

Full-Stack Developer Technical Assessment

Assessment Overview

Tasks: 2 main tasks

Technologies: Flask, Next.js, TypeScript, React

Getting Started

Step 1: Get the Code

Clone the assessment repository:

```
git clone https://github.com/GhiProject/New-Student-Test.git  
cd New-Student-Test/flask-app
```

Step 2: Set Up the Flask App

```
# Install dependencies
```

```
pip install -r requirements.txt
```

```
# Run the application
```

```
python app.py
```

Visit <http://localhost:5000> in your browser.

Login Credentials: - Email: test@example.com - Password: password123

Your Tasks

Task 1: Find and Fix 3 Bugs (30 minutes)

The Flask application has 3 intentional bugs that need to be fixed.

What to do: 1. Explore the application and find all 3 bugs

2. Fix each bug in the code

3. Document your findings

Create a file: BUG_REPORT.md

For each bug, document:

```
## Bug #1: [Brief Title]
```

****What's broken:**** [Describe the issue]

****Where:**** [File name and line number]

****Why it matters:**** [Security/Performance/Functionality impact]

****How I fixed it:**** [Explain your solution]

****How to test:**** [Steps to verify the fix]

Hints about the bugs: - One is related to authentication/security - One is related to performance/database queries - One is related to file validation

Task 2: Migrate Dashboard to Next.js (25 minutes)

Convert the Flask dashboard page to a modern Next.js application with TypeScript.

Requirements: - Create a Next.js dashboard page that displays files - Use TypeScript for proper type safety - Create an API endpoint to fetch files - Show a loading state while fetching data - Basic styling (TailwindCSS or plain CSS)

What you need to create:

```
next-app/
  └── app/
    ├── dashboard/
    │   └── page.tsx      # Dashboard page component
    └── api/
        └── files/
            └── route.ts    # API endpoint
  └── lib/
    └── types.ts          # TypeScript interfaces
  └── README.md          # Setup instructions
```

Don't worry about: - Authentication implementation - Real database connection (mock data is fine) - Perfect design - Full CRUD operations

Submission Instructions

Step 1: Create Your GitHub Repository

1. Create a new public repository on your GitHub account
2. Name it something like: [YourName]-flask-assessment
3. Initialize it with a README

Step 2: Organize Your Code

Your repository should have this structure:

```
your-repo/
  ├── README.md          # Setup instructions
  ├── BUG_REPORT.md      # Your bug documentation
  └── flask-app/
    ├── app.py            # Fixed Flask application
    │   ...
  └── next-app/
    ├── app/
    ├── lib/
    └── README.md          # Your Next.js application
```

Step 3: Push Your Code

```
# In your working directory  
git init  
git add .  
git commit -m "Complete technical assessment"  
git remote add origin https://github.com/YOUR_USERNAME/YOUR_REPO_NAME.git  
git branch -M main  
git push -u origin main
```

Step 4: Submit

[CS Team Submission – Fill out form](#)

Important: Make sure your repository is PUBLIC so we can review it!

Evaluation Criteria

We'll evaluate your submission based on:

Bug Finding & Fixing (60 points)

- Did you find all 3 bugs?
- Do your fixes actually work?
- Are your explanations clear and detailed?

Next.js Migration (40 points)

- Does the dashboard page render correctly?
- Are TypeScript types properly used?
- Is the code clean and well-organized?

Code Quality (Bonus)

- Clean, readable code
 - Good commit messages
 - Clear documentation
-

Tips for Success

1. Time Management: Spend ~30 min on bugs, ~25 min on migration
 2. Commit Often: Make small commits as you progress
 3. Document Well: Clear explanations are valued
 4. Test Everything: Make sure your code runs before submitting
 5. Ask if Stuck: If you're blocked on setup for >30 minutes, email us
-

Troubleshooting

Port 5000 already in use?

```
# Mac/Linux  
lsof -ti:5000 | xargs kill -9
```

```
# Windows  
netstat -ano | findstr :5000  
taskkill /PID <PID> /F  
Flask not installed?  
pip install Flask  
# or  
pip3 install Flask  
Python not found? Make sure Python 3.9+ is installed:  
https://www.python.org/downloads/
```

Questions?

If you encounter any blocking issues: - Email: nsavale@iu.edu

We want to test your coding skills, not your debugging of environment issues. Don't hesitate to reach out if you're stuck on setup!

Deadline

Please complete and submit within 7 days from receiving this email. (02/23/2026, 6:00 pm est)

Good luck! We're excited to see your work.

Regards,
CS Team
Global-Health-Impact