

SYNOPSIS

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DECLARATION

I hereby declare that the synopsis entitled “Rentify – Online Renting Platform” submitted to the Department of Computer Science & Engineering, Kashi Institute of Technology, Varanasi, for the award of the degree of Bachelor of Technology is my original work. The matter embodied in this synopsis is the result of my own investigations and has not been submitted for the award of any other degree.

Signature: _____

Name: Ritesh Maurya

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Date:

CERTIFICATE

This is to certify that the synopsis report entitled “Rentify – Online Renting Platform” submitted by Ritesh Maurya (Roll No. 2304280109013) in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in the Department of Computer Science & Engineering, Kashi Institute of Technology, Varanasi, is a record of his own work carried out under my supervision.

Supervisor: Priya Srivastava Ma'am

Head of Department: Dr. Jyoti Srivastava

APPROVAL SHEET

This synopsis entitled _____ by _____ is approved
for the degree of Bachelor of Technology in Computer
Science and Engineering.

Supervisor: Priya Srivastava

Head of Department: Dr. Jyoti Srivastava

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It gives me immense pleasure to present the synopsis of my B.Tech final year internship project, entitled “Rentify – Online Renting Platform.” I take this opportunity to express my heartfelt gratitude to Priya Ma’am, Department of Computer Science & Engineering, Kashi Institute of Technology, Varanasi, for her constant guidance, valuable suggestions, and continuous encouragement throughout the course of this work. Her sincerity, dedication, and insightful feedback have been a constant source of inspiration for me and have greatly contributed to the successful completion of this synopsis.

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Ritesh Maurya

CHAPTER 1: INTRODUCTION

1.1 Introduction

In today's digital era, renting products has become highly popular due to affordability and convenience. However, there is no unified digital platform where users can list or rent items such as electronics, furniture, home appliances, rooms, vehicles, cameras, tools, etc.

To solve this problem, Rentify is developed as a MERN Stack (MongoDB, Express, React, Node.js) based full-stack web platform that allows users to:

- List their products for rent

- Browse products posted by others

- Send rent requests

- Connect with owners

- Manage rentals

Rentify creates a modern, secure, and user-friendly digital marketplace for renting anything online.

1.2 Purpose

The purpose of this project is to build an efficient online system where users can rent or lend products smoothly. It removes manual dependency and enables:

- Easy posting of items for rent

- Transparent rent process

Secure user accounts

Faster search and filtering

Communication between renter and owner

It promotes affordable access, resource sharing, and digital renting culture.

1.3 Objectives

- Provide an online marketplace for renting products.
- Allow users to list, edit, or delete their rental items.
- Implement secure user authentication with JWT.
- Enable product search, filter, and category system.
- Create separate dashboards for owners and renters.
- Store product images, details, and rent pricing.
- Provide chat/communication and rent request system.
- Ensure scalable backend using Node.js + MongoDB.
- Build responsive UI using React.js.

1.4 Scope of Project

The project can be used for:

- Renting household items
- Renting electronics
- Renting rooms, PGs, apartments
- Renting vehicles (scooty, bike, car)
- Renting books, tools, or gadgets

Future possibilities include mobile app development, AI-based pricing, advanced search, and online payment integration.

CHAPTER 2: METHODOLOGY

2.1 Overview of Methodology (SDLC – MERN)

- Requirement Analysis – Features, modules, user roles.
- System Design – ER diagram, database schema, backend APIs.
- Frontend Design – React components, routing, state management.
- Backend Development – Express API, JWT auth, MongoDB models.
- Integration – Connecting frontend & backend via APIs.
- Testing – Unit test, integration test, API testing (Postman).
- Deployment – Cloud hosting (Render/Netlify).

2.2 Workflow Diagram

User → Register/Login → Browse Product → Send Rent Request → Owner Approval → Product Rented → Tracking → Return

2.3 Implementation Details

Main Modules:

1. User Module

- Register & login using JWT
- List / edit / delete own products

- View rent requests
- Chat with renters
- Manage profile

2. Product Module

- Add product with images
- Categories & pricing
- Search & filter
- Availability tracking

3. Rental Module

- Send rent request
- Owner approves/declines
- Track rental duration
- History of rented items

4. Admin Module (Optional)

- Manage users
- Approve suspicious listings
- Handle reports

2.4 Tools & Technologies Used

Category	Technology
<i>Frontend</i>	<i>HTML , CSS , EJS / React</i>
<i>Backend</i>	<i>Node.js, Express.js</i>
<i>Database</i>	<i>MongoDB</i>
<i>Auth</i>	<i>JWT</i>
<i>Storage</i>	<i>Clouinary / Local Storage</i>
<i>IDE</i>	<i>VS Code</i>
<i>Platform</i>	<i>Windows/macOS</i>
<i>Model Used</i>	<i>MERN Stack + REST APIs</i>

CHAPTER 3: RESULT

3.1 Screenshots (Description Only)

- Home page with all rental items
- Product detail page
- Login / Sign-up page
- User dashboard
- Add product form
- Rent request panel

3.2 Accuracy

- Proper validation ensures accurate data entry
- Secure login guarantees authorized access
- APIs tested for stable performance

3.3 Result Analysis

- Users can easily list and rent items
- Fast search & filtering
- Real-time rent request status

3.4 Summary

The system successfully enables a complete renting workflow using MERN technology.

CHAPTER 4 : CONCLUSION

4.1 Key Findings

- Renting becomes easier and digital
- Easy management of multiple rental items
- MERN stack ensures scalability and speed

4.2 Real-World Relevance

Useful for:

- Students
- Businesses
- Home users
- Property/vehicle owners

4.3 Limitations

- Online payment not included
- No mobile app yet
- Manual approval required for rentals

4.4 Final Conclusion

Rentify is a modern rental platform that streamlines renting and resource sharing using cutting-edge MERN technology.

CHAPTER 5 : FUTURE SCOPE

- Mobile app (React Native)
- Online payment gateway
- AI-based rent price prediction
- OTP verification
- Live chat and voice assistant
- GPS-based nearby rental suggestions

5.1 Enhancements

- Integrate payment gateway (Razorpay / Stripe) with escrow for owner protection.
- Implement real-time chat (Socket.io) between renter and owner.
- Add booking calendar conflict checks and availability ranges.
- Implement KYC/identity verification for trust.
- Build mobile apps (React Native) for wider reach.

5.2 Research Possibilities

- Demand prediction & dynamic pricing using historical rentals.
- Fraud detection & trust scoring using ML models.
- NLP-based search improvements for better product discovery.