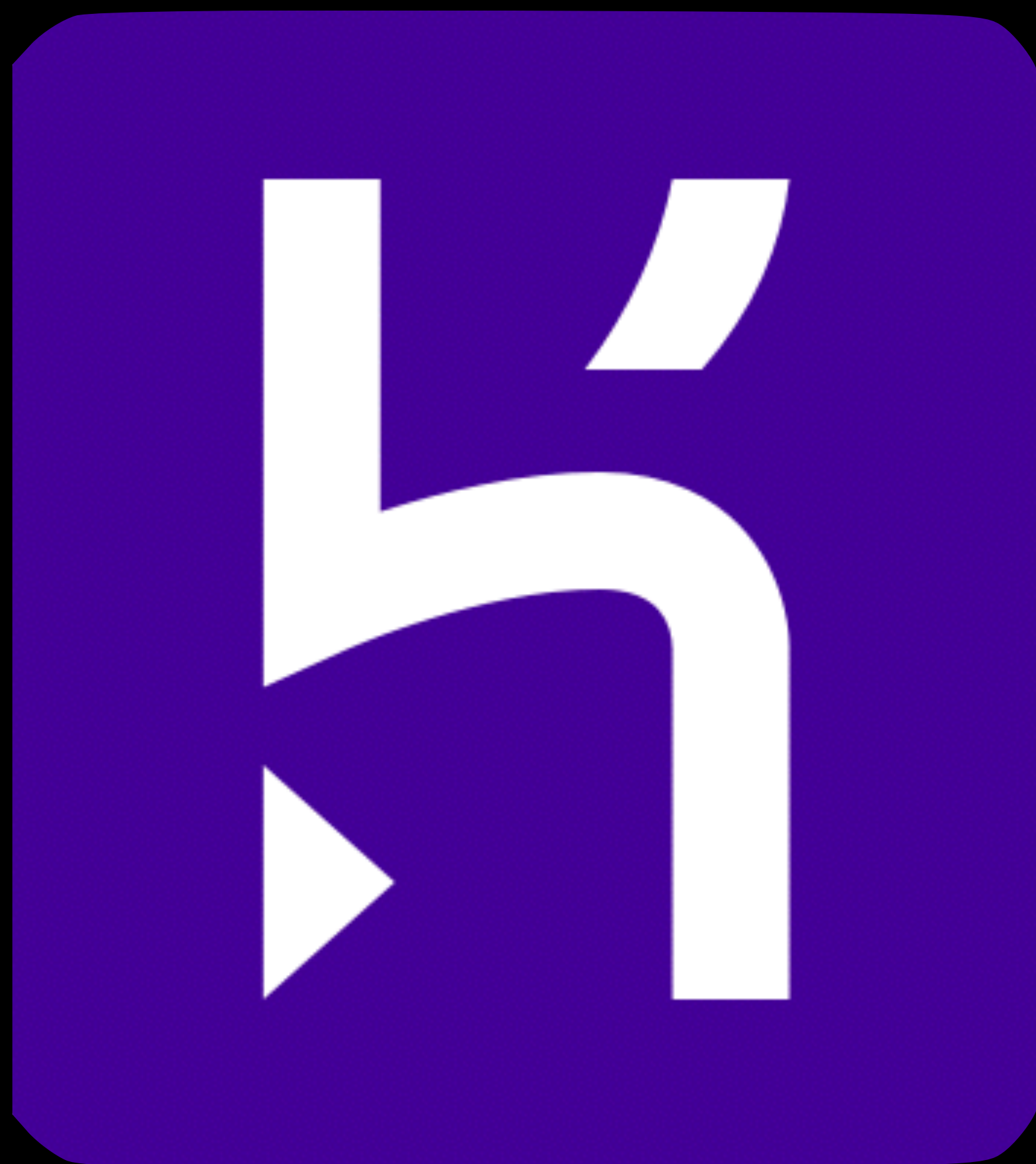# From Harvard to Heroku

① Create **Procfile**

- create a new file in your **project2/** directory
- name the new file **Procfile**
- the file should contain the line:

```
web: python application.py
```

② Edit `application.py`

- if not already there, add **import os** to the top of `application.py`
- add this to the bottom of `application.py`:

```python
if __name__ == "__main__":
    port = int(os.environ.get("PORT", 8080))
    app.run(host="0.0.0.0", port=port)
```

(3) Add requirements.txt

- add this to a file called requirements.txt:

```
cs50
Flask
Flask-Session
passlib
SQLAlchemy
```

(4) Update **pwd_context**

- if in **application.py**, you use **pwd_context.encrypt**, change that wording to **pwd_context.hash**

⑤ Create GitHub repository

- go to **https://github.com/new**
- name your repository
- (if possible) designate it private
- you can leave "Initialize this repository with a README" unchecked

⑥ Push to GitHub

- follow these steps:

```
git init
git add *
git commit -m "first commit"
git remote add origin https://github.com/USERNAME/REPONAME.git
git push -u origin master
```

(7) Create a Heroku app

- go to <u>https://dashboard.heroku.com/apps</u>
- click New → Create new app
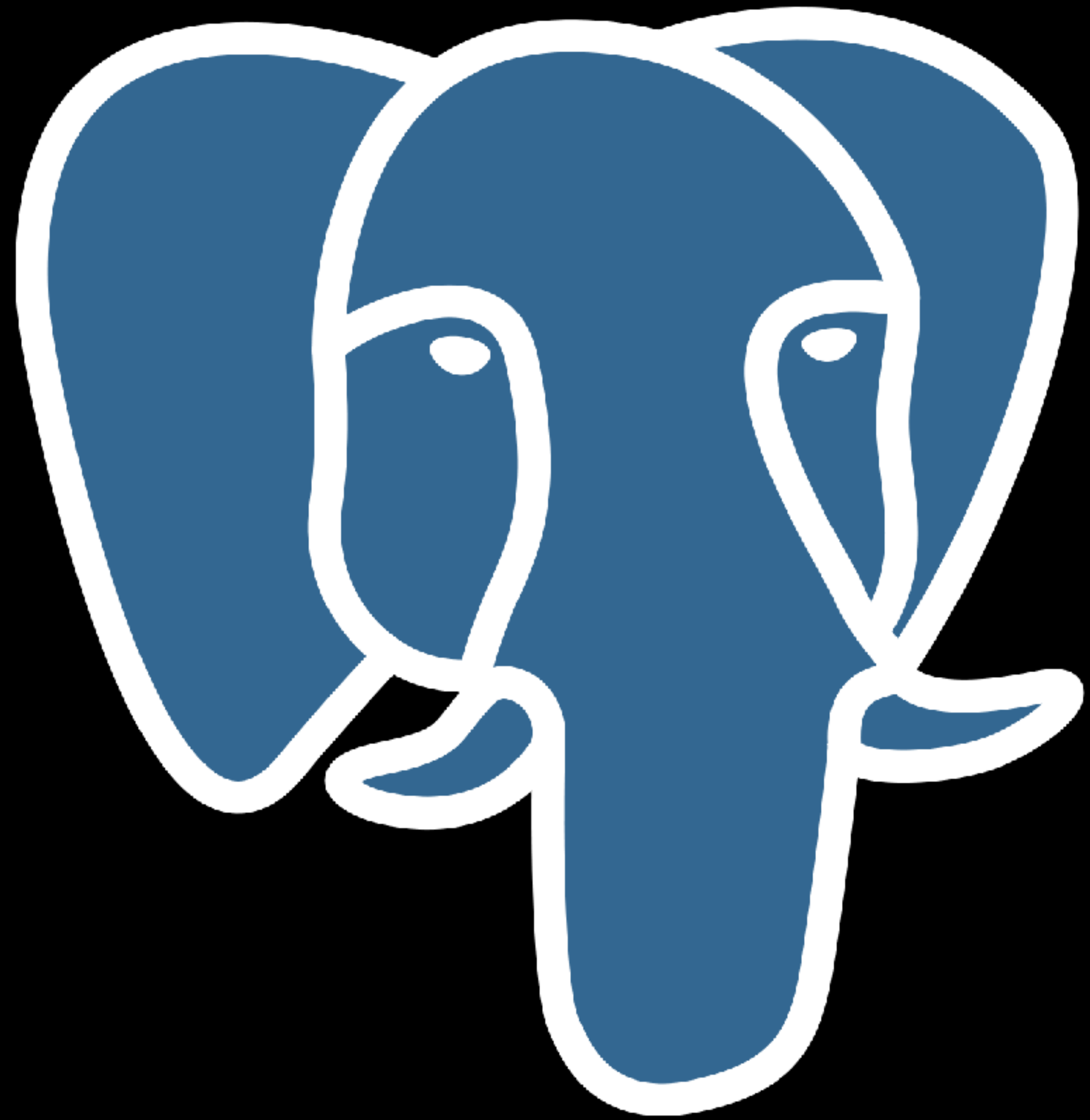- give the app a name, and click "Create App"

8 Connect GitHub

- on Deploy tab → "Deployment method," click GitHub, then "Connect to GitHub"
- if prompted, authorize Heroku access

(9) Deploy App

- search for your repo name
- click "Connect"
- click "Enable automatic deploys"
- click "Deploy branch"

⑩ Set up Heroku Postgres

- in Overview → "Installed add-ons", click "Configure add-ons"
- choose "Heroku Postgres" → "Provision"
- click "Heroku Postgres :: Database"

(11) Set up Postgres Queries

- in IDE, type `sqlite3 finance.db`
- type `.schema` and copy the results to a file
- replace `'` with `"`
- replace `INTEGER PRIMARY KEY AUTOINCREMENT` with `SERIAL PRIMARY KEY`
- replace `DATETIME` with `TIMESTAMP`

(12) Connect to Postgres

- in Heroku, go to "Database Credentials" ➜ "View Credentials…"
- copy the URI that appears
- in IDE, type **psql [uri]** (fill in URI)
- copy/paste the SQL queries and press return
- type **Ctrl-D** to exit

(13) Update `application.py`

- in **application.py**, add this line to the top:

  `import psycopg2`

- replace

  `db = SQL("sqlite:///finance.db")`

  with

  `db = SQL(os.environ.get("DATABASE_URL") or "sqlite:///finance.db")`

(14) Update **requirements.txt**

- add this line to **requirements.txt**

  psycopg2

(15) Push to GitHub

- run these commands in IDE:

```
git add *
git commit -m "set up Postgres"
git push
```