FOX OF HOOD

PROJECT STATUS REPORT | FINAL

Team B

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12/03/2024 6:00pm

https://github.com/ettany/FOH_PSE.git

Roles

- **Grace:** Database & Transaction Lead
- **Manila:** Activity Log, UI, User Portfolio Lead
- **Ngoc:** Visualization & CAPTCHA Lead
- **Tamsyn:** Authentication & API Lead
- **Berkan:** Facial Recognition Lead

Project Info

How our team operates:

- Zoom
- WhatsApp & Email
- In-Person Meetings

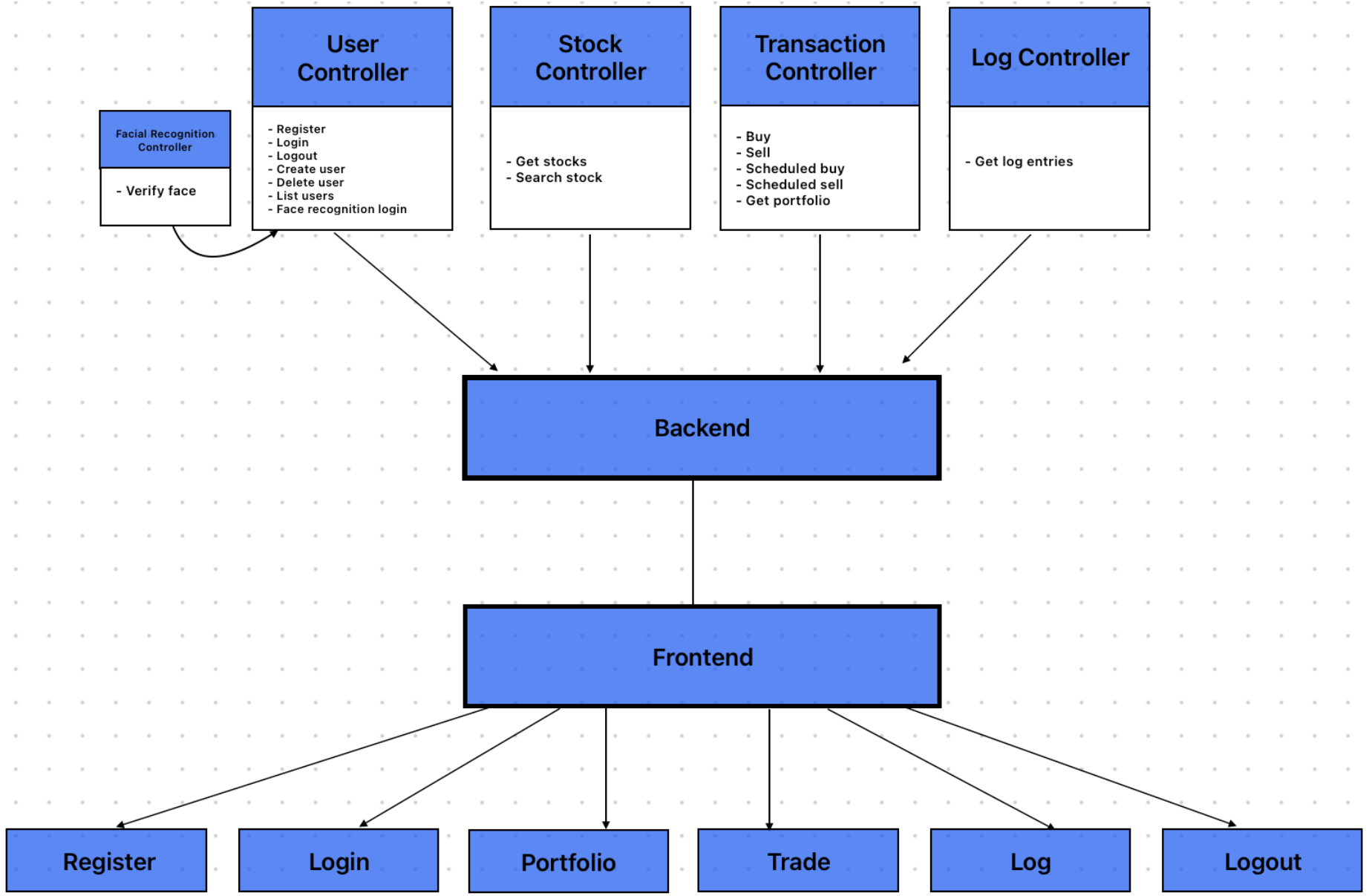
Development process used:

- Agile/incremental

Tools used:

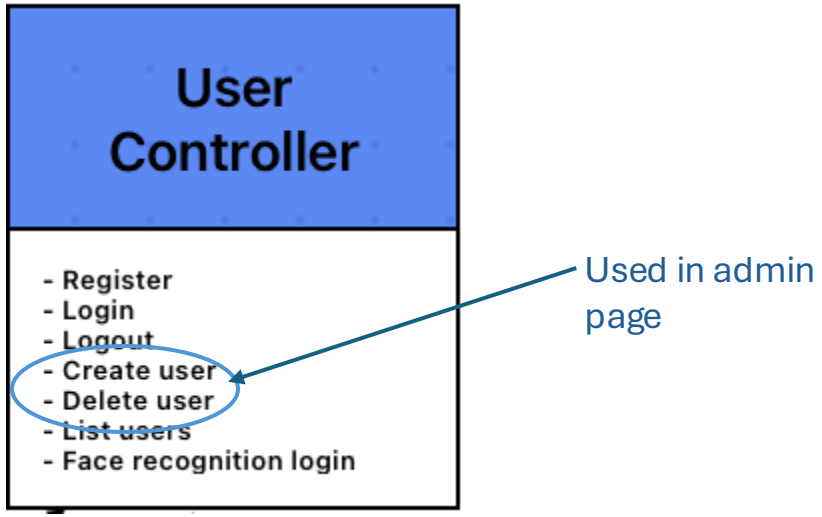
- **Planning:** Asana
- **Development:** VS Code, FIGMA (UI visualization), shared GitHub repository

Software Architecture of Fox of Hood

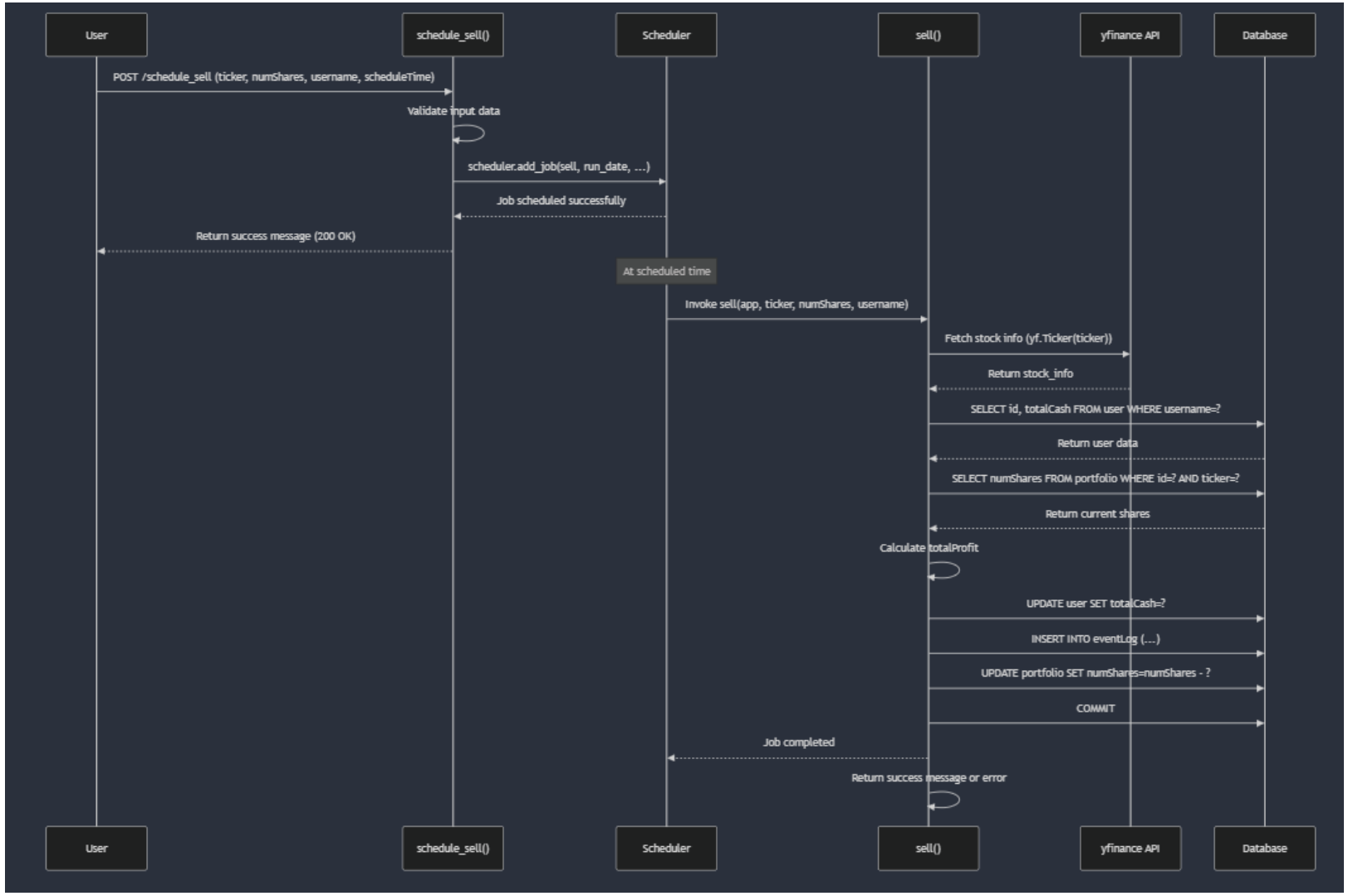


Software Architecture | Traceability

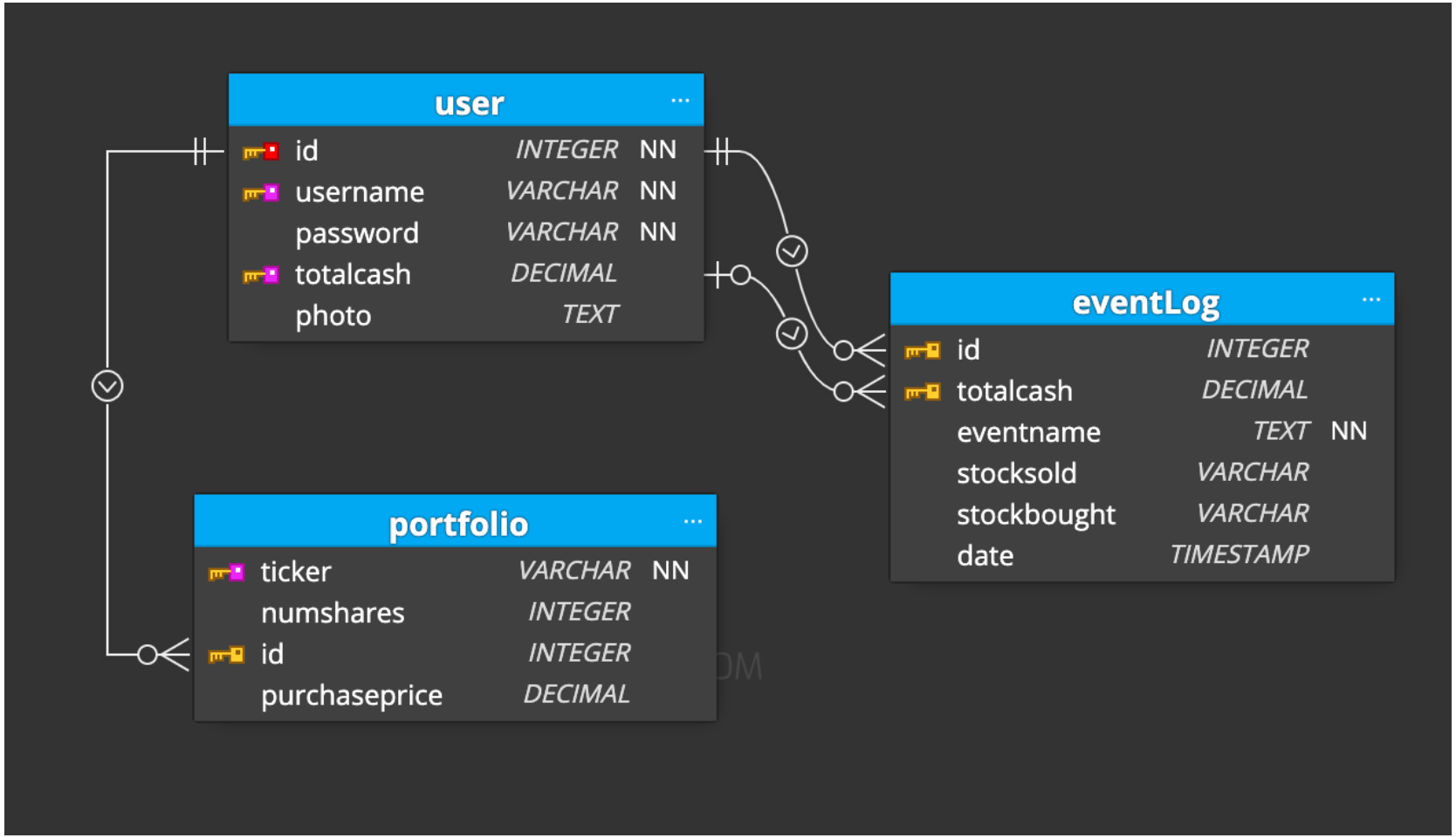
- **Example:** "Administrators should be able to manage user accounts"
  - SRS: Administration | REQ-2: Allow admin account to create new user accounts
  - Account-based privileges
  - Separate dashboard for "administration" account



Developed Software | Buy & Sell Stocks



Developed Software | Database



Developed Software | Security

CAPTCHA

```
recaptcha_response = data.get('recaptcha_response')

# Verify reCAPTCHA response
recaptcha_payload = {
    'secret': RECAPTCHA_SECRET_KEY,
    'response': recaptcha_response
}
recaptcha_verify_url = "https://www.google.com/recaptcha/api/siteverify"
recaptcha_result = requests.post(
    recaptcha_verify_url, data=recaptcha_payload)
recaptcha_json = recaptcha_result.json()

if not recaptcha_json.get('success'):
    return jsonify({"error": "reCAPTCHA verification failed."}), 400
```

Facial Recognition

```
def verify_face(saved_image_path, captured_image_path):
    saved_image = face_recognition.load_image_file(saved_image_path)
    saved_face_encoding = face_recognition.face_encodings(saved_image)

    captured_image = face_recognition.load_image_file(captured_image_path)
    captured_face_encoding = face_recognition.face_encodings(captured_image)

    if not saved_face_encoding or not captured_face_encoding:
        return False

    matches = face_recognition.compare_faces(
        saved_face_encoding, captured_face_encoding[0])

    return matches[0]
```

Other simple security measures:

1. Password hashing with werkzeug
2. Identical username prevention
3. Password requirements (length, numbers, special characters)
4. Account-based access control (user vs admin)

Accomplished Work

Register & Login: username, password, facial recognition, CAPTCHA

Database: *user, portfolio,* and *eventLog* tables

Portfolio

- Balance
- Stock portfolio
- Graph: profit

Trade

- Search
- Buy, sell, schedule
- Graphs: searched stock, top 5 stocks

Log

- Log on, logg off, buy, sell

Accomplished Work

How good is it?

- Reached milestones & requirements before due date
- Structured plan
- Designated leaders

Project size:

- Estimated 400 - 450 hrs total
- +- 8-9 hrs pp/week over 10 weeks

Developing the product to ensure compatibility:

- Python & Flask (backend)
- SQL (database schema)
- Frontend (HTML, CSS, JavaScript)
- API: yahoo finance

Portfolio | Trade | Log | Logout

127.0.0.1:5001 says

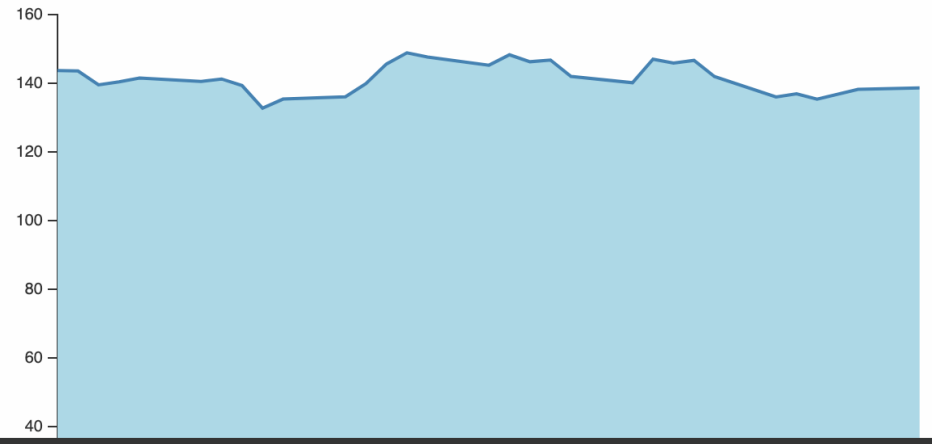
Transaction successful: buy 5 of NVDA

OK

Stocks

NVDA Search

SYMBOL	NAME	PRICE	QUANTITY	ACTION
NVDA	NVIDIA Corporation	$138.63	5	Buy Sell mm/dd/yyyy, --:-- -- Schedule Buy Schedule Sell



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Lessons Learned

Success

- Focus on priorities
- Established leadership roles
  - Manageable chunks
  - Ownership
  - Collaboration

Struggles

- Initially:
  - Collaboration
  - Buy and sell functionality
  - Maintaining session

Lessons

- Establish roles and rules earlier in the SDLC
- Stick to familiar languages and frameworks

Demo

https://youtu.be/7XaVBbRt8u4