



FINAL YEAR PROJECT REPORT

RESERVEAT

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

By

**SHAHMIR NAEEM
HUSSAIN MURTAZA
SUMAIR HUSSAIN**

**72984 (BSCS)
72985 (BSCS)
72986 (BSCS)**

SUPERVISED

**BY
DR. HUMERA FAROOQ**

BAHRIA UNIVERSITY (KARACHI CAMPUS)

FALL-2024

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 : Shahi

Name : SHAHMIR NAEEM

Reg No. : 72984

Signature : Murad

Name : HUSSAIN MURTAZA

Reg No. : 72985

Date : Shahi

Name : SUMAIR HUSSAIN

Reg No. : 72986

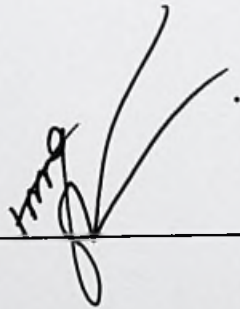
Date : 31/12/24

APPROVAL FOR SUBMISSION

We certify that this project report entitled "**ReservEat**" was prepared by **SHAHMIR NAEEM, HUSSAIN MURTAZA, SUMAIR HUSSAIN** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science in **Computer Science** at Bahria University, Karachi.

Approved by,

Signature :



Supervisor : Dr Humera Farooq

Date

: 31 /12/24

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

© 2024BahriaUniversity. All right reserved.

Specially dedicated to

My beloved grandmother, mother and father

SHAHMIR NAEEM

My beloved grandmother, mother and father

HUSSAIN MURTAZA

My beloved grandmother, mother and father

SUMAIR HUSSAIN

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Dr Humera Farooq for her invaluable advice, guidance and her enormous patience throughout the development of the research.

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

RESERVEAT

ABSTRACT

Good food and healthy diet is the basic necessity of a person's life. Being a citizen of a crowded city and keeping the heavy traffic conditions of the roads in mind, The people want to save their precious time and utilize every bit of it. Hundreds of people visit restaurants and cafes to fulfil their cravings of delicious food but most of the times they have to wait for a very long time. Sometimes for the table and sometimes for the food. Due to this reason many peoples avoid going to the restaurants and they prefer home deliveries but at the same time they miss the charm of food being served on the point. A Restaurant table reservation and food ordering system can be the solution to this problem. ReservEat is like a big change for restaurants to make things better. It's about using a smart system to help restaurants manage tables more easily, so people can have a nicer time eating out. ReservEat makes it simpler for customers to book tables, reducing the time they have to wait for a seat by organizing reservations better. It also helps restaurant staff plan things better, so they can serve customers well. ReservEat looks at data to understand what customers like and when they like to visit, helping the restaurant make smarter decisions about the menu and service. ReservEat includes features like keeping track of reservations and making sure the restaurant knows what customers like. The best part is that it can grow and change as needed, making it easier for the restaurant to handle more customers and adapt to new things. Overall, ReservEat aims to make restaurants better at what they do, making customers happier and improving how restaurants operate.

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL FOR SUBMISSION	iii
ACKNOWLEDGEMENTS	vi
ABSTRACT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xii
LIST OF FIGURES	xiii

CHAPTER

1	INTRODUCTION	1
1.1	Introduction & Background:	1
1.2	Problem Statements:	1
1.3	Objectives:	2
1.4	Project Scope:	2
2	LITERATURE REVIEW	4
2.1	Background:	4
2.2	Related Work:	4
2.3	Comparison Table With Existing Study:	6
3	REQUIREMENT SPECIFICATIONS	8
3.1	Existing System:	8
3.2	Proposed System:	8
3.3	Specific Requirements:	8
3.3.1	Functional Requirements:	8
3.3.2	Non-Functional Requirements:	8
3.4	Roles And Responsibilities:	9

3.5	Planning Phase:	9
3.6	Analysis Phase:	9
3.7	Design Phase:	10
3.8	Development Phase:	10
3.9	Testing Phase:	10
3.10	Deployment Phase:	10
3.11	Deliverables And Milestones:	10
3.12	Resources Needed:	11
3.12.1	Hardware:	11
3.13	Constraints And Dependencies:	11
3.13.1	Constraints:	11
3.13.2	Dependencies:	11
3.14	Use Cases:	12
3.14.1	Use Cases For Users:	12
3.14.2	Use Cases for Restaurant Owners:	14

4 DESIGN AND METHODOLOGY 16

4.1	Proposed Methodology:	16
4.1.1	Frontend Development:	16
4.1.2	Backend Development:	16
4.1.3	Ai-Driven Features:	16
4.1.4	Database Management:	17
4.1.5	Testing And Quality Assurance:	17
4.2	Process Model:	17
4.2.1	Iterative Development:	18
4.2.2	Continuous Feedback:	18
4.2.3	Collaboration And Adaptability:	18
4.3	Modules Discussion:	19
4.3.1	Customer Panel:	19
4.3.2	Restaurant Module:	19
4.4	Screenshots:	20
4.5	Work Flow Diagram:	36

4.6	Use Case Diagram:	37
4.7	Sequence Diagram:	38
5	SYSTEM IMPLEMENTATION	39
5.1	Research:	39
5.2	Execution:	39
	5.2.1: Authentication Module:	39
	5.2.2: Sign In Module:	39
	5.2.3: Sign Up Module:	39
	5.2.4: Table Booking Module:	40
5.3	System Architecture:	41
5.4	Database Layer:	41
5.5	Scrum meetings:	41
5.6	Development frameworks:	42
5.7	Continuous integration and deployment:	42
5.8	Monitoring And Evaluation:	42
5.9	Development Methodology:	43
5.10	Code Review And Testing:	43
5.11	Closure:	45
	5.11.1 Deliverables & milestones:	45
	5.11.2 Constraints & dependencies:	45
6	SYSTEM TESTING AND EVALUATION	46
6.1	Test Types:	46
	6.1.1 Unit Testing:	46
	6.1.2 Regression Testing:	46
	6.1.3 Load Testing:	46
	6.1.4 Integration Testing:	47
6.2	Test Cases:	47
7	CONCLUSION	50
7.1	Conclusion:	50