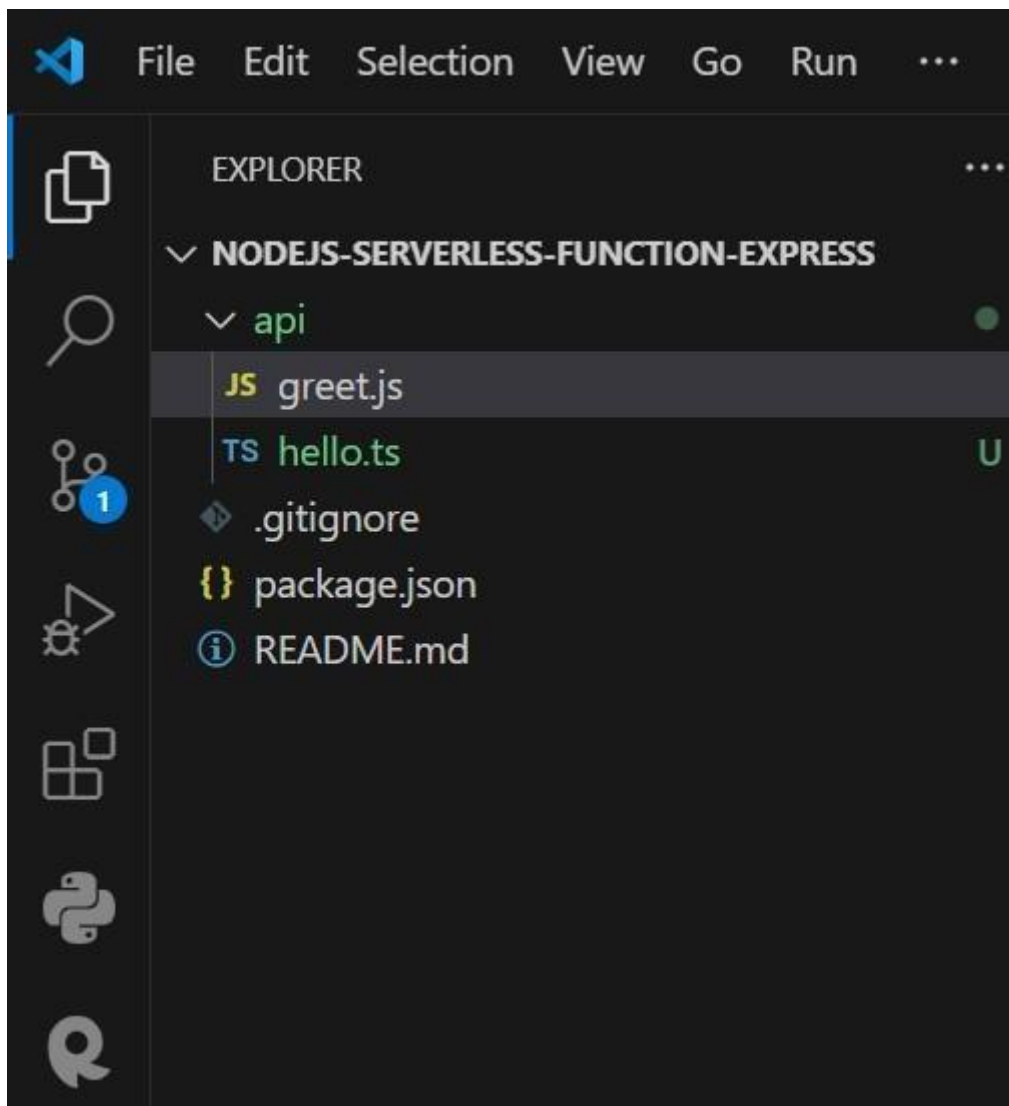
The screenshot shows the Vercel Deployment Details page for a project named 'vercel-demo'. The page displays the deployment status as 'Ready Stale' and provides various details including the environment (Production), domains, source (main), and deployment configuration. The deployment was created 44 minutes ago and is ready to be visited. The page also shows the deployment configuration, build logs, deployment summary, and assigning custom domains. The runtime logs, observability, web analytics, and speed insights are also visible.

LINK: <https://nodejs-serverless-function-express-pi-pearl-5b.vercel.app/api/greet>

3. Github Repository

The screenshot shows the GitHub repository page for 'nodejs-serverless-function-express'. The repository is owned by 'zohaibShafqat2003' and is a private repository. The page displays the repository's main branch, the initial commit, and the files included in the repository: 'api', '.gitignore', 'README.md', and 'package.json'. The README file is open, showing the title 'Node.js Hello World' and the description 'Simple Node.js + Vercel example that returns a "Hello World" response.' The page also shows the repository's activity, including the number of stars, forks, and releases.

4. Folder Structure



Post-Lab Reflection Answers

1. What is a serverless function and how is it different from a traditional server?

A serverless function is a backend function hosted in the cloud that executes on demand. Unlike traditional servers, there is no need to manage infrastructure. The cloud provider handles server setup, scaling, and maintenance. You only pay when your function runs.

2. How does Vercel make deployment easy using templates?

Vercel provides ready-to-use templates with pre-configured code and setup. You can deploy instantly with just a few clicks, without writing code from scratch. It integrates with GitHub and automatically redeploys on changes.

3. How would you create a new API route if you had to expand the backend?

To create a new route:

Go to the `api/` folder in your project. Create a new file, e.g., `api/time.js`. Add your handler logic:

```
export default function handler(req, res) {  
  res.status(200).json({ time: new Date().toISOString() });  
}
```

Vercel deploys it, and you can access via `/api/time`

4. Why is this type of deployment considered 'cloud-native'?

This deployment is cloud-native because it uses:

On-demand scaling

Event-driven execution

Microservice architecture (each function is isolated)

No server management

Fast CI/CD pipelines and global CDN

It aligns with modern cloud computing best practices