
Shportal

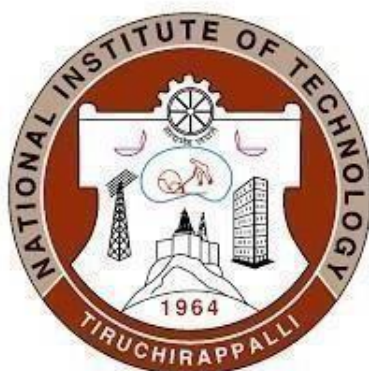
A project report submitted in partial fulfilment of the requirements for the
award of the degree of

MASTER OF COMPUTER APPLICATIONS

**IN
COMPUTER APPLICATIONS**

BY

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DEPARTMENT OF COMPUTER APPLICATIONS

NATIONAL INSTITUTE OF TECHNOLOGY

TIRUCHIRAPPALLI – 620015

JUNE 2023

BONAFIDE CERTIFICATE

This is to certify that the project entitled “**Shportal**” is a project work successfully done by

Navin Parmar (205120056)

in partial fulfilment of the requirements for the award of the degree of **MASTER OF
COMPUTER APPLICATIONS** from **NATIONAL INSTITUTE OF TECHNOLOGY,
TIRUCHIRAPPALLI**, during the academic year **2022-23** (6th Semester - CA750 Project Work).

Dr. S. Nickolas

Project Guide

Dr. Michael Arock

Head of the Department

Project Viva held on

Internal Examiner

External Examiner

ABSTRACT

The NITT ShPortal is an innovative online platform designed to assist students at the National Institute of Technology, Trichy (NITT) in streamlining their placement process. This web-based system offers a wide range of features to help students navigate their journey towards securing internships and job placements. By leveraging the power of peer-to-peer interactions, the platform allows juniors to access interview experiences and placement procedures shared by their seniors. The portal also facilitates direct communication between juniors and seniors, enabling juniors to seek guidance and advice from experienced individuals.

In addition to its placement-related functionalities, the platform incorporates a dedicated book store where students can sell their used books and other students can purchase them. This feature promotes sustainability and provides an affordable option for acquiring course materials. Furthermore, the portal offers a curated collection of highly-rated senior notes for core subjects and programming languages, helping students enhance their understanding and academic performance.

To ensure security and restrict access to authorized users, the NITT Placement Portal utilizes webmail verification for the signup process, allowing only NITT students to create accounts and access its features. This verification method ensures that the platform remains exclusive to NITT's student community, fostering a sense of trust and reliability among users.

Overall, the NITT Placement Portal serves as a comprehensive and user-friendly platform that empowers students by providing them with invaluable resources, insights, and connections to excel in their placement endeavors. By bridging the gap between juniors and seniors, offering a convenient book exchange service, and offering curated academic notes, this platform aims to optimize the placement experience for NITT students and facilitate their academic growth.

ACKNOWLEDGEMENT

I express our deep sense of gratitude to **Dr. G. Aghila**, Director, National Institute of Technology, Tiruchirappalli for giving me an opportunity to do this project.

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I express my heartfelt gratitude to my internal guide **Dr. S. Nickolas**, Professor, Department of Computer Applications, National Institute of Technology, Tiruchirappalli for his immense support and guidance during the study.

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1.INTRODUCTION

The purpose of this project is to develop a web application that assists students of the National Institute of Technology, Trichy (NITT) in finding placement opportunities and accessing the interview experiences of their seniors. Additionally, the platform will provide a bookstore where students can sell their old books, and others can purchase them. Furthermore, the application will allow students to access highly-rated notes shared by seniors for core subjects and programming languages. The project will incorporate webmail verification to ensure that only NITT students can access the platform.

2.PROBLEM STATEMENT

Develop a web-based platform exclusively for students of the National Institute of Technology (NITT) that aims to facilitate the placement process, enable access to interview procedures of senior students, and foster communication between juniors and seniors. The platform should also include a bookstore where students can sell their books and purchase both old and new books from other students. Additionally, the platform should provide access to highly rated senior notes for core subjects and programming languages. The system should implement a webmail verification system for signup to ensure that only NITT students can log in to the platform.

3. OBJECTIVE

- The main objectives of the project are as follows:
- Provide a platform for NITT students to access placement procedures and interview experiences shared by their seniors.
- Create a book store where students can sell their used books and other students can purchase them.
- Allow students to access highly-rated notes for core subjects and programming languages.
- Implement webmail verification to restrict access to NITT students only.

4. Features and Functionality

The project will include the following features:-

4.1 Student Registration and Login

- Students can register using their NITT webmail address and create an account.
- Webmail verification will be implemented during the signup process to authenticate NITT students.
- Once registered, students can log in to their accounts using their credentials.

4.2 Placement Procedures and Interview Experiences

- Seniors can upload information about the placement procedures of different companies.
- Seniors can also share their interview experiences, including questions asked and tips for success.
- Juniors can access this information to prepare for their own placements.
- Students can search for specific companies or filter information based on their interests.

4.3 Bookstore

- Students can sell their used books by listing them on the platform.
- Other students can search for books they need and purchase them directly from the sellers.
- The platform will facilitate communication between the buyer and the seller for book transactions.

4.4 Senior Notes

- Seniors can upload their notes for core subjects and programming languages.
- Students can access these notes, sorted by popularity or ratings.
- The most liked and highly-rated notes will be prominently featured.

5. Technology Stack

The project will be developed using the following technologies:

- **Front-end:** HTML, CSS, JavaScript, React.js
- **Back-end:** Node.js, Express.js
- **Database:** MongoDB
- **Authentication:** Webmail verification and JWT (JSON Web Tokens)

Project Implementation Plan : The project will follow the following implementation plan:

5.1 Requirements Gathering and Analysis

- Understand the specific requirements of NITT students regarding placement information, interview experiences, book selling, and note sharing.
- Define the scope of the project and prioritize the features.

5.2 Design and Database Schema

- Create a user-friendly and intuitive design for the web application.
- Design the database schema to store user information, placement data, book details, and notes.

5.3 Front-end Development

- Implement the user interface using HTML, CSS, and JavaScript.
- Utilize React.js to build interactive components and ensure a responsive design.

5.4 Back-end Development

- Develop the server-side functionality using Node.js and Express.js.
- Integrate the database to store and retrieve user data, placement information, book details, and notes.
- Implement webmail verification during the signup process.

5.5 Integration and Testing

- Integrate the front-end and back-end components to create a fully functional web application.
- Perform thorough testing to identify and fix any bugs or issues.
- Conduct user acceptance testing with NITT students to gather feedback and make necessary improvements.

6. System Development and Implementation

1. Requirements Gathering:

- Gather detailed requirements from stakeholders, including students, seniors, and faculty members at the National Institute of Technology, Tiruchirappalli (NITT).
- Identify key features such as placement process information, interview experiences, senior's placement process sharing, email communication, book store functionality for buying and selling books, and access to senior notes for core subjects and programming languages.

2. System Design:

- Design a user-friendly web application that allows NITT students to access various features and functionalities.
- Use a responsive design approach to ensure compatibility with different devices (desktop, tablets, mobile).

3. User Authentication and Authorization:

- Implement a user registration and login system.
- Use NITT's webmail verification for signup to ensure only NITT students can access the platform.
- Maintain user profiles with relevant information such as email, contact details, and academic details.

4. Placement Process Information:

- Create a section that provides detailed information about the placement process, including registration, eligibility criteria, interview rounds, and frequently asked questions.
- Keep the information up to date and allow for easy updates by authorized administrators.

5. Interview Experience Sharing:

- Allow senior students to upload their placement process experiences and interview questions.
- Provide search and filtering options for juniors to find relevant experiences by company, role, or department.
- Implement a rating system to help juniors identify the most helpful experiences.

6. Communication:

- Enable juniors to contact seniors via email using an internal messaging system.

- Protect the privacy of email addresses by routing communications through the platform without revealing actual email addresses.

7. Book Store Functionality:

- Develop a marketplace where students can sell their old or new books.
- Provide search and filtering options for students to find the books they need.
- Include features such as book descriptions, pricing, condition, and contact information for the seller.
- Implement a secure payment gateway for book purchases if required.

8. Security and Privacy:

- Implement appropriate security measures to protect user data, such as encryption, secure storage, and secure data transmission.
- Ensure that only authorized users can access and modify the relevant data.
- Comply with relevant data protection regulations, including obtaining necessary user consent for data collection and processing.

9. Testing and Deployment:

- Conduct thorough testing to identify and fix any bugs or issues.
- Deploy the system on a reliable web hosting platform.
- Monitor system performance and make necessary optimizations.

10. Maintenance and Support:

- Provide ongoing maintenance and support to ensure the system runs smoothly.
- Regularly update the platform with new features and improvements based on user feedback and evolving requirements.

7. Modules/Schema

In this, we use three schema :-

- User
- books
- Token
- Placements
- academics

7.1 User

```
const Userschema = new Schema({
  name: {
    type:String,
    required:true
  },
  email: {
    type:String,
    required:true,
    unique:true
  },
  password: {
    type:String,
    required:true
  },
  mobile_no:{
    type:String,
    required:true,
    unique:true
  },
  user_image:{
    type:String,
    required:true
  },
  public_id:{
    type:String,
    required:true
  },
  department:{
    type:String,
    required:true
  },
  },
```

```

date:{
  type:Date,
  default:Date.now
},
gender:{
  type:String,
  required:true
},
role:{
  type:String,
  enum:[roles.ADMIN, roles.CLIENT],
  default:roles.CLIENT
},
isBlocked:{
  type:Boolean,
  default:false
},
verified:{
  type:Boolean,
  default:false
}
});

```

7.2. BOOKS

```

const itemSchema=new Schema({
  user:{
    type:mongoose.Schema.Types.ObjectId,
    ref:'user'
  },
  user_name:{
    type:String,
    required:true
  },
  name:{
    type:String,
    required:true
  },
  // type:{
  //   type:String
  // },
  date:{
    type:Date,
    default:Date.now
  },

```

```

// place:{
//   type:String,
//   required:true
// },
description:{
  type:String
},
image_name:{
  type:String,
  required:true
},
public_id:{
  type:String,
  required:true
},
is_reported:{
  type:Boolean,
  default:false
},
status:{
  type:String,
  required:true
}
});

```

7.3. Token

```

const tokenSchema = new mongoose.Schema(
{
  userId: {
    type: Schema.Types.ObjectId,
    ref: 'user',
    required: true
  },
  token: {
    type: String,
    required: true,
  },
  createdAt: {
    type: Date,
    default: Date.now,
    index: { expires: 1 }
  }
}
);

```

7.4 PLACEMENT

```
const placementSchema = new mongoose.Schema(
  {
    userId: {
      type: Schema.Types.ObjectId,
      ref: 'user',
      required: true
    },
    company_name: {
      type: String,
      required: true,
    },
    profile: {
      type: String,
      required: true,
    },
    No_students: {
      type: String,
      required: true,
    },
    No_rounds: {
      type: String,
      required: true,
    },
    intern_or_fte: {
      type: String,
      required: true,
    },
    round_exp: {
      type: String,
      required: true,
    },
    uploader:{
      type:String,
      required:true
    },
    date: {
      type: Date,
      required: true,
    }
  }
);
```

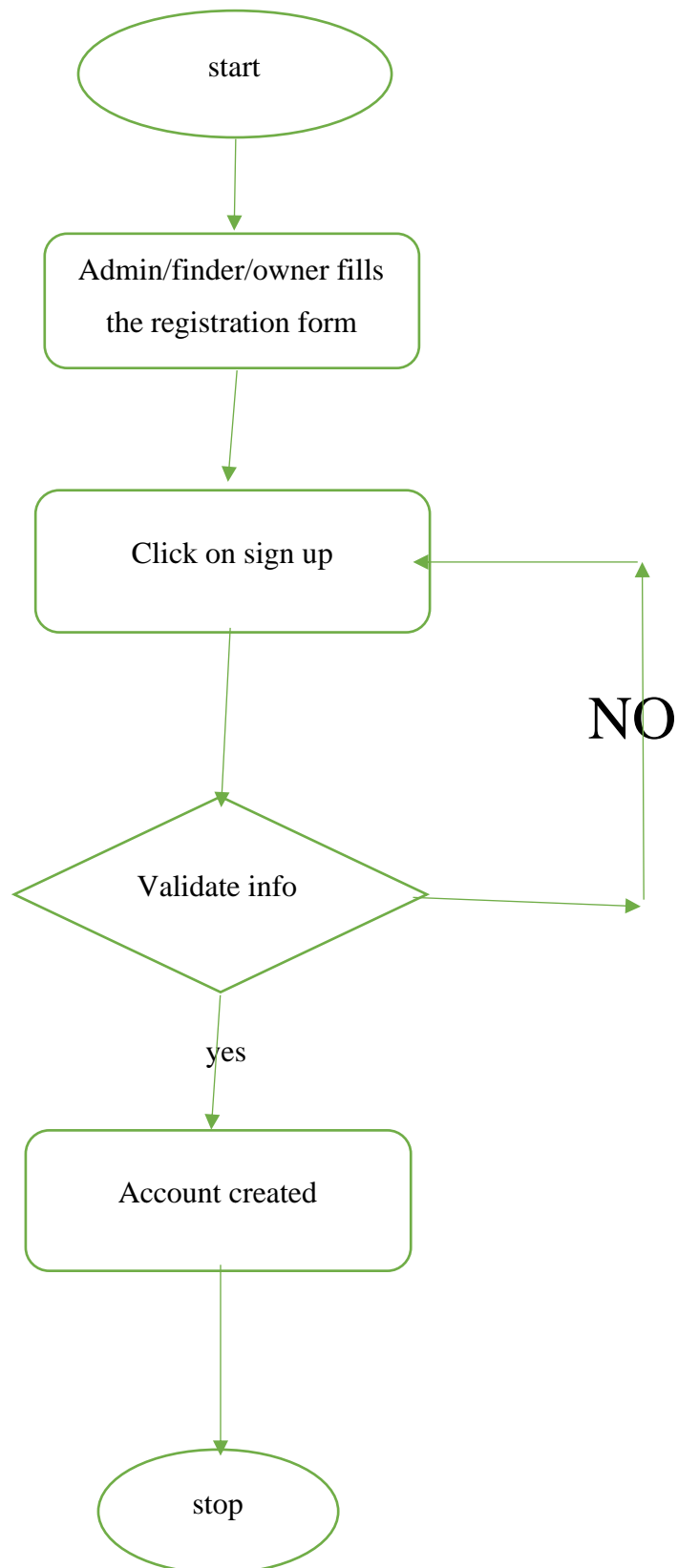

7.5 NOTES

```
const notesSchema=new Schema({
  user_id:{
    type:mongoose.Schema.Types.ObjectId,
    ref:'user'
  },
  user_name:{
    type:String,
    required:true
  },
  notes_name:{
    type:String,
    required:true
  },
  file_name:{
    type:String,
    required:true
  },
  date:{
    type>Date,
    default:Date.now
  },
  description:{
    type:String
  },

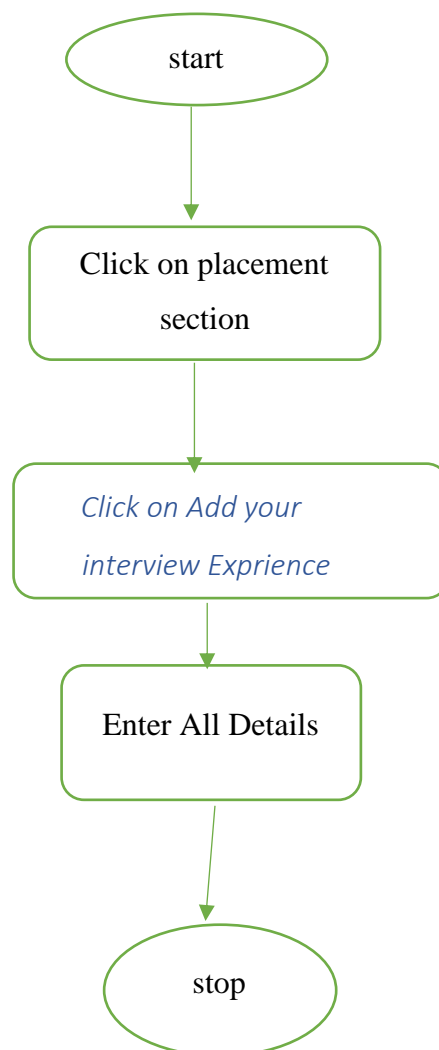
  is_reported:{
    type:Boolean,
    default:false
  },
  likes:{
    type:Number,
    default:0
  }
});
```

8. ACTIVITY DIAGRAM

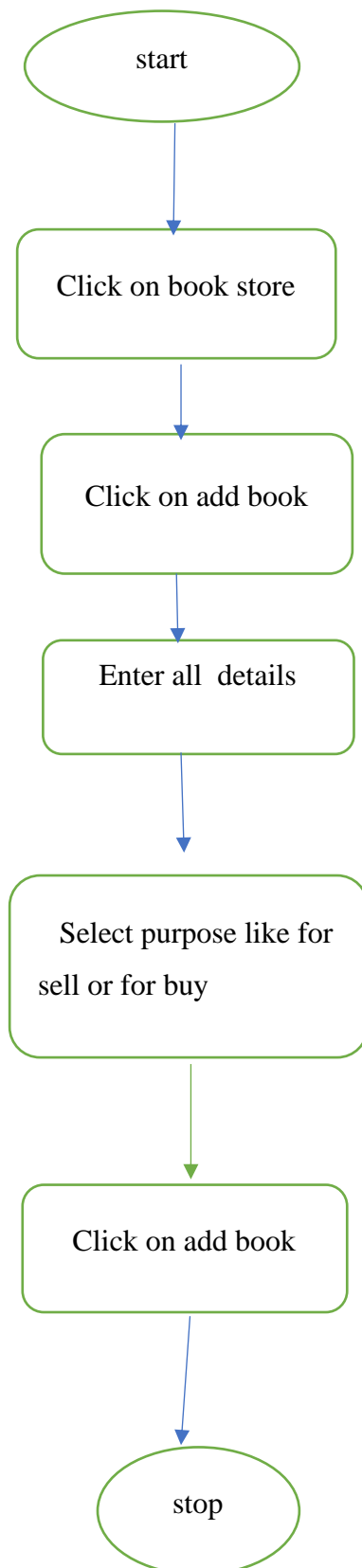
8.1. Create Account



8.2. Upload placement procedure:

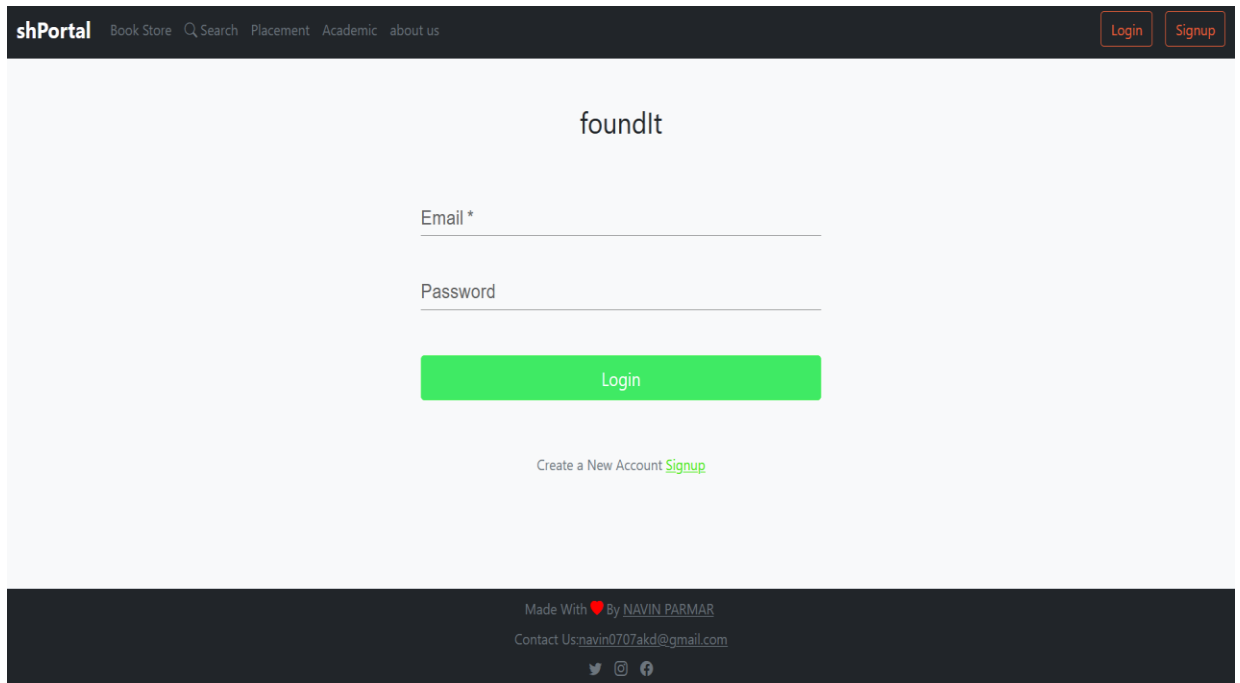


8.3. Upload book for sell



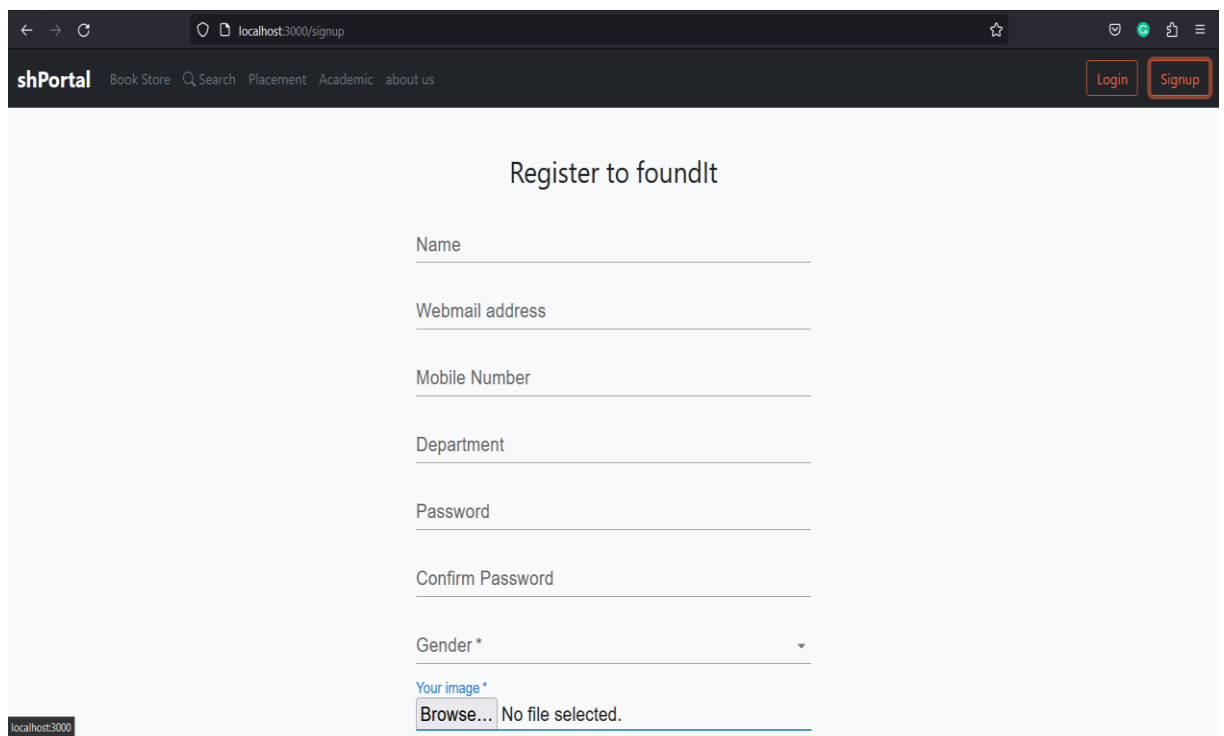
9. SCREENSHOTS

9.1 Login



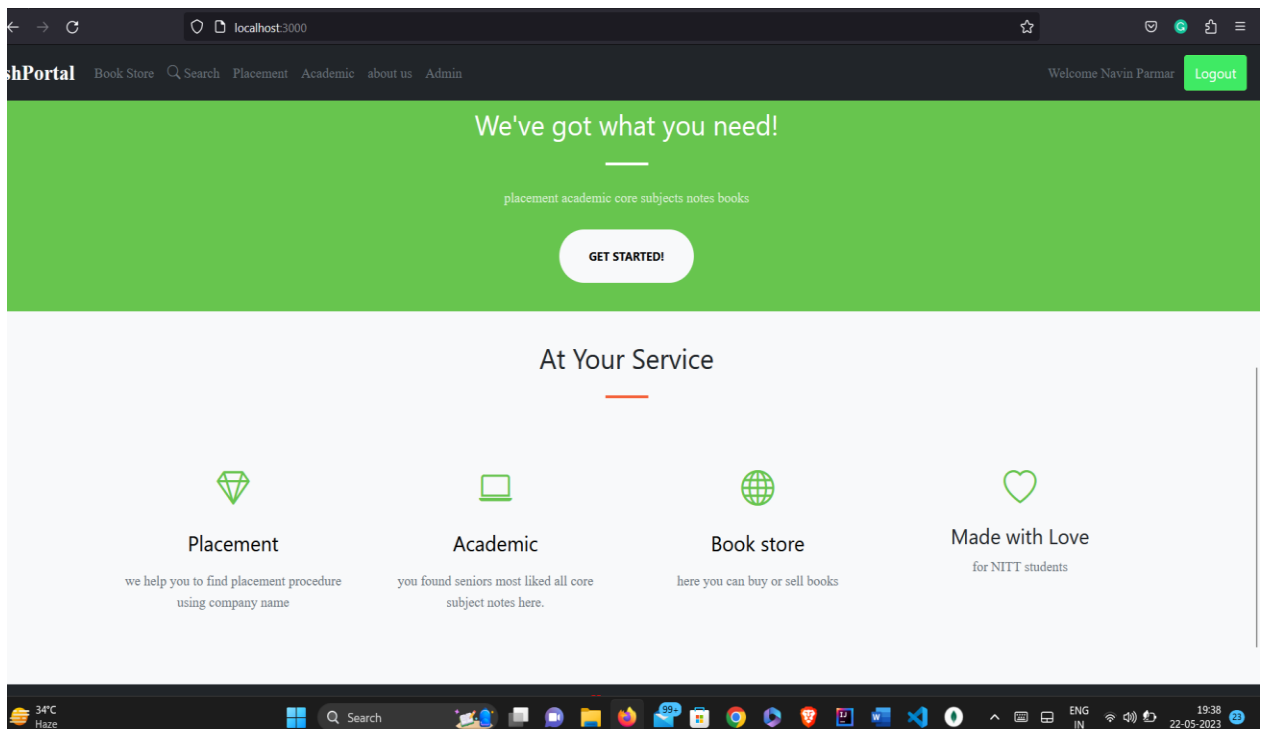
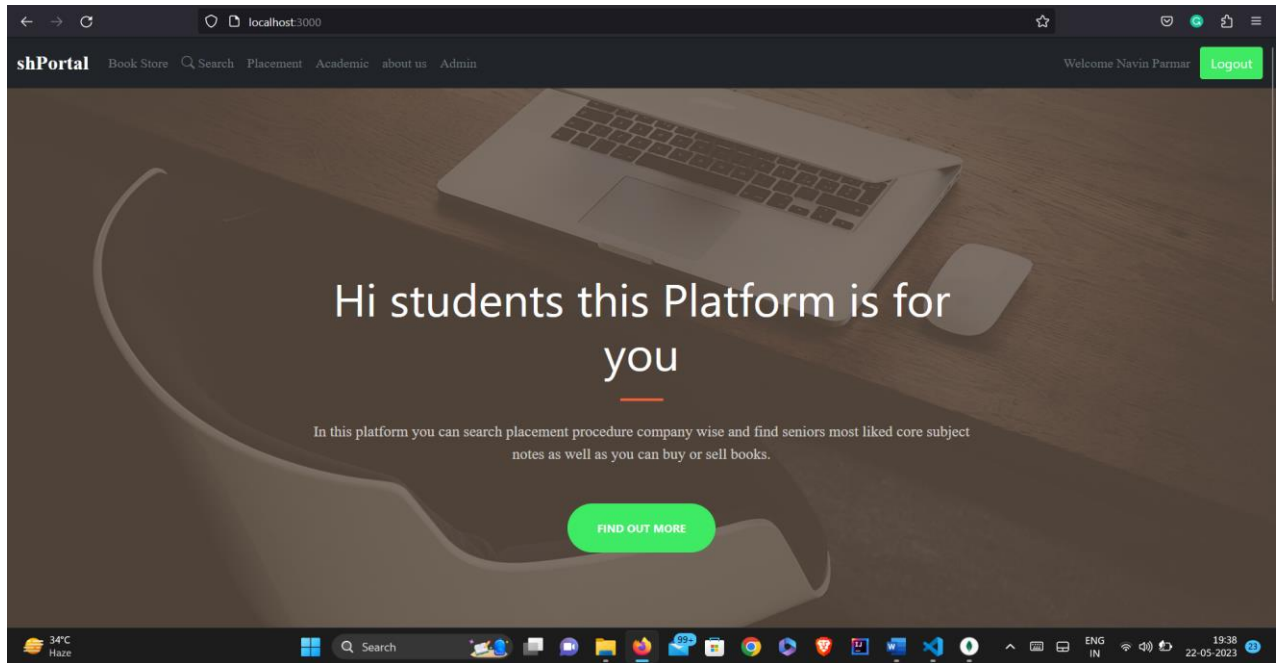
The screenshot shows the login page of the 'shPortal' application. The header includes the 'shPortal' logo and navigation links: 'Book Store', 'Search', 'Placement', 'Academic', and 'about us'. In the top right corner, there are 'Login' and 'Signup' buttons. The main content area is titled 'foundIt' and contains a login form with fields for 'Email *' and 'Password'. Below these fields is a prominent green 'Login' button. At the bottom of the form, there is a link to 'Create a New Account Signup'. The footer contains the text 'Made With ❤️ By NAVIN PARMAR', contact information 'Contact Us:navin0707akd@gmail.com', and social media icons for Twitter, Instagram, and Facebook.

9.2 Signup



The screenshot shows the signup page of the 'shPortal' application. The browser's address bar indicates the URL 'localhost:3000/signup'. The header is identical to the login page, with the 'shPortal' logo, navigation links, and 'Login'/'Signup' buttons. The main content area is titled 'Register to foundIt' and contains a registration form. The form includes fields for 'Name', 'Webmail address', 'Mobile Number', 'Department', 'Password', and 'Confirm Password'. There is also a 'Gender *' dropdown menu. At the bottom, there is a section for 'Your image *' with a 'Browse...' button and the text 'No file selected.'. The footer of the page is not visible in this screenshot.

9.3. Homepage



9.4. Placement Section

shPortal

Book StoreSearchPlacementAcademicabout usAdmin

Welcome Navin ParmarLogout

STUDENT NAME	COMPANY	DATE	PROFILE	INTERN/FTE	NUMBER_OF_ROUNDS	NUMBER OF STUDENTS	PI EXPERIENCE
Navin Parmar	Pine Labs	2022-10-21T00:00:00.000Z	sde	FTE	5	3	view
Rishikant Patel	SAMSUNG SEMICONDUCTOR INDIA RESEARCH	2022-10-15T00:00:00.000Z	SDE	FTE	3	5	view
Piyush Devda	Amazon	2022-09-20T00:00:00.000Z	SDE	FTE	4	3	view
SHANOOR AHMED	BNY MELLON	2022-09-20T00:00:00.000Z	SDE	Intern+ FTE	3	3	view
Hrshikant Mehta	SAMSUNG SEMICONDUCTOR INDIA RESEARCH	2022-10-15T00:00:00.000Z	SDE	FTE	4	5	view

34°C

9.5 Add interview Experience

shPortal

Book StoreSearchPlacementAcademicabout usAdmin

Welcome Navin ParmarLogout

Add your interview Exprience

Company Name

Profile

Company visit date

dd / mm / yyyy

Number of students slected

Number of rounds

Intern or FTE


Explain Procedure stepwise

Submit

9.6 Open interview experience

shPortal

[Book Store](#) [Search](#) [Placement](#) [Academic](#) [about us](#) [Admin](#)



Username

SHANOOR AHMED

Company :

BNY MELLON

Profile :

SDE

Date :

2022-09-20T00:00:00.000Z

Number of Rounds :

3

Intern or FTE

Intern+ FTE


Send a message

BNY MELLON interview Experience:

Mode: Offline 1st round(Technical): 20-25 mins Tell me about yourself In depth discussion of one of the modules of my project Password Authentication: Given a password, check if it is a strong or a weak password. -> I started with my own assumptions and then the interviewer added some more of his own -> Paper coding Asked a few basic question related to Git and Github What do I do in my free time apart from academics? Asked about the clubs I am in and what we do there Where do I see myself in 5 years professionally and personally Questions for the interviewer 2nd round(Technical): 30-40 mins Took 5-10 mins to review my entire resume. Verified my coding profiles as I had mentioned some of my contest ranks in my resume. Brief discussion on the game I built, the platform I used, workflow, deployment In depth discussion of the workflow for the websites I built, how I distribute my work Things i have learned apart from academics Brief explanation of the AI project I am building Neural Network Knowledge Graph (AI), couldn't answer Questions on Version Control System Asked if i had used Github plugins in any of my projects Function pointer, couple more questions on OOPS Multiple inheritance, use case Questions on computer architecture, which I couldn't answer Little

shPortal

[Book Store](#) [Search](#) [Placement](#) [Academic](#) [about us](#) [Admin](#)



Username

Piyush Devda

Company :

Amazon

Profile :

SDE

Date :

2022-09-20T00:00:00.000Z

Number of Rounds :

4

Intern or FTE

FTE

Send a message

Amazon interview Experience:

Amazon OA was quite simple in first question i was given an array and integer k. Have to make array size equals to k by adding numbers from 1 to infinity which are not present in the array with minimum sum of the added number. In second question given an array ,have to add two numbers unit digit and put back it into the array.this way each iteration size reduces by 1.Do this operation till array size become 2 and finally return string of the remaining numbers in the array. Also behavioural type questions were there Round 1 Initially he gave his intro and asked me TMAY Then he gave me a question <https://leetcode.com/problems/delete-node-in-a-linked-list/> Which i gave approach and code it successfully with the discussion of te 2nd ques he gave me was <https://practice.geeksforgeeks.org/problems/preorder-traversal-and-bst4006/1> I gave him recursive approach after a discussion he satisfied and asked me to code. I coded but some corner cases were missed Then he asked some situation based questions Then he asked me to ask any question if I have. verdict : not selected

9.7 Upload books for buy and sell

The screenshot shows the 'Add Book' modal form in the shPortal application. The form is centered on a dark background. It contains the following fields and elements:

- Name of Book ***: A text input field.
- Purpose ***: A dropdown menu.
- description**: A text input field.
- Date when You lost or found ***: A date input field with the format 'dd/mm/yyyy' and a calendar icon.
- Image of item ***: A file upload section with a 'Browse...' button and the text 'No file selected.' Below this, a note states: 'Only images are expected, max image size is 2MB'.
- Buttons**: 'Add' and 'Close' buttons at the bottom of the modal.

In the background, the main application interface is visible, showing a header with 'shPortal', 'Book Store', 'Search', and 'Placement' links. A user is logged in as 'Navin Parmar'. On the left, a green checkmark icon indicates '1 books you have upload'. On the right, a green plus icon indicates '1 sell books Your books for sell'. A '+ Add Book' button is located at the bottom right of the main interface.

9.8 Search Book

The screenshot shows the 'Search Book' page in the shPortal application. The page has a dark header with 'shPortal', 'Book Store', 'Search', 'Placement', 'Academic', 'about us', and 'Admin' links. A user is logged in as 'Navin Parmar'. The main content area is light gray and contains the following search filters:

- Status**: A dropdown menu.
- Type of Item**: A text input field.
- Place where You lost or found the Item**: A text input field.
- Date when You lost or found the Item**: A date input field with the format 'dd/mm/yyyy' and a calendar icon.
- Apply filters**: A green button.

Below the filters, the 'Search Results' section displays four book covers:

- By Piyush Doshi**: 'ALGORITHMS MADE EASY: Data Structures and Algorithmic Puzzles'.
- By Yous**: 'OPERATING SYSTEM CONCEPTS' by Abraham Silberschatz.
- By Rushikant Patel**: 'ACCOUNTING FOR MANAGERS (PARTICULAR PRINCIPLES HANDBOOK)'.
- By SHANOOK AHMED**: 'The Complete Reference'.

Search Results

By Piyush Devda

Book Name : Data Structure and algorithms By Narasimha karumanchi

purpose: To Buy

uploaded By Piyush Devda on

[Read More](#)

By You

Book Name : Operating System Concepts

purpose: To Sell

uploaded By Navin Parmar on

[Read More](#)

By Rishikant Patel

Book Name : ACCOUNTING FOR MANAGERS Text Book

purpose: To Buy

uploaded By Rishikant Patel on

[Read More](#)

By SHANOOR AHMED

Book Name : C++: The Complete Reference, 4th Edition

purpose: To Sell

uploaded By SHANOOR AHMED on

[Read More](#)

Made With By NAVIN PARMAR

9.9 Find Seniors Notes

shPortal

Book Store

Search

Placement

Academic

about us

Admin

Welcome Navin Parmar

Logout

Add Your Notes

Browse...

No files selected.

Add

All Notes

Notes Name: C++ Notes

Uploaded By: Navin Parmar

Description: it cover all concept of cpp

likes: 0

Date: 22May

Open

Notes Name: DBMS Notes

Uploaded By: Rishikant Patel

Description: it cover all dbms topics

likes: 0

Date: 22May

Open

Notes Name: OOPS Notes

Uploaded By: Hrshikant Mehta

Description: it cover all concept of oops

likes: 0

Date: 22May

Open

Notes Name: Operating System Notes

Uploaded By: Navin Parmar

Description: it cover all os concept

likes: 0

Date: 22May

Open

Made With By NAVIN PARMAR

Contact Us:navin0707akd@gmail.com

10. CONCLUSION

In conclusion, our project is a comprehensive platform designed to assist students at NITT (National Institute of Technology, Trichy) in various aspects of their academic and career journey. By providing access to placement procedures and interview experiences of seniors, we aim to empower juniors with valuable insights and guidance to navigate the placement process successfully.

One of the key features of our platform is the ability for seniors to upload their placement experiences, including their email addresses, allowing juniors to reach out and seek further advice or clarification. This fosters a strong sense of community and encourages knowledge sharing between students.

Additionally, our platform offers a convenient book store where students can sell their used books to other students who are in need of them. This feature promotes sustainability and cost-effectiveness within the student community, as well as facilitates easy access to required course materials.

Another significant aspect of our project is the availability of senior notes. Students can access the most popular and well-received notes from seniors, covering core subjects as well as programming languages. This centralized repository of high-quality notes provides a valuable resource for students to enhance their understanding and excel in their studies.

To ensure the security and exclusivity of the platform, we have implemented a webmail verification system for sign-ups, limiting access to NITT students only. This adds an additional layer of authentication and reinforces the trustworthiness and relevance of the information shared within the platform.

Overall, our project strives to create a dynamic and supportive ecosystem within NITT, bridging the gap between juniors and seniors, facilitating knowledge exchange, and enhancing the overall learning and placement experience for the students. By leveraging technology and harnessing the power of community, we believe our platform will greatly benefit students in their academic and professional growth.

11. FUTURE WORK

While the current version of the project has accomplished its core goals, there are several potential areas for future improvement and expansion:

1. **Enhanced User Interaction:** Explore the implementation of a discussion forum or chat functionality where students can engage in real-time conversations, seek advice, and discuss placement-related topics.
2. **Recommendation System:** Develop a recommendation engine that suggests relevant interview experiences, notes, or textbooks based on a student's profile, academic interests, and previous interactions with the platform.
3. **Alumni Engagement:** Extend the platform to include participation from NITT alumni who can provide industry insights, mentorship, and networking opportunities for current students.
4. **Analytics and Feedback Mechanism:** Incorporate analytics tools to gather user feedback and track platform usage patterns, enabling continuous improvements and feature enhancements.
5. **Collaboration with Departments:** Collaborate with various academic departments within NITT to gather additional resources, such as subject-specific notes, research papers, and project guides, to further enrich the learning experience for students.
6. **Expansion to Other Institutions:** Consider expanding the platform to cater to students from other educational institutions, allowing for broader knowledge sharing and connectivity among a larger student community.

By implementing these future enhancements, the project can continue to evolve and provide an even more robust and valuable platform for students, fostering a supportive and collaborative environment that enhances their academic and career journeys.

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