CONTENTS

	Page No
1. INTRODUCTION	
1.1 Introduction	1
1.2 Motivation	2
1.3 Problem Definition	2
1.4 Objective of the Project	2
1.5 Limitations of the Project	3
1.6 Organization of the Report	3
2. SYSTEM SPECIFICATIONS	
2.1 Software Specifications	4
2.2 Hardware Specifications	5
3. LITERATURE SURVEY	
3.1 Introduction	7
3.2 Existing System	7
3.3 Disadvantages of Existing System	9
3.4 Proposed System	10
4. DESIGN AND IMPLEMENTATION	
4.1 Introduction	11
4.2 Project Design	12
4.2.1 Interface Design	12
4.2.2 Backend Design	13
4.2.2 Deployment Architecture	14

4.3 Project Workflow 16

4.4 UML Diagrams 21

4.4 Source Code 24

4.4.1 Command Line Interface 24

4.5.2 Flask Server 33

4.6 Output 34

4.7 Testing and Validation 38

5. CONCLUSION

5.1 Conclusion 45

5.2 Future Enhancements 46

REFERENCES **47**

LIST OF FIGURES

FIGURE NO.	FIGURE NAME	PAGE NO.
Fig 4.3.1	Flow Chart	16
Fig 4.4.1	State Chart Diagram	21
Fig 4.4.2	Activity Diagram	22
Fig 4.4.3	Sequence Diagram	23
Fig 4.4.4	Collaboration Diagram	24
Fig 4.6.1	Application Run Options	34
Fig 4.6.2	Application Version	34
Fig 4.6.3	Processing a Command	35
Fig 4.6.4	Chat Functionality	35
Fig 4.6.5	Executing the Command	36
Fig 4.6.6	Displaying the Cache	36
Fig 4.6.7	Deleting the Cache	37

LIST OF TABLES

TABLE NO.	TABLE NAME	PAGE NO.
Table - 1	Test Cases for Unit Testing	39
Table - 2	Test Cases for Integration Testing	41
Table - 3	Test Cases for Functional Testing	42
Table - 4	Test Cases for Validation Testing	43

Table - 5	Test Cases for System Testing	43
Table - 6	Test Cases for Acceptance Testing	44

LIST OF ABBREVATIONS

NLP	-	Natural Language Processing
LLM	-	Large Language Model
CLI	-	Command Line Interface
UI	-	User Interface
GPU	-	Graphical User Interface
HTTP	-	Hypertext Transfer Protocol
API	-	Application Programming Interface
BERT	-	Bidirectional Encoder Representations from Transformers
NALIGE	-	Natural Language Interface to Operating System Generation Environment
NLIOS	-	Natural Language Interfaces for Operating System