

FINAL YEAR PROJECT REPORT

RAM: AN E - LEARNING PLATFORM BASED ON WEB APPLICATION

In fulfillment of the requirement For degree of BS (COMPUTER SCIENCES)

By

MUHAMMAD AZHAN AWAIS REHAN AHMED ABDUL WAHAB

57174 (BSCS) 57202 (BSCS) 57213 (BSCS)

SUPERVISED

BY

MUHAMMAD NOMAN KHALID

BAHRIA UNIVERSITY (KARACHI CAMPUS)

SPRING-2022

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

Signature:

Name: Muhammad Azhan Awais

Reg No. : 57174

Signature:

Name: Rehan Ahmed

Reg No. : 57202

Signature: Codwing

Name : Abdul Wahab

Reg No. : 57213

Date : 14/6/2022

The copyright of this report belongs to Bahria University according to the Intellectual Property Policy of Bahria University BUORIC-P15 amended in April 2019. Due acknowledgement shall always be made of the use of any material contained in, or derived from, this report.

© 2019 Bahria University. All right reserved.

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, **Muhammad**Noman Khalid for his invaluable advice, guidance and his enormous patience throughout the development of the project.

In addition, we would also like to express our gratitude to our loving parent and friends who had helped and given us encouragement.

RAM: AN E - LEARNING PLATFORM BASED ON WEB APPLICATION

ABSTRACT

A project is proposed for the E-learning web application named RAM that will help the different educational organizations like schools, colleges and universities to enhance the existing traditional learning system. This project will allow the organizations to cope with the modern education systems and techniques that will support the students, instructors and organizations in an enormous way with the multiple functionalities and features. Main focus of this project is to help the students and instructors to manage and utilize time through digital features like grading assessment, quiz attempts, lecture demonstration through videos and documents along with the publishing courses. First and foremost, it is an essential requirement for the students to have an E-learning portal for their courses and lectures along with the availability of the instructors and second it will be good to have multiple choices in terms of programs and courses offers by the instructors, these are some of the pain points that student faces in different educational organizations. The project will support three different modules. Student module will have the feature of addressing the queries and questions of students, helping the students in exploring and accessing the affordable courses by the instructors in organization along with the certifications, and availability of multiple study materials on the same subject. Second, it will help the instructors in organizing and managing students, study materials, and resources. The main objective of the project is to develop a good web application that can fulfil the requirements of students and instructors by providing functionalities and features like enrolment, payment integration, awarding certifications, managing courses and students, accessing grades and queries of the students etc.

TABLE OF CONTENTS

DECLARATION

| ALLKOV | 111 | | |
|---------|------|----------------------------|----|
| COPYRI | iv | | |
| ACKNOV | v | | |
| ABSTRA | vi | | |
| TABLE C | vii | | |
| LIST OF | ix | | |
| LIST OF | x | | |
| LIST OF | xiii | | |
| | | | |
| | | | |
| СНАРТЕ | | | |
| | | | |
| 1 | INTE | 14 | |
| | 1.1 | Background | 14 |
| | 1.2 | Problem Statement | 15 |
| | 1.3 | Aims and Objectives | 15 |
| | 1.4 | Scope of Project | 16 |
| | | | |
| 2 | LITE | 17 | |
| | 2.1 | Background | 17 |
| | 2.2 | Project Overview | 18 |
| | 2.3 | Related Work | 19 |
| | 2.4 | Comparison Table | 21 |
| | | 2.4.1 Competitive Analysis | 21 |
| | 2.5 | Chapter Summary | 24 |
| | | | |

ii

| 3 | DESI | DESIGN AND METHODOLOGY | | | | |
|-----|--------|------------------------|-----------------------|----|--|--|
| | 3.1 | Propos | 25 | | | |
| | 3.2 | Proces | Process Model | | | |
| | 3.3 | Modul | Modules Discussion | | | |
| | | 3.3.1 | Student Module | 29 | | |
| | | 3.3.2 | Instructor Module | 30 | | |
| | | 3.3.3 | Admin Module | 31 | | |
| | 3.4 | Project | t Diagrams | 32 | | |
| | | 3.4.1 | Database Design (ERD) | 32 | | |
| | | 3.4.2 | Sequence Diagram | 33 | | |
| | | 3.4.3 | Context Diagram | 36 | | |
| | | 3.4.4 | Use Cases Diagram | 37 | | |
| | | | | | | |
| 4 | IMPI | IMPLEMENTATION | | | | |
| | 4.1 | Modul | e Development | 41 | | |
| | 4.2 | GUI aı | nd Source Code | 46 | | |
| | | 2.4.1 | Admin Module | 46 | | |
| | | 2.4.2 | Instructor Module | 51 | | |
| | | 2.4.3 | Student Module | 57 | | |
| | 4.3 | Result | and Discussion | 62 | | |
| 5 | TEST | ΓING AN | ID EVALUATION | 63 | | |
| | 5.1 | Test P | lan | 63 | | |
| | 5.2 | Testin | g Modules | 65 | | |
| | 5.3 | Test C | Cases and Evaluation | 66 | | |
| 6 | CON | CLUSIO | N AND FUTURE WORK | 71 | | |
| | 6.1 | Concl | usion | 71 | | |
| | 6.2 | Future | e Work | 72 | | |
| REF | ERENCE | S | | 73 | | |

REFERENCES