## **List of Figures:**

Serial number	Figure	Page number
1	Red Bus Application Logo	1
2	3.1.1 Data Flow Diagram (Level 0)	11
3	3.1.2 Data Flow Diagram (Level 1)	12
4	3.2 Class Diagram	13
5	3.3.1 Use Case Diagram for Bus Booking	14
6	3.3.2 Use Case Diagram for Bus Tracking	15
7	3.3.3 Use Case Diagram for Customer Service	15
8	3.4 Sequence Diagram	17
9	3.5 State Chart Diagram	18
10	3.6.1 Flow Chart Diagram	19
11	3.6.2 Activity Diagram	21
12	3.6.3 Swim Lane Diagram	22
13	3.7 Component Diagram	23
14	5.3.1 Initial Interface	33
15	5.3.2 Home Page	33
16	5.3.3 Searching page	34
17	5.3.4 Results, Sort & Filter	34
18	5.3.5 Bus & Seat information	34
19	5.3.6 Seat Selection	34
20	5.3.7 Boarding place selection	35
21	5.3.8 Dropping place selection	35
22	5.3.9 Passenger information	36
23	5.3.10 Payments	36

## **List of Tables:**

Serial number	Tables	Page number
1	5.2.1 Test Case Parameters	31
2	5.2.2 Test case for Register and Login	32

## **Table of contents:**

1.1       Objective       3         1.2       TimeLine       3         1.3       Feature       5         2       Literature SURVEY       5-9         3       SYSTEM DESIGN AND MODELING       11-23         3.1       Data Flow Diagram       11-12         3.2       Class Diagram       13         3.3       Use Case Diagram       14-15         3.3.1       Use case diagram for booking       14         3.3.2       Use case diagram for Bus tracking       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28	Serial number	Figure	Page number
1.2         TimeLine         3           1.3         Feature         5           2         Literature SURVEY         5-9           3         SYSTEM DESIGN AND MODELING         11-23           3.1         Data Flow Diagram         11-12           3.2         Class Diagram         14-15           3.3         Use Case Diagram         14-15           3.3.1         Use case diagram for booking         14           3.3.2         Use case diagram for Bus tracking         15           3.4         Sequence Diagram         16-17           3.5         State Chart Diagram         18           3.6         Activity Diagram         19-22           3.6.1         Flow Chart diagram         19           3.6.2         Activity diagram         21           3.6.3         Swim Lane diagram         21           3.6.3         Swim Lane diagram         22           3.7         Component Diagram         23           4         IMPLEMENTATION         24-28           4.1         Tools         24           4.2         Technologies         24-26           5         TESTING         29-36           5.1.1	1	INTRODUCTION	3-5
1.3   Feature   5   2   Literature SURVEY   5-9   3   SYSTEM DESIGN AND MODELING   11-23   3.1   Data Flow Diagram   11-12   3.2   Class Diagram   13   3.3   Use Case Diagram   14-15   3.3.1   Use case diagram for booking   14   3.3.2   Use case diagram for Bus tracking   15   3.3.3   Use case diagram for Bus tracking   15   3.3.3   Use case diagram for customer service   15   3.4   Sequence Diagram   16-17   3.5   State Chart Diagram   18   3.6   Activity Diagram   19-22   3.6.1   Flow Chart diagram   19   3.6.2   Activity diagram   21   3.6.3   Swim Lane diagram   22   3.7   Component Diagram   23   4   IMPLEMENTATION   24-28   4.1   Tools   24   4.2   Technologies   24-26   4.3   Sample code of the application   26-28   5   TESTING   29-36   5.1.1   Unit Testing   29   3.1   5.1.2   Integration Testing   29-30   5.1.3   Validation Testing   29-30   5.1.4   System Testing System   31   5.2   Test cases   31-32   5.3   User interfaces   32-36   CONCLUSION   37   REFERENCES   38   APPENDIX   Research Papers   SRS Document	1.1	Objective	3
2         Literature SURVEY         5-9           3         SYSTEM DESIGN AND MODELING         11-23           3.1         Data Flow Diagram         11-12           3.2         Class Diagram         14-15           3.3         Use Case Diagram         14-15           3.3.1         Use case diagram for booking         14           3.3.2         Use case diagram for Bus tracking         15           3.3.3         Use case diagram for customer service         15           3.4         Sequence Diagram         16-17           3.5         State Chart Diagram         19-22           3.6.1         Flow Chart diagram         19-22           3.6.2         Activity Diagram         21           3.6.3         Swim Lane diagram         21           3.6.3         Swim Lane diagram         22           3.7         Component Diagram         23           4         IMPLEMENTATION         24-28           4.1         Tools         24           4.2         Technologies         24-26           4.3         Sample code of the application         26-28           5         TESTING         29-36           5.1         Unit Testing         <	1.2	TimeLine	3
3         SYSTEM DESIGN AND MODELING         11-23           3.1         Data Flow Diagram         11-12           3.2         Class Diagram         13           3.3         Use Case Diagram         14-15           3.3.1         Use case diagram for booking         14           3.3.2         Use case diagram for Bus tracking         15           3.4         Sequence Diagram         16-17           3.5         State Chart Diagram         18           3.6         Activity Diagram         19-22           3.6.1         Flow Chart diagram         21           3.6.2         Activity diagram         21           3.6.3         Swim Lane diagram         22           3.6         Activity diagram         22           3.7         Component Diagram         23           4         IMPLEMENTATION         24-28           4.1         Tools         24           4.2         Technologies         24-26           4.3         Sample code of the application         26-28           5         TESTING         29-36           5.1         Types of testing         29-31           5.1.1         Unit Testing         29-30	1.3	Feature	5
3.1       Data Flow Diagram       11-12         3.2       Class Diagram       13         3.3       Use Case Diagram       14-15         3.3.1       Use case diagram for booking       14         3.3.2       Use case diagram for Bus tracking       15         3.3.3       Use case diagram for customer service       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31	2	Literature SURVEY	5-9
3.2       Class Diagram       13         3.3       Use Case Diagram       14-15         3.3.1       Use case diagram for booking       14         3.3.2       Use case diagram for Bus tracking       15         3.3.3       Use case diagram for customer service       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29-30         5.1.2       Integration Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32	3	SYSTEM DESIGN AND MODELING	11-23
3.3       Use Case Diagram       14-15         3.3.1       Use case diagram for booking       14         3.3.2       Use case diagram for Bus tracking       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLU	3.1	Data Flow Diagram	11-12
3.3.1       Use case diagram for booking       14         3.3.2       Use case diagram for Bus tracking       15         3.3.3       Use case diagram for customer service       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         Research Papers <td>3.2</td> <td>Class Diagram</td> <td>13</td>	3.2	Class Diagram	13
3.3.2       Use case diagram for Bus tracking       15         3.3.3       Use case diagram for customer service       15         3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       21         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES <td< td=""><td>3.3</td><td>Use Case Diagram</td><td>14-15</td></td<>	3.3	Use Case Diagram	14-15
3.3.3     Use case diagram for customer service     15       3.4     Sequence Diagram     16-17       3.5     State Chart Diagram     18       3.6     Activity Diagram     19-22       3.6.1     Flow Chart diagram     21       3.6.2     Activity diagram     21       3.6.3     Swim Lane diagram     22       3.7     Component Diagram     23       4     IMPLEMENTATION     24-28       4.1     Tools     24       4.2     Technologies     24-26       4.3     Sample code of the application     26-28       5     TESTING     29-36       5.1     Types of testing     29-31       5.1.1     Unit Testing     29       5.1.2     Integration Testing     29-30       5.1.3     Validation Testing     30-31       5.1.4     System Testing System     31       5.2     Test cases     31-32       5.3     User interfaces     32-36       CONCLUSION     37       REFERENCES     38       APPENDIX       Research Papers       SRS Document	3.3.1	Use case diagram for booking	14
3.4       Sequence Diagram       16-17         3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       21         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX         Research Papers       SRS Document	3.3.2	Use case diagram for Bus tracking	15
3.5       State Chart Diagram       18         3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.3.3	Use case diagram for customer service	15
3.6       Activity Diagram       19-22         3.6.1       Flow Chart diagram       19         3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.4	Sequence Diagram	16-17
3.6.1   Flow Chart diagram   19   3.6.2   Activity diagram   21   3.6.3   Swim Lane diagram   22   3.7   Component Diagram   23   4   IMPLEMENTATION   24-28   4.1   Tools   24   4.2   Technologies   24-26   4.3   Sample code of the application   26-28   5   TESTING   29-36   5.1   Types of testing   29-31   5.1.1   Unit Testing   29   5.1.2   Integration Testing   29-30   5.1.3   Validation Testing   30-31   5.1.4   System Testing System   31   5.2   Test cases   31-32   5.3   User interfaces   32-36   CONCLUSION   37   REFERENCES   38   APPENDIX   Research Papers   SRS Document	3.5	State Chart Diagram	18
3.6.2       Activity diagram       21         3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.6	Activity Diagram	19-22
3.6.3       Swim Lane diagram       22         3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.6.1	Flow Chart diagram	19
3.7       Component Diagram       23         4       IMPLEMENTATION       24-28         4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.6.2	Activity diagram	21
4         IMPLEMENTATION         24-28           4.1         Tools         24           4.2         Technologies         24-26           4.3         Sample code of the application         26-28           5         TESTING         29-36           5.1         Types of testing         29-31           5.1.1         Unit Testing         29           5.1.2         Integration Testing         29-30           5.1.3         Validation Testing         30-31           5.1.4         System Testing System         31           5.2         Test cases         31-32           5.3         User interfaces         32-36           CONCLUSION         37           REFERENCES         38           APPENDIX         Research Papers           SRS Document         SRS Document	3.6.3	Swim Lane diagram	22
4.1       Tools       24         4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	3.7	Component Diagram	23
4.2       Technologies       24-26         4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	4	IMPLEMENTATION	24-28
4.3       Sample code of the application       26-28         5       TESTING       29-36         5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	4.1	Tools	24
5         TESTING         29-36           5.1         Types of testing         29-31           5.1.1         Unit Testing         29           5.1.2         Integration Testing         29-30           5.1.3         Validation Testing         30-31           5.1.4         System Testing System         31           5.2         Test cases         31-32           5.3         User interfaces         32-36           CONCLUSION         37           REFERENCES         38           APPENDIX         Research Papers           SRS Document         SRS Document	4.2	Technologies	24-26
5.1       Types of testing       29-31         5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX         Research Papers       SRS Document	4.3	Sample code of the application	26-28
5.1.1       Unit Testing       29         5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	5	TESTING	29-36
5.1.2       Integration Testing       29-30         5.1.3       Validation Testing       30-31         5.1.4       System Testing System       31         5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX       Research Papers         SRS Document       SRS Document	5.1	Types of testing	29-31
5.1.3         Validation Testing         30-31           5.1.4         System Testing System         31           5.2         Test cases         31-32           5.3         User interfaces         32-36           CONCLUSION         37           REFERENCES         38           APPENDIX           Research Papers         SRS Document	5.1.1	Unit Testing	29
5.1.4         System Testing System         31           5.2         Test cases         31-32           5.3         User interfaces         32-36           CONCLUSION         37           REFERENCES         38           APPENDIX           Research Papers         SRS Document	5.1.2	Integration Testing	29-30
5.2       Test cases       31-32         5.3       User interfaces       32-36         CONCLUSION       37         REFERENCES       38         APPENDIX         Research Papers       SRS Document	5.1.3	Validation Testing	30-31
5.3         User interfaces         32-36           CONCLUSION         37           REFERENCES         38           APPENDIX         Research Papers           SRS Document         SRS Document	5.1.4	System Testing System	31
CONCLUSION 37 REFERENCES 38 APPENDIX Research Papers SRS Document	5.2	Test cases	31-32
REFERENCES 38 APPENDIX Research Papers SRS Document	5.3	User interfaces	32-36
APPENDIX  Research Papers  SRS Document		CONCLUSION	37
Research Papers SRS Document		REFERENCES	38
SRS Document		APPENDIX	
		Research Papers	
List of Abbreviations		SRS Document	
		List of Abbreviations	