**A**

**PROJECT REPORT**

**ON**

**EDUHUB-COMMUNITY OF LEARNING**

**SUBMITTED BY**

**MS. VAISHNAVI CHAVAN (B-10)**

**MS. AYUSHA HOMKAR (B-20)**

**MR. NACHIKET KULKARNI (B-31)**

**MR. CHINMAY LALE (B-32)**

**UNDER THE GUIDANCE OF**

**PROF. V.V.BAG**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**P.N.E.S.P.’S**

**NAGESH KARAJAGI *ORCHID* COLLEGE OF ENGG. & TECH**

**SOLAPUR – 413 002**

[](https://dbatu.ac.in/)

**AFFILIATED TO**

[**DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY**](https://dbatu.ac.in/) **LONERE**

**CERTIFICATE**

This is to certify that the project entitled **EDUHUB-COMMUNITY OF LEARNING** has been completed by following students of B.E (CSE) class in satisfactory manner under my guidance.

**Ms. VAISHNAVI CHAVAN (B-10)**

**Ms. AYUSHA HOMKAR (B-20)**

**MR. NACHIKET KULKARNI (B-31)**

**Mr. CHINMAY LALE (B-32)**

The project is found to be complete in partial fulfillment for the award of Degree of Bachelor of Computer Science & Engineering of DBATU University, Lonere.

(Dr. V. V. Bag) (Dr. V.V. Bag) (Dr.B.K.Sonage)

PROJECT GUIDE HOD PRINCIPAL



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**P.N.E.S.P.’S**

**NAGESH KARAJAGI *ORCHID* COLLEGE OF ENGG. & TECH**

**SOLAPUR – 413 002**

[](https://dbatu.ac.in/)

**AFFILIATED TO**

[**DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY**](https://dbatu.ac.in/) **LONERE**

**Code of Ethics for Plagiarism**

1. I/We know that plagiarism means taking and using the ideas, writings, works or inventions of another person as if they were one’s own. I/We know that plagiarism not only includes verbatim copying, but also the extensive use of another person’s ideas without proper acknowledgement (which includes the proper use of quotation marks). I/We know that plagiarism covers this sort of use of material found in textual sources and from the Internet.
2. I/We acknowledge and understand that plagiarism is wrong.
3. I/We understand that my research must be accurately referenced. I/We have followed the rules and convention concerning referencing, citation and the use of quotation as set out in the Departmental Guide.
4. This project work is my/our own work, or my/our group’s unique group project work. I/We acknowledge that copying someone else’s work or part of it, is wrong, and that submitting identical work to others constitutes a form of plagiarism.
5. I/We have not allowed, nor will I/We in the future allow, anyone to copy my/our work with the intention of passing it off as their own work.

……………………………………………………………

……………………………………………………………

……………………………………………………………

……………………………………………………………

(Name & Signature of the Student/s)

Place: NKOCET, Solapur

Date:

|  |  |
| --- | --- |
| **The Orchid School_Logo** | **D E C L A R A T I O N** |

By the UG (B.Tech) Student

I/We hereby declare that the Report of the UG Project Work entitled

………………………………………………………………

………………………………………………………………

………………………………………………………………

Which is being submitted to the DBATU University, Lonere in Partial ful-fillment of the requirements for the award of the Degree Bachelor/Master of ………………………… in the department of …………………………………………………………………..…. , is a bonafide report of the work carried out by me/us. The material contained in this report has not been submitted to any University or Institution for the award of any degree.

.…………………………………………

.…………………………………………

.…………………………………………

.…………………………………………

(Name & Signature of the Student/s)

Place: NKOCET, Solapur

Date:

**ACKNOWLEDGEMENT**

We are thankful to Department of computer science & Engineering, Nagesh Karajgi Orchid College of Engineering & Technology, Solapur for giving us opportunity to undertake project in their organization. We would like to mention our sincere gratitude’s towards our Principal Dr. B.K. Sonage and H.O.D Dr. V. V. Bag, Computer Science and Engineering Department, for giving us this opportunity to carry out this project. We take this opportunity to express our sincere thanks to our guide Dr. V.V. Bag for his guidance and encouragement.

We are thankful to our guide Dr. V.V. Bag for his guidance at every step throughout our project report. Finally we take this opportunity to mention our sincere thanks to one and all those who helped us directly and indirectly in the completion of this project report.

**Ms. Vaishnavi Chavan**

**Ms. Ayusha Homkar**

**Mr.Nachiket Kulkarni**

**Mr. Chinmay Lale**

**ABSTRACT**

EduHub addresses the growing demand for flexible and accessible online learning opportunities. This project outlines the design and development of a comprehensive e-learning platform that caters to students, instructors, and administrators. The platform offers a diverse range of courses, real-time video call doubt-solving sessions, and features that foster community building among geographically dispersed learners.

The report details the chosen technology stack (React, Node.js, MongoDB) and its suitability for building a scalable, performant, and user-friendly platform. A rigorous testing strategy is emphasized to ensure the quality, reliability, and security of EduHub. Cloud-based deployment ensures efficient scaling and management as the platform grows.

Key functionalities include:

* Course browsing and enrolment
* Uploading and managing course content (video lectures, presentations, quizzes)
* Real-time one-on-one video call doubt-solving sessions with instructors
* Location-based services to find nearby users for collaborative learning
* Asynchronous communication through forums or chat functionalities
* Event management for online and offline doubt-solving workshops

The report concludes by highlighting the project's potential to revolutionize the online learning experience. Future aspirations include gamification, AI-powered recommendations, content creation tools for instructors, and integration with existing Learning Management Systems (LMS) for wider adoption.

EduHub strives to create a dynamic and interactive learning environment, empowering students to learn at their own pace and connect with a supportive community.

**INDEX**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **i.**  **ii.**  **iii.**  **iv.**  **v.**  **vi.**  **vii** | **Certificate…………………………………………………………………….**  **Code of Ethics for Plagiarism……………………………………………….**  **Declaration…………………………………………………………………...**  **Acknowledgement…………………………………………………………...**  **Abstract………….…………………………………………………………...**  **List of Screen Figures……………………………………………………….**  **List of Screen shots………………………………………………………….** | ii  iii  iv  v  vi  x  xi | |  |
| **1)** | **INTRODUCTION** |  |
|  | 1.1 General Introduction…………………………………………………….… | 01 | |  |
|  | 1.2 Literature Review…………………………………………………………. | 01 | |  |
|  | 1.3 Existing System…………………………………………………………… | 04 | |  |
|  | 1.3.1 Limitations of Existing System……………………………………… | 04 | |  |
|  | 1.4 Summary………………………………………………………………….. | 05 | |  |
| **2)** | **PROPOSED WORK** |  | |  |
|  | 2.1 General Introduction……………………………………………………….  2.2 Motivation………………………………………………………………… | 06  06 | |  |
|  | 2.3 Objective…………………………………………………………………. | 06 | |  |
|  | 2.4 Proposed System…………………………………………………………. | 07 | |  |
|  | 2.5 Scope…………………………………………………………………………..... | 07 | |  |
|  | 2.6 Project Analysis………………………………………………………………….. | 08 | |  |
|  | 2.7 Summary………………………………………………………………..... | 08 | |  |
| **3)** | **REQUIREMENTS ANALYSIS AND SRS PREPARATION** |  | |  |
|  | 3.1 General Introduction………………...…………………………….………  3.2 Software Requirement Specification (SRS)………………………………. | 09  09 | |  |
|  | 3.3 Constraints…………………..…………………………………….……… | 09 | |  |
|  | 3.4 Functional Requirement ……..…………………………………………… | 10 | |  |
|  | 3.5 Interfaces ……………………..………………………………...………… | 10 | |  |
|  | 3.5.1 Hardware Interfaces ……..…………………………………………. | 11 | |  |
|  | 3.5.2 Software Interfaces………..………………………………………… | 11 | |  |
|  | 3.6 Other Requirements…………….…………………………………………. | 11 | |  |
|  | 3.6.1 Security Recoverability and Usability….………………..…………. | 11 | |  |
|  | 3.6.2 Maintainability………………………….…………………..………. | 12 | |  |
|  | 3.7 Summary………………………………………………………………….. | 12 | |  |
| **4)** | **DETAILED DESIGN** |  | |  |
|  | 4.1 General Introduction…..…………………………………………………..  4.2 Class diagrams……………………………………………………………. | 13  13 | |  |
|  | 4.3 Use Case Diagram ……..…………………………………………………. | 13 | |  |
|  | 4.4 Activity Diagrams…………………………………………………………  4.4.1 Activity Diagrams for Perchase course……..…………..…………..  4.4.2 Activity Diagrams for Schedule session….….……..………………. | 17  17  18 | |  |
|  | * 1. Sequence Diagram………………………………….…………………….   4.5.1 Sequence Diagram for Attending Doubt Solving Session…………. | 19  20 | |  |
|  | 4.6 Summary…………………………………………….…………………… | 21 | |  |
| **5)** | **IMPLEMENTATION AND CODING** |  | |  |
|  | 5.1 General Introduction…..…………………………………………………..  5.2 Implementation…………………………………………………………… | 22  22 | |  |
|  | 5.2.1 Technology Endorsed………….……………………………………. | 22 | |  |
|  | 5.2.1.1 Frontend (client side).…………...…………………………..... | 22 | |  |
|  | 5.2.1.2 Backtend (server side) .…………..…………………………... | 22 | |  |
|  | 5.2.1.3 Database …………………………...………………………… | 23 | |  |
|  | 5.3 Module Description……………………………..………………………… | 23 | |  |
|  | 5.3.1 Login Module………………………………..……………………… | 23 | |  |
|  | 5.3.2 Registration Module…………………………..…………………….. | 24 | |  |
|  | 5.3.3 List Generation Module………………………..……………………. | 24 | |  |
|  | 5.4 Testing……………………………………………….……………………. | 24 | |  |
|  | 5.4.1 Unit Testing ………………………………………………………... | 24 | |  |
|  | 5.4.2 Integration Testing……………………………………………….. ... | 25 | |  |
|  | 5.4.3 Component Interface Testing……………………………………….. | 25 | |  |
|  | 5.4.4 System Testing……………………………………………………… | 25 | |  |
|  | 5.5 Testing examples……………………….…………………………………. | 25 | |  |
|  | 5.5.1 List generation test case……………………………………………. | 25 | |  |
|  | 5.5.2 Server side interface test case……………………………………… | 25 | |  |
|  | 5.5.3 Login form test cases………………………………………………. | 26 | |  |
|  | 5.6 Summary…………………………………………………………………. | 26 | |  |
| **6)** | **DEPLOYMENT** |  | |  |
|  | 6.1 General Introduction………………………………………………………  6.2 How to Execute and Use………………………………………………….  6.3 Website visuals…………………………………………………………… | 27  27  28 | |  |
|  | 6.4 Summary…………………………………………………………………. | 34 | |  |
| **7)** | **CONCLUSION AND FUTURE WORK** |  | |  |
|  | 7.1 Conclusion………………………………………………………………...  7.2 Future scope………………………………………………………………. | 35  36 | |  |
|  | **REFERENCES**................................................................................................. | 38 | |  |

**LIST OF FIGURE**

|  |  |  |
| --- | --- | --- |
| Fig 4.1 | Usecase diagram for Student………………………………….… | 15 |
| Fig 4.2 | Usecase diagram for Admin ………………………………….… | 16 |
| Fig 4.3 | Usecase diagram for Instructor ………………………………… | 16 |
| Fig 4.4 | Activity diagram for purchasing course………………………… | 18 |
| Fig 4.5 | Activity diagram for scheduling doubt  solving session…………………………………………………… | 19 |
| Fig 4.6 | Sequence diagram for attending session…….…………………… | 20 |

**LIST OF SCREENSHOTS**

|  |  |  |
| --- | --- | --- |
| Screenshot 5.1: | Login screen…………………………………………… | 23 |
| Screenshot 5.2: | Signup screen………………………………………….. | 24 |
| Screenshot 6.1: | Home screen……………………….…………………... | 28 |
| Screenshot 6.2: | Course categories………..……………………………... | 29 |
| Screenshot 6.3: | Features………………………………………………… | 29 |
| Screenshot 6.4: | Course cards……………………….…………………... | 30 |
| Screenshot 6.5:  Screenshot 6.6:  Screenshot 6.7:  Screenshot 6.8:  Screenshot 6.9:  Screenshot 6.10:  Screenshot 6.11:  Screenshot 6.12: | Reviews………………………………………………...  Purpose………………………………………………….  About us page…………………………………………..  About us………………………………………………...  Course page……………………………………………..  Doubt section…………………………………………...  Connect with buddies…………………………………..  Courses added to cart…………………………………... | 30  31  31  32  32  33  33  34 |