Day 1 Resource Links & Setup Guide

🔗 Resources You Need to Create

1. Postman Collection (Required)

What: Shared Postman workspace with API examples **How to Create:**

1. Go to postman.com

2. Create workspace: "API Course - Day 1"

3. Add these collections:

Collection 1: Good APIs

```
GitHub API Examples:
- GET https://api.github.com/users/octocat
- GET https://api.github.com/repos/microsoft/vscode

Stripe API Examples:
- GET https://api.stripe.com/v1/charges (with demo key)

JSONPlaceholder Examples:
- GET https://jsonplaceholder.typicode.com/posts/1
- GET https://jsonplaceholder.typicode.com/users/1
```

Collection 2: Educational APIs

```
REST Countries:
- GET https://restcountries.com/v3.1/name/france
- GET https://restcountries.com/v3.1/region/europe

OpenWeather:
- GET https://api.openweathermap.org/data/2.5/weather?q=London&appid=DEMO_KEY

JSONPlaceholder CRUD:
- GET https://jsonplaceholder.typicode.com/posts
- POST https://jsonplaceholder.typicode.com/posts
- PUT https://jsonplaceholder.typicode.com/posts/1
- DELETE https://jsonplaceholder.typicode.com/posts/1
```

Collection 3: Legacy/Problem APIs

Share Method: Invite students to workspace or export/import JSON

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2. GitHub Repository (Essential)

Repo Name: taskflow-api-course **URL:** https://github.com/[YOUR_USERNAME]/taskflow-api-course

Required Files to Create:

README.md

```markdown
# TaskFlow API Course Materials

## Day 1: API Foundation & Design

### Workshop Materials
- [Domain Modeling Template](./workshops/domain-modeling-template.md)
- [API Design Checklist](./workshops/api-design-checklist.md)
- [Status Code Scenarios](./workshops/status-code-scenarios.md)

### Demo Code
- [TaskFlow OpenAPI Spec](./docs/taskflow-api-spec.yml)
- [Domain Model Examples](./examples/domain-models/)
- [gRPC Proto Files](./examples/grpc-examples/)

### Resources
- [Postman Collection](./resources/postman-collection.json)
- [Excalidraw Templates](./resources/excalidraw-templates.md)
```

docs/taskflow-api-spec.yml (OpenAPI specification) **workshops/domain-modeling-template.md examples/domain-models/taskflow-domains.md examples/grpc-examples/taskflow-analytics.proto**

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3. Excalidraw Templates (Interactive)

What: Shared drawing boards for domain modeling **How to Create:**

1. Go to excalidraw.com
2. Create template boards
3. Share links with students

Template 1: Domain Modeling Canvas

- URL: `https://excalidraw.com/#json=[YOUR_TEMPLATE_DATA]`
- Pre-drawn sections for entities, services, events
- Color coding legend
- Sample TaskFlow elements

Template 2: API Endpoint Design

- URL: `https://excalidraw.com/#json=[YOUR_TEMPLATE_DATA]`
- REST endpoint structure template
- HTTP verb examples
- Nested resource patterns

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4. Google Slides Presentation

What: Day 1 slide deck **How to Create:**

1. Go to slides.google.com
2. Create new presentation: "Day 1 - API Foundation & Design"
3. Use content from the slide deck artifact above
4. Make shareable with view access

Slides to Create: (18 slides total)

- Welcome & Day Overview
- Ground Rules & Expectations
- API Treasure Hunt Instructions
- API Type Decision Matrix
- Domain-Driven Design Introduction
- TaskFlow Business Overview
- Domain Modeling Activity Setup
- Domain Boundaries Visual
- API Design Principles
- Domain-to-REST Mapping Challenge

- HTTP Status Codes Reality

- Error Response Design Pattern

- gRPC vs REST Comparison

- gRPC Demo Preview

- Legacy Integration Reality

- Legacy API Challenge Setup

- Day 1 Wrap-up

- Questions & Discussion

🌐 Public APIs for Activities (Ready to Use)

APIs Students Will Explore:

✅ JSONPlaceholder: https://jsonplaceholder.typicode.com
- No auth required
- Perfect for learning REST
- Reliable and fast

✅ GitHub API: https://api.github.com
- Public endpoints work without auth
- Professional API design example
- Well-documented

✅ REST Countries: https://restcountries.com/v3.1
- No auth required
- Good response structure
- Reliable service

✅ OpenWeather: https://api.openweathermap.org/data/2.5
- Free tier available
- Commercial API example
- Requires API key (provide demo key)

✅ HTTPBin: https://httpbin.org
- Perfect for testing HTTP methods
- Shows request/response details
- Great for debugging demos

APIs for Comparison/Discussion:

SOAP Examples (to show what NOT to do):

- http://webservices.oorsprong.org/websamples.countryinfo/CountryInfoService.wso

- https://www.w3schools.com/xml/tempconvert.asmx

GraphQL Examples:

- https://api.github.com/graphql (requires token)

- https://countries.trevorblades.com (public GraphQL)

📱 Tools Students Need (Send Before Class)

Required Installations:

✅ Postman Desktop App
  Download: https://www.postman.com/downloads/

✅ VS Code
  Download: https://code.visualstudio.com/

✅ VS Code REST Client Extension
  Install from: VS Code Extensions marketplace
  Search: "REST Client" by Huachao Mao

✅ Modern Web Browser
  Chrome, Firefox, or Edge with bookmark bar enabled

✅ GitHub Account
  Signup: https://github.com (if they don't have one)

Optional but Helpful:

✅ Git Client
  - GitHub Desktop: https://desktop.github.com
  - Or command line git

✅ JSON Formatter Browser Extension
  - Chrome: "JSON Formatter"
  - Firefox: "JSONView"

📋 Pre-Class Setup Checklist

1 Week Before:

☐ Create GitHub repository with all materials

- [ ] Set up Postman workspace with API collections
- [ ] Create Excalidraw templates
- [ ] Build Google Slides presentation
- [ ] Test all API endpoints to ensure they work
- [ ] Send setup instructions to students

1 Day Before:

- [ ] Verify all links are working
- [ ] Test screen sharing setup
- [ ] Print backup worksheets (in case internet fails)
- [ ] Prepare physical materials (sticky notes, markers)
- [ ] Test Excalidraw collaboration with a friend

Day Of:

- [ ] Open all browser tabs you'll need
- [ ] Test Postman workspace access
- [ ] Verify slide presentation works
- [ ] Have backup plans ready (offline materials)
- [ ] Charge laptop and have backup power

🎯 Student Communication Template

Email to send 1 week before:

🔧 Backup Plans (If Tech Fails)

If Internet is Unreliable:

☐ Download offline copies of all materials

☐ Print key worksheets and templates

☐ Have local Postman collections exported

☐ Prepare whiteboard/physical sticky note alternatives

If Excalidraw Doesn't Work:

☐ Use Google Drawings (simpler)

☐ Fall back to physical sticky notes + photos

☐ Use shared Google Doc with text-based modeling

If Postman Doesn't Work:

☐ Use VS Code REST Client extension

☐ Use curl commands in terminal

☐ Use browser developer tools for GET requests

Next Steps:

1. Create these resources in the order listed

2. Test everything with a colleague or friend

3. Send setup instructions to students 1 week early

4. Have backup plans ready

This gives you a complete resource foundation for Day 1!