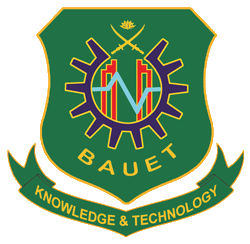
*Knowledge & Technology*

**Bangladesh Army University of Engineering & Technology (BAUET)**

**Qadirabad, Natore-6431**



**Department of Computer Science and Engineering (CSE)**

**Project Title:** Custom OS

**Course Code:** CSE-4100

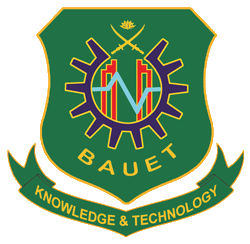
**Course Title:** Integrated Design Project (IDP)/Capstone Project

**Submission Date:**

|  |  |
| --- | --- |
| **Submitted By** | **Supervised By** |
| **Name:** Fathma Khatun Mim  **ID:** 20104002  **Name:** Gourob Roy  **ID:** 20104027  **Name:** Md. Arik Rayhan  **ID:** 20104033  **Department:** CSE  **Year:** 4th  **Semester:** 1st  **Batch:** 11th  **Session:** 2020-2021 | **Mohammed Golam Sarwar Bhuyan**  Professor & Head of CSE  BAUET  **Bristi Rani Roy**  Lecturer  Dept. of CSE, BAUET |

*Knowledge & Technology*

**Bangladesh Army University of Engineering & Technology (BAUET)**

****

**APPROVAL**

This is to approve that the report entitled A Report on **“**Custom OS**”-**A Software project by **“Fathma Khatun Mim”, ID No: 20104002, “Gourob Roy”, ID No: 20104027, “Md. Arik Rayhan”, ID No: 20104033** has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Bachelor of Science in Computer Science and Engineering on March, 2023.

Project Review Panel

---------------------- ------------------------

**(Mohammed Golam Sarwar Bhuyan) (Mithun Kumar)**

Professor & Head, CSE, BAUET Assistant Professor, CSE, BAUET

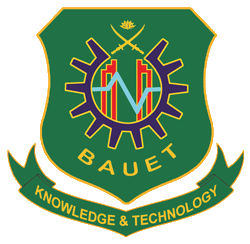
------------------------ -------------------------

**(Bristi Rani Roy) (Redoanul Haque)**

Lecturer, CSE, BAUET Lecturer, CSE, BAUET

*Knowledge & Technology*

**Bangladesh Army University of Engineering & Technology (BAUET)**

****

**DECLARATION**

We hereby declare that our report entitled **“Custom OS”** -A Software Project is the result of our work. We also ensure that it was not previously submitted or published elsewhere for the award of any degree or diploma.

The work has been accepted for the degree of Bachelor of Science in Computer Science and Engineering at Bangladesh Army University of Engineering & Technology (BAUET).

Author(s)

………………………………

(Fathma Khatun Mim)

………………………………

(Gourob Roy)

………………………………

(Md. Arik Rayhan)

**Acknowledgement**

This project report on **"Custom OS"** is being presented with pleasure as it is a requirement for the sixth semester of the BSc in Computer Science and Engineering. As we submit this report, we'd like to take this chance to thank everyone who helped us along the way. We would like to take this opportunity to express our gratitude to Allah Almighty for granting us his favor and bringing our endeavor to a successful conclusion. We express our profound gratitude to our department teachers, for guiding and advising us appropriately at key moments and for illuminating the path for us. We sincerely appreciate, **Mohammed Golam Sarwar Bhuyan,** Professor & Head, Dept of CSE, BAUET, allowing us to utilize the facilities. Last but not least, we would like to express our gratitude to our family & friends for their support and encouragement throughout our work.

**Submitted by**

**Name:** Fathma Khatun Mim

**ID:** 20104002

**Name:** Gourob Roy

**ID:** 20104027

**Name:** Md. Arik Rayhan

**ID:** 20104033

|  |  |  |
| --- | --- | --- |
| **List of Contents** | | |
| **Chapter** | **Title** | **Page No.** |
|  | Approval | i |
|  | Declaration | ii |
|  | Acknowledgement | iii |
|  | List of contents | iv-v |
|  | List of figures | vi |
|  |  |  |
| **1.** | **INTRODUCTION** | **1-5** |
|  | 1.1 Introduction | 1 |
|  | 1.2 Motivation | 1-2 |
|  | 1.3 Objectives | 2 |
|  | 1.4 Expected Outcomes | 2-3 |
|  | 1.5 Project management and Finance | 3-5 |
|  |  |  |
| **2.** | **BACKGROUND** | **6-12** |
|  | 2.1 Preliminaries/Terminologies | 6-7 |
|  | 2.2 Related work | 7-8 |
|  | 2.3 Comparative Analysis | 8-9 |
|  | 2.4 Scope of the Problem | 9-10 |
|  | 2.5 Challenges | 10-12 |
|  |  |  |
| **3.** | **REQUIREMENT SPECIFICATION** | **13-15** |
|  | 3.1 Business Process Modeling | 13-14 |
|  | 3.2 Requirement Collection and Analysis | 14-15 |
|  |  |  |
| **4.** | **DESIGN SPECIFICATION** | **16-20** |
|  | 4.1 Front-end Design | 16 |
|  | 4.2 Circuit Diagram | 17 |
|  | 4.3 Interaction Design and User Experience (UX) | 18 |
|  | 4.4 Implementation Requirements | 18-20 |
|  |  |  |
| **5.** | **IMPLEMENTATION AND TESTING** | **21-24** |
|  | 5.1 Implementation of Database | 21-22 |
|  | 5.2 Testing Implementation | 22-23 |
|  | 5.3 Test Results and Reports | 23-24 |
|  |  |  |
| **6.** | **IMPACT ON SOCIETY, ENVIRONMENT AND** | **25-29** |
|  | **SUSTAINABILITY** |  |
|  | 6.1 Impact on Society | 25-26 |
|  | 6.2 Impact on Environment | 26-27 |
|  | 6.3 Ethical Aspects | 27-28 |
|  | 6.4 Sustainability Plan | 28-29 |
|  |  |  |
| **7.** | **CONCLUSION AND FUTURE SCOPE** | **30-32** |
|  | 7.1 Discussion and Conclusion | 30 |
|  | 7.2 Scope for Further Developments | 31-32 |
|  | **REFERENCES** | **33** |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **List of Figures** |  |
| **Figure No.** | **Title** | **Page No.** |
| 01 | Front-end Design of Quick Park | 5 |
| 02 | Circuit Diagram of Quick Park | 11 |
| 03 | UML Diagram for Quick Park | 12 |