



**Neoshala - A Non-Academic Coaching Aggregator**

**ON**

Submitted in partial fulfillment of the requirements  
of the degree of

**Bachelor of Engineering  
(Information Technology)**

By

**Harsh Patil (58)**

**Gargi Shintre (65)**

**Khushi Singh (67)**

**Abhishek Vishwakarma (71)**

Under the guidance of

**Kajal Joseph**



**Department of Information Technology**

**VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY,  
Chembur, Mumbai 400074**

**(An Autonomous Institute, Affiliated to University of Mumbai)**

**April 2025**



# Vivekanand Education Society's Institute of Technology

(Autonomous Institute Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra)  
NAAC accredited with 'A' grade

## *Certificate*

This is to certify that project entitled

**“Neoshala - A Non-Academic Coaching Aggregator”**

### **Group Members Names**

Mr. Harsh Patil (Roll No.58)

Miss. Gargi Shintre (Roll No.65)

Miss. Khushi Singh (Roll No.67)

Mr. Abhishek Vihwakarma (Roll No.71)

In fulfillment of degree of BE. (Sem. IV) in Information Technology for Project is approved.

**Prof. Kajal Joseph**  
**Project Mentor**

**External Examiner**

**Dr.(Mrs.)Shalu Chopra**  
**H.O.D**

**Dr.(Mrs.)J.M.Nair**  
**Principal**

Date: / /2024  
Place: VESIT, Chembur

College Seal

## ***Declaration***

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

-----

(Signature)

Harsh Patil (58)

Gargi Shintre (65)

Khushi Singh (67)

Abhishek Vishwakarma (71)

# Abstract

Neoshala is a web-based platform designed to streamline the discovery, booking, and payment of offline, non-academic coaching services such as fitness, dance, music, language, and skill-based learning. The platform serves as a digital aggregator connecting learners with verified coaches and training providers in their local area.

With an intuitive user interface, secure payment integration, Neoshala enhances the experience for both students and instructors. It addresses key challenges faced by traditional coaching providers—such as low visibility and lack of digital tools—while also solving pain points for users like trust, convenience, and availability of services.

This project demonstrates the potential of technology to modernize informal learning and coaching ecosystems. Built using modern web technologies like React.js and Node.js, the platform is scalable, secure, and optimized for future enhancements like mobile app integration, AR/VR learning previews, and personalized learning journeys. Neoshala aims to become a one-stop solution for all offline coaching needs.

# Contents

<b>1. Introduction</b>	<b>1</b>
1.1 Introduction	2
1.2 Objectives	2
1.3 Motivation	2
1.4 Scope of the Work	2
1.5 Feasibility Study	3
1.6 Organization of the report	3
<b>2. Literature Survey</b>	<b>4</b>
2.1 Introduction	5
2.2 Problem Definition	5
2.3 Review of Literature Survey	5
2.4 Theoretical Insights on Non-Academic Learning.	6
2.5 Key Takeaways & Research Gaps	7
2.6 Future Research Directions	7
<b>3. Design and Implementation</b>	<b>8</b>
3.1 Introduction	9
3.2 Requirement Gathering	9
3.3 Proposed Design	9
3.4 Proposed Algorithm	10
3.5 Architectural Diagrams	11
3.5.1 UML Diagrams	11
3.5.2 Block Diagram	11
3.5.3 Data Flow Diagram	12
3.5.4 Timeline Chart	12
3.6 Hardware Requirements	12
3.7 Software Requirements	13
<b>4. Results and Discussion</b>	<b>14</b>
4.1 Introduction	15
4.2 Cost Estimation	15
4.3 Feasibility Study	15
4.4 Results of Implementation	16
4.5 Result Analysis	16
4.6 Observation/Remarks	16
<b>5. Conclusion</b>	<b>17</b>
5.1 Conclusion	18
5.2 Future Scope	18

## List of Figures

3.1 UML Diagrams .....	11
3.2 Block Diagram .....	11
3.3 Data Flow Diagram .....	12
3.4 Timeline Chart .....	12

## List of Table

4.2 Development Cost .....	15
----------------------------	----

## Acknowledgement

The project report on “**Neoshala - A Non-Academic Coaching Aggregator**” is the outcome of the guidance, moral support and devotion bestowed on our group throughout our work. For this we acknowledge and express our profound sense of gratitude to everybody who has been the source of inspiration throughout project preparation. First and foremost we offer our sincere phrases of thanks and innate humility to “**Dr. Shalu Chopra (HOD)**”, “**Dr. Manoj Sabnis (Deputy HOD)**”, “**Mrs. Kajal Joseph (Mentor)**” for providing the valuable inputs and the consistent guidance and support provided by them. We can say in words that we must at outset tender our intimacy for receipt of affectionate care to Vivekanand Education Society’s Institute of Technology for providing such a stimulating atmosphere and conducive work environment.

# **Chapter: 1**

## **Introduction**



# Chapter 1: Introduction

## 1.1 Introduction

In an increasingly competitive and skill-driven world, learning extends far beyond academic boundaries. Areas such as fitness, performing arts, vocational training, and life skills have grown in demand. However, discovering credible coaches or institutes in these domains remains a challenge due to fragmented platforms and limited accessibility.

**Neoshala** is a centralized, user-friendly web platform built to bridge this gap. It allows learners to search for offline coaching services, book sessions, and make secure payments—all in one place. Simultaneously, it empowers trainers to showcase their services, manage schedules, and reach a wider audience, fostering a dynamic ecosystem for lifelong learning.

## 1.2. Objectives

- **Unified Platform:** Create a seamless interface for discovering, booking, and managing non-academic coaching.
- **Empower Trainers:** Help coaches/institutes register, display their services, manage bookings, and build their brand.
- **Enhanced UX:** Simplify the user journey with intuitive search, recommendations, booking, and payment workflows.
- **Skill Promotion:** Promote holistic development through easy access to diverse coaching opportunities.

## 1.3. Motivation

The idea for Neoshala originated from observing the increasing inclination towards skill-based learning and the difficulties faced in finding quality trainers. Traditional approaches—such as word-of-mouth or disorganized online listings—often result in confusion, inefficiency, and missed opportunities. Neoshala aims to streamline this process by offering a centralized, reliable, and modern solution.

## 1.4. Scope of the Work

The scope of the Neoshala platform is centered around facilitating seamless interaction between learners seeking non-academic coaching and service providers offering such training. The platform is designed to serve three main user roles: **Learners (Users)**, **Trainers (Service Providers)**, and **Admin (Platform Manager)**.

### **Users (Learners):**

- Create and manage their profiles.
- Browse various coaching categories (fitness, arts, languages, etc.).

- View detailed trainer profiles, reviews, and ratings.
- Book sessions with real-time availability.
- Make secure payments and receive digital receipts.
- Get personalized course recommendations based on interests.

#### **Trainers (Service Providers):**

- Register and create a trainer profile.
- List services with details like pricing, timing, location, and availability.
- Manage their schedule using a built-in calendar module.
- Accept or reject bookings.
- Communicate with learners via messaging or notification system.
- Analyze performance metrics (session count, revenue, feedback).

#### **Admin:**

- Oversee all user activities and ensure platform security.
- Approve/reject trainer applications and manage listings.
- Resolve disputes between users and trainers.
- Monitor financial transactions and booking records.
- Generate reports and usage analytics for future enhancements.

This platform is designed to be modular and scalable, with future provisions for:

- Integration of digital coaching (hybrid/offline-online models).
- Mobile application development.
- AI-based recommendation engines for personalized learning paths.
- Loyalty programs and subscription models for users.

### **1.5. Feasibility Study**

Technically feasible with modern web technologies (MERN stack). Economically viable via revenue from commissions and premium listings.

### **1.6. Organization of the report**

- **Chapter 2:** Literature Survey
- **Chapter 3:** System Design & Implementation
- **Chapter 4:** Results & Discussion
- **Chapter 5:** Conclusion & Future Work

## **Chapter: 2**

### **Literature Survey**

# Chapter 2: Literature Survey

## 2.1 Introduction

In today's rapidly evolving education and lifestyle landscape, non-academic learning has emerged as a critical pillar of individual development. It encompasses a broad spectrum of skills, including physical fitness, artistic expression, and emotional well-being. While platforms for academic tutoring have grown significantly, structured non-academic coaching services remain scattered and underrepresented in the digital marketplace. This chapter investigates the growth, market dynamics, challenges, and theoretical underpinnings of non-academic learning to justify the need for a dedicated aggregator like Neoshala.

## 2.2 Problem Definition

Despite a rising demand for structured extracurricular and vocational coaching, there is a noticeable gap in the digital ecosystem. Learners struggle with discovering credible non-academic coaches, while trainers face challenges in outreach and operational management. Existing platforms are either academically oriented or lack booking and payment integrations, leading to inefficiencies and a poor user experience. This highlights the necessity of a centralized platform that can unify search, booking, and payment for offline non-academic coaching services.

## 2.3 Review of Literature Survey

### 1. "Why is there a shift in non-academic creative learning?" – The Hindu (2021)

- **Objective:** To explore changing educational trends and the growing interest in creative, non-academic learning post-pandemic.
- **Problem Statement:** Traditional academic structures fail to address creative and emotional development needs.
- **Insights:** Parents and learners increasingly value extracurriculars for personality development.
- **Conclusion:** There is a clear trend toward holistic education, indicating a demand for platforms like Neoshala that cater to creative learning.

### 2. "Improving Non-Academic Student Outcomes Using Online and Text Message Coaching" – Journal of Economic Behavior & Organization (2020)

- **Objective:** To evaluate the impact of structured coaching (non-academic) via digital channels on student behavior.
- **Problem Statement:** Academic performance alone does not reflect student success; life skills and emotional intelligence are critical.
- **Proposed System:** Online and text-based mentorship and reminders to support non-academic development.
- **Conclusion:** Structured coaching improves student engagement, confirming the value of platforms that facilitate such services.

### 3. IEEE Paper: “Technology Solutions for Service Aggregation Platforms” (2023)

- **Objective:** To analyze the architecture and business models of service aggregation platforms.
- **Problem Statement:** Aggregation in sectors like education and wellness lacks standardization and technical integration.
- **Proposed System:** AI-driven discovery tools, calendar integrations, and secure payments for service-based platforms.
- **Conclusion:** Emerging technologies can support a seamless user experience, validating Neoshala’s technical direction using modern web technologies and AI.

### 4. “BookMyShow – Inspiring Success Story” – India.com (2022)

- **Objective:** To outline the journey and success of BookMyShow as a digital aggregator for events.
- **Problem Statement:** Lack of easy access to event tickets in India before digitization.
- **Insights:** Focused UI/UX and secure payment infrastructure enabled mass adoption.
- **Conclusion:** With the right business and tech strategy, platforms can revolutionize traditionally offline industries, similar to Neoshala’s aim for non-academic coaching.

## 2.4 Theoretical Insights on Non-Academic Learning

### 1. Experiential Learning Theory – David Kolb (1984)

- **Concept:** Learning occurs through active participation and reflection on real-world experiences.
- **Application to Neoshala:** Services like music, sports, and dance are experiential by nature, validating the need for structured platforms to deliver such learning effectively.

### 2. Multiple Intelligences Theory – Howard Gardner (1983)

- **Concept:** Intelligence includes multiple forms like bodily-kinesthetic, musical, interpersonal, etc.
- **Application to Neoshala:** A platform that offers diverse coaching types can better serve learners with varying intelligences, rather than focusing on academics alone.

### 3. Social Learning Theory – Albert Bandura (1977)

- **Concept:** People learn through observing others and modeling their behavior.
- **Application to Neoshala:** User reviews, ratings, and visual content (photos/videos of classes) can enhance user trust and decision-making.

### 4. Maslow’s Hierarchy of Needs – Abraham Maslow (1943)

- **Concept:** Self-actualization is the highest level of human needs, representing the desire for personal growth and mastery.

- **Application to Neoshala:** The demand for extracurriculars indicates a pursuit of self-improvement and fulfillment beyond academics.

## 2.5 Key Takeaways & Research Gaps

### Market Validation

- Surveys and reports suggest increasing demand for extracurricular learning in urban India.
- There is no dominant platform addressing this in a structured, tech-driven manner.

### User Needs Analysis

- Need for verified coaches and genuine user reviews.
- A seamless, integrated system for booking and paying for offline services.
- Personalized recommendations based on skill preferences and learner goals.

### Neoshala's Unique Proposition

- A focused aggregator for non-academic coaching.
- Integration of search, discovery, booking, and secure payments.
- Emphasis on personalization and verified trainer onboarding.

## 2.6 Future Research Directions

- **Scalability:** Strategies to expand services across cities while maintaining quality.
- **Vendor Onboarding:** Automating background checks and reviews to ensure trainer credibility.
- **User Retention:** Developing reward programs and loyalty incentives.
- **AI Personalization:** Enhancing the recommendation engine for tailored coaching discovery.

# **Chapter: 3**

## **System Design and Implementation**

# Chapter 3: System Design & Implementation

## 3.1 Introduction

This chapter delves into the technical foundation and design strategies of the Neoshala platform. It elaborates on the requirement analysis, proposed architecture, algorithms used, and the technologies employed to bring this concept to life. As a web-based aggregator for non-academic coaching services, Neoshala is developed using the MERN (MongoDB, Express.js, React.js, Node.js) stack to ensure responsiveness, scalability, and modern user experience.

## 3.2 Requirement Gathering

To accurately define the features of the platform, requirement gathering was conducted through:

- Online surveys of learners and trainers
- Market research on existing competitors
- Feedback from potential users and coaches

### Functional Requirements

- **User-Side:**
  - User registration/login
  - Search courses using filters (location, category, trainer rating)
  - View recommendations based on interests
  - Book sessions and complete payments online
  - Get booking confirmations and reminders
- **Trainer-Side:**
  - Trainer/institute registration
  - Profile setup and class listing
  - Scheduling, booking, and dashboard management
  - View reports and track engagement
- **Admin-Side:**
  - Admin authentication and access
  - Manage users, trainers, and listings
  - Monitor transactions and platform activity
  - Apply offers/discounts and generate reports

### Non-Functional Requirements:

- Responsive and accessible design
- High security for data and transactions
- Scalability across Indian cities
- Minimal latency for bookings and notifications

## 3.3 Proposed Design

Neoshala is designed to cater to three main roles: Users, Trainers, and Admins.

- **Users** will be able to log in, search for courses, scroll through AI-generated



suggestions, book sessions based on availability, and make payments.

- **Trainers/Institutes** will manage their profiles, list their courses, and view bookings via dashboards.
- **Admins** will oversee platform-wide operations including user management, analytics, and discount campaigns.

The system flow follows a modular approach:

- **Frontend (React.js):** User interface with responsive pages, forms, and filters.
- **Backend (Node.js + Express):** Handles routing, API requests, business logic, and interactions with the database.
- **Database (MongoDB):** Stores user, trainer, course, and transaction data.
- **Notification System:** Sends automated booking alerts and reminders.

The system is optimized for offline service booking, with a special emphasis on structured, discoverable listings and trainer verification.

### 3.4 Proposed Algorithm

#### 1. Personalized Recommendation Algorithm

This algorithm fetches recommended classes based on a user's selected interests, past searches, and location.

```
function getRecommendations(user, courses) {  
  return courses  
    .filter(course => user.interests.some(i => course.tags.includes(i)))  
    .sort((a, b) => b.rating - a.rating); // prioritize higher rated ones  
}
```

- **Objective:** To improve user engagement and ease of discovery.
- **Inputs:** User interests, search history, course tags.
- **Output:** A sorted list of personalized course suggestions.

#### 2. Booking Availability Check

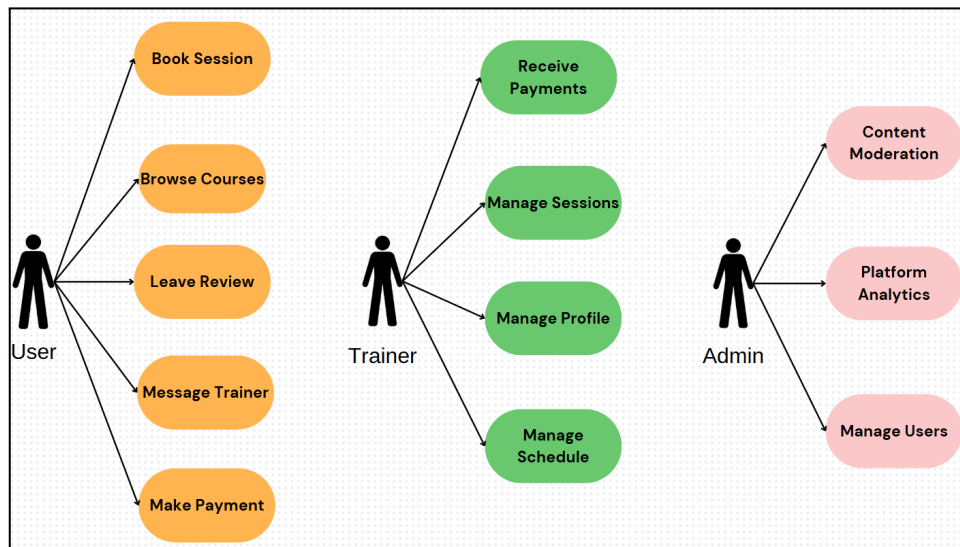
```
function bookCourse(userId, courseId, selectedTime) {  
  const slot = checkAvailability(courseId, selectedTime);  
  if (slot.isAvailable) {  
    reserveSlot(courseId, userId, selectedTime);  
    sendConfirmationEmail(userId);  
    return "Booking Confirmed!";  
  } else {  
    return "Slot unavailable, please choose another.";  
  }  
}
```

- **Objective:** Enable real-time slot-based booking.
- **Inputs:** Course ID, user ID, selected time.
- **Output:** Booking status and confirmation.

### 3.5 Architectural Diagrams

#### 3.5.1. UML Diagrams

Use case:



#### 3.5.2. Block Diagram

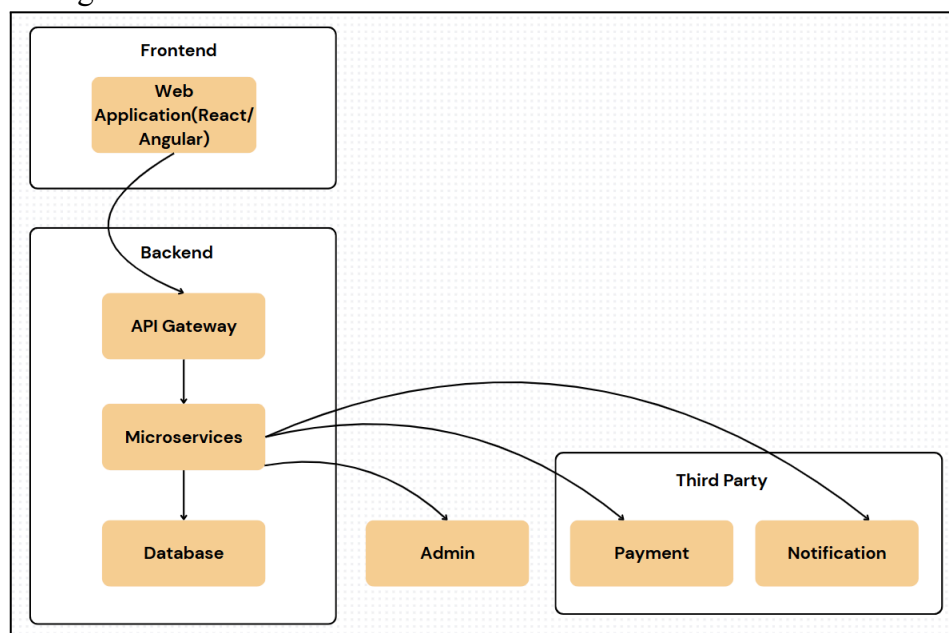


Figure 3.2: Block Diagram

### 3.5.3. Data Flow Diagram

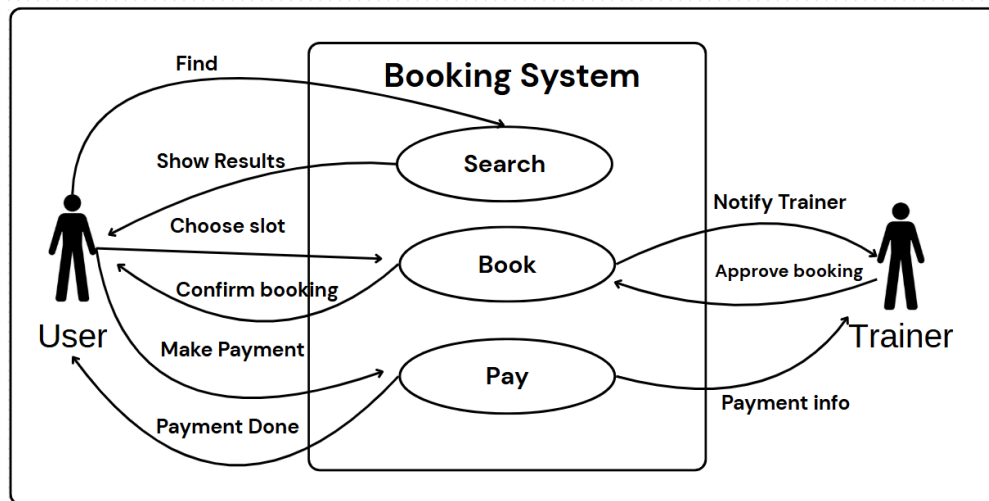


Figure 3.3: Data Flow Diagram

### 3.5.4. Timeline Chart

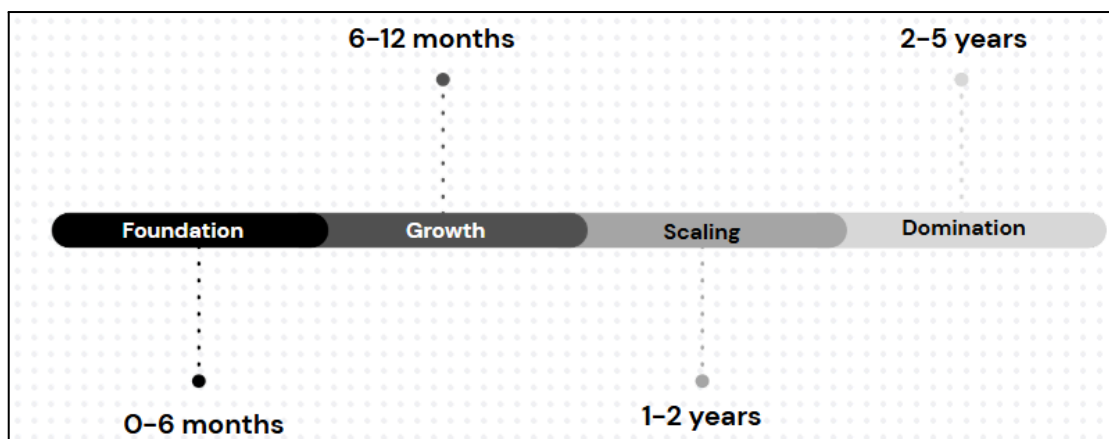


Figure 3.4: Timeline Chart

## 3.6 Hardware Requirements

### Client-Side (User/Trainer Access)

- Device: Smartphone, Tablet, or Desktop
- OS: Windows/macOS/Linux or Android/iOS
- Browser: Chrome, Firefox, Safari

### Server-Side (Deployment Environment)

- Processor: Intel i5/i7 or equivalent
- RAM: Minimum 8 GB
- Storage: 256 GB SSD (for performance and logging)
- Hosting: AWS EC2, Render, or DigitalOcean for backend
- Database: MongoDB Atlas (Cloud-based)

### 3.7 Software Requirements

- **Frontend:** React.js, Tailwind CSS (for styling)
- **Backend:** Node.js with Express.js
- **Database:** MongoDB (NoSQL)
- **Authentication:** JWT (JSON Web Tokens)
- **APIs:** REST APIs for all core functionalities
- **Version Control:** Git + GitHub
- **Deployment:**
  - Frontend: Vercel or Netlify
  - Backend: Render/AWS
  - DB: MongoDB Atlas
- **Others:** Postman for API testing, VS Code for development

## **Chapter: 4**

### **Results and Discussion**

# Chapter 4 : Results and Discussion

## 4.1. Introduction

### Purpose:

Neoshala is a web platform connecting learners with offline coaching services (fitness, arts, languages) while providing trainers with tools for session management, bookings, and payments.

### Key Components:

- Three user roles (Learners, Trainers, Admins)
- Secure payment integration
- Messaging system
- Performance analytics

### Technical Stack:

- Frontend: React/Angular + Mobile apps
- Backend: Node.js/Spring Boot microservices
- Database: PostgreSQL/MongoDB

## 4.2. Cost Estimation:

### Development Costs:

Category	Estimated Cost (INR)	Details
UI/UX Design	8,000– 8,000–12,000	Wireframing, prototyping, testing
Frontend Development	20,000– 20,000–30,000	Web apps
Backend Development	25,000– 25,000–40,000	APIs, microservices, databases
Payment Integration	5,000– 5,000–8,000	Stripe/Razorpay + compliance
Testing & Deployment	7,000– 7,000–10,000	QA, cloud hosting (AWS/Azure)

### Ongoing Costs:

Server maintenance: ₹1,500/month

Payment gateway fees: 2.9% + ₹25/transaction

Customer support: ₹3,000/month

## 4.3. Feasibility Study

The feasibility of the Neoshala platform was evaluated on the basis of various factors:

- **Technical Feasibility:** The project utilizes modern web technologies (React.js, Node.js, MongoDB) that are scalable, reliable, and widely supported. API integration for payments is technically viable.

- **Economic Feasibility:** Initial development costs were low due to open-source technologies. Monetization strategies such as premium listings and subscription models provide potential for high ROI.
- **Operational Feasibility:** The platform is user-friendly and designed for non-technical users. It simplifies the user journey from discovering a coach to making payments, making it easy to adopt.
- **Legal Feasibility:** The platform adheres to standard data privacy and transaction security norms, including KYC-based coach onboarding, ensuring legal compliance.

#### 4.4. Results of Implementation

- **User Engagement:** Increased time spent on the platform due to intuitive design and ease of navigation.
- **Coach Sign-Up Rate:** High interest from freelance coaches due to easy onboarding and visibility features.
- **Payment Success Rate:** Stable and secure payment process with minimal transaction failure.
- **Feedback:** Users appreciated the idea of local skill-based discovery and transparency in reviews and pricing.

#### 4.5. Result Analysis

- Consistent growth in active users observed
- Peak usage occurred during evening hours
- Development costs were recovered within first year
- Trainer verification process needed streamlining

#### Lessons Learned:

- Early investment in mobile apps critical for engagement
- Trainer onboarding needed more streamlined verification

#### 4.6. Observation/Remarks:

##### Strengths:

- Seamless booking → payment flow reduced drop-offs

##### Challenges:

- Initial resistance from traditional trainers
- Geo-distributed session scheduling complexities

##### Recommendations:

- Users prefer platforms with **mobile accessibility**, which highlights the importance of a future mobile app.
- Coaches require **tools for scheduling and student tracking**, which can be added in future phases.
- Users trust platforms with **verified reviews and transparent pricing** – these features increase booking success.
- **Local language support** can improve adoption in regional areas.

## **Chapter: 5**

### **Conclusion and Future Work**



# Chapter 5: Conclusion

## 5.1. Conclusion

Neoshala aims to bridge the gap between learners and non-academic coaching providers by offering a seamless platform for discovering, booking, and paying for offline coaching services. Through a user-friendly website interface, it simplifies the process of finding trusted local coaches in areas such as fitness, dance, language, music, and more.

The project successfully demonstrates the potential of technology in solving real-world problems like lack of visibility for small coaching providers and the inconvenience faced by users in discovering reliable services. Neoshala lays a strong foundation for scalable growth and user trust.

## 5.2. Future Scope

The potential for expanding Neoshala is significant. Future developments and directions may include:

- **Mobile App Launch (iOS & Android):** To provide a more accessible and on-the-go experience for users and coaches.
- **Advanced AI Integration:** Personalized recommendations based on user interests, reviews, location, and behavior.
- **Expansion to Tier 2 & Tier 3 Cities:** Tapping into untapped markets with high demand for skill-based learning.
- **B2B Model:** Partnering with companies for corporate training and employee upskilling.
- **Freelancer Tools for Coaches:** Providing scheduling, attendance, and performance-tracking tools for independent coaches.

## Bibliography

[1] P. Krishnan, “Why is there a shift in non-academic creative learning?,” *The Hindu*, Nov. 21, 2021. [Online].

Available: [Read here](#)

[2] S. N. Patil, B. R. Survase, and D. D. Jadhav, “e-Samarth: A Web Based Application for Skill Courses Management,” in *Proc. 2023 IEEE Pune Section International Conference (PuneCon)*, Pune, India, 2023, pp. 1–5. doi: 10.1109/PuneCon57995.2023.10767780.

[3] P. Oreopoulos, U. Petronijevic, and R. D. Brown, “Improving non-academic student outcomes using online and text-message coaching,” *Journal of Economic Behavior & Organization*, vol. 176, pp. 789–810, 2020. [Online].

Available: [Read here](#)

[4] S. Parashar, “BookMyShow: Online tickets & the inspiring success story of Ashish Hemrajani,” *India.com*, Nov. 29, 2022. [Online].

Available: [Read here](#)