

FocusForge

Next-Generation AI-Powered Learning Platform

Project Overview

FocusForge is a revolutionary educational learning platform built with Spring Boot and powered by Spring AI, designed to transform the way students learn, track progress, and achieve their career goals.

Created By

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Hackathon Topic

AI-Powered Online Education

- Next-gen learning platforms
- AI tutors & personalized course recommenders
- Skill trackers & adaptive learning
- Intelligent progress monitoring

Core Features

1. User Authentication & Profile Management

Secure Sign Up & Login powered by Spring Security

Sample Profile JSON:

```
{  
  "timeStamp": "2026-02-11T13:53:19.7427089",  
  "data": {  
    "age": 22,  
    "goal": "Crack Product Based Company",  
    "skills": "Spring Boot, DSA, Microservices",  
    "targetJob": "Software Developer"  
  },  
  "error": null  
}
```

2. Daily Study Session Tracking

Sample Study Session JSON:

```
{  
  "timeStamp": "2026-02-11T13:55:19.8115358",  
  "data": {  
    "date": "2026-02-11",  
    "subject": "Learn bean Life Cycle Part 2",  
    "platform": "Anuj Bhaiya from CodingShuttle",  
    "duration": 150,  
    "notes": "Implement Beans And Understand Bean Life Cycle"  
  },  
  "error": null  
}
```

}

3. Weekly Progress Analytics

Sample Weekly Report JSON:

```
{  
  "timeStamp": "2026-02-11T14:02:17.0840154",  
  "data": {  
    "weekStart": "2026-02-09",  
    "totalStudyTime": 270,  
    "consistency": 14.285714285714285,  
    "commits": [  
      {  
        "date": "2026-02-11",  
        "message": "Studied Learn bean Life Cycle Part 2 for 150 mins on Anuj Bhaiya from CodingShuttle"  
      },  
      {  
        "date": "2026-02-11",  
        "message": "Studied Learn bean Life Cycle for 120 mins on Anuj Bhaiya from CodingShuttle"  
      }  
    ],  
    "error": null  
  }  
}
```

4. AI-Powered RAG Question-Answer Bot

- Context-aware responses based on user learning journey
- AI-driven learning path suggestions
- Instant doubt resolution
- Goal-oriented guidance

5. Global Leaderboard & Gamification

Ranking based on:

- Max streaks
- Max commits
- Higher screen time

6. Collaborative Study Rooms

Workflow:

1. Create Room
2. Send Invites
3. Accept/Reject Invitations
4. Start Room
5. Real-Time Chat
6. Ask Doubts
7. Collaborative Learning
8. End Room

Automatic session recording includes:

- Topic Name
- Participants
- Messages
- Doubts
- Duration
- Start & End Time
- Date

Technical Stack

- Spring Boot
- Spring Security
- Spring AI
- Spring Data JPA
- WebSocket
- MySQL
- RAG (Retrieval-Augmented Generation)

Gamification Achievements

- Streak Master
- Study Warrior
- Time Champion
- Collaboration King
- Goal Achiever

User Journey Flow

Sign Up -> Login -> Create Profile -> Log Sessions -> View Analytics -> Interact with AI -> Check Leaderboard -> Join Study Rooms -> Achieve Goals

Future Enhancements

- Mobile App
- Video Integration
- Smart Notes
- Calendar Integration
- Email Notifications
- Multi-language Support
- Certification System

FocusForge - Learn. Track. Collaborate. Achieve.