

Food Purveyance Development System

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ABSTRACT

There are some problems in the current system, which are the failure of all family members to benefit from the ration allocated due to some circumstances resulting in addition to the delay and congestion resulting in the dealings that take place when going to the supply offices to submit requests, and there are also some problems on the ground such as damage to the card and the need to exchange it with Stopping the exchange of goods and bread loaves until a new card is extracted or the current machines designated for disbursement do not work well and face difficulty in reading the card data. Therefore, a set of proposed solutions has been developed to solve these problems, which is replacing the current cards into cards containing QR code and replacing the machines with machines containing A QR code scanner to read the data, and it is also possible to create sub cards for the rest of the family members, enabling them to exchange customized goods, a website and a mobile application, to facilitate dealing through it and not go to the catering offices. The final outcome of this project is the creation of a website and the creation of a mobile site that the citizen uses to complete the operations electronically and create new cards that differ from the old ones in terms of handling and form. Creating sub cards for the rest of the family members. Supply offices, which reduce congestion and the spread of diseases like covide-19, reduce paperwork, and preserve the environment.

Table of Contents

1. INTRODUCTION	1
2. LITERATURE.....	3
3. PROPOSED SOLUTION.....	3
4. DOMAIN ANALYSIS.....	4
4.1 DATA GATHERING.....	5
4.1.1 QUESTIONNAIRE.....	6
4.1.1.2 MINISTRY QUESTIONNAIRE.....	9
4.2 REQUIREMENTS.....	14
4.2.1 FUNCTIONAL REQUIREMENTS.....	14
4.2.2 NON-FUNCTIONAL REQUIREMENTS.....	14
4.3 RISKS AND CONSTRAINTS.....	15
4.3.1 CONSTRAINTS.....	15
4.3.2 RISKS	15
4.3.2.1 ANALYSIS RISK	15
4.3.2.2 DESIGN RISK.....	15
4.3.2.2 IMPLEMENTATION RISK.....	15
4.4 HARDWARE AND SOFTWARE REQUIREMENTS.....	16
4.5 PROJECT PLAN.....	17
4.6 QUALITY ASSURANCE PLAN.....	19
4.7 SYSTEM USE-CASES.....	20
4.8 USE CASES SCENARIO.....	22
4.9 CLASS DIAGRAM.....	46
4.10 SEQUENCE DIAGRAM.....	48
4.11 THE PROPOSED STRUCTURE MODEL.....	64
4.12 DATA FLOW DIAGRAM	65
4.13 ER DIAGRAM.....	77
4.14 DATA DICTIONARY	78
4.15 DEPLOYMENT	81
5. SYSTEM ARCHITECTURE.....	82
6. DESIGN PHASE	82
6.1 USER INTERFACE MOCKUP	82

7. PROJECT STATUS.....	85
8. CONCLUSION.....	85
9. REFERENCE	86
10. APPENDIX.....	87

List of Figures

Figure 1. Questionnaire of People work on Distribution Market page 1	6
Figure 2. Questionnaire of People work on Distribution Market page 2	7
Figure 3. Questionnaire of People work on Distribution Market page 3	8
Figure 4. Questionnaire of Employee in Ministry page 1	9
Figure 5. Questionnaire of Employee in Ministry page 2	10
Figure 1. Questionnaire of People work on Distribution Market page 1 6	iv
Figure 2. Questionnaire of People work on Distribution Market page 2 7	iv
Figure 3. Questionnaire of People work on Distribution Market page 3 8	iv
Figure 4. Questionnaire of Employee in Ministry page 1 9	iv
Figure 5. Questionnaire of Employee in Ministry page 2 10	iv
Figure 11. Use case of Distribution Market 22	vii
Figure 12. Use case Scenario of "Register" Use case.....	22
.....	vii
Figure 13. Use case Scenario of "login for Employee" Use case	23
.....	vii
Figure 14. Use case Scenario of "login for citizen" Use case.....	24
.....	vii
Figure 15. Use case Scenario of "view card points & Data" Use case.....	25
.....	vii
Figure 16. Use case Scenario of "Create new card" Use case.....	26
.....	vii
Figure 17. Use case Scenario of "Create sub card " Use case.....	27
.....	vii
Figure 18. Use case Scenario of "Add family member" Use case.....	28
.....	vii
Figure 19. Use case Scenario of "Separate from family " Use case.....	29
.....	vii
Figure 20. Use case Scenario of "Transfer governorate" Use case.....	30
.....	vii
Figure 21. . Use case Scenario of "View responses" Use case.....	31
.....	vii
Figure 22. Use case Scenario of "View Distribution Market Owners' item info" Use case.....	32
.....	vii
Figure 23. . Use case Scenario of "Control Employee restrictions" Use case.....	33
.....	vii
Figure 24. . Use case Scenario of "Add employee" Use case.....	34
.....	vii
Figure 25. . Use case Scenario of "Check requests" Use case.....	35
.....	vii
Figure 26. Use case Scenario of "Make Join Request" Use case.....	36
.....	vii
Figure 27. Use case Scenario of "Login for Distribution Market Owner" Use case.....	37
.....	vii
Figure 28. Use case Scenario of "View and Edit Distribution Market Data" Use case.....	38
.....	vii
Figure 29. Use case Scenario of "Check requests" Use case.....	39
.....	vii

Figure 30. Use case Scenario of "Pay the insurance" Use case.....	40
.....	vii
Figure 31. Use case Scenario of "Order new Ration" Use case.....	41
.....	vii
Figure 32. Use case Scenario of "Edit Citizen Points" Use case.....	42
.....	vii
Figure 33. Use case Scenario of "Confirm ration Receiving" Use case.....	43
.....	vii
Figure 34. Use case Scenario of "Specify Merchant Ration" Use case.....	44
.....	vii
Figure 35. Use case Scenario of "View Requests Responses" Use case.....	45
.....	vii
Figure 36. Class Diagram part 1.....	46
.....	vii
Figure 37. Class Diagram part 2.....	47
.....	vii
Figure 38. Sequence of (Home page) for Head of family & other family member.....	49
.....	vii
Figure 39. Sequence of (control page) for Head of family	50
.....	vii
Figure 40. Sequence of Distribution Market map page.....	51
.....	vii
Figure 41. Sequence of (setting page) for Head of family & other family member.....	53
.....	vii
Figure 42. Sequence of (service page) for Head of family.....	55
.....	vii
Figure 43. Sequence of (service page) for other family member.....	57
.....	vii
Figure 44. Sequence of (Technical support page) for Head of family & other family member.....	58
.....	vii
Figure 45. Sequence of Home Page for Distribution Market.....	59
.....	vii
Figure 46. Sequence of login Page for Distribution Market.....	61
.....	viii
Figure 47. Sequence of Service Page for Distribution Market.....	63
.....	viii
Figure 50. Data flow for Distribution market log in.....	65
.....	viii
Figure 51. Data flow for Distribution market log in (v.c)	65
.....	viii
Figure 52. Data flow for Distribution market delete from system.....	66
.....	viii
Figure 53. Data flow for Distribution market update data.....	67
.....	viii
Figure 54. Data flow for Distribution market add new rations.....	67
.....	viii
Figure 55. Data flow for Distribution market show responsive box page.....	68
.....	viii
Figure 56. Data flow for citizen login.....	68
.....	viii
Figure 57. Data flow for citizen login.....	69
.....	viii
Figure 58. Data flow for citizen show QR code.....	69

.....	viii
Figure 59. Data flow for Citizen Show other family member information's.....	70
.....	viii
Figure 60. Data flow for Citizen Edit other family member.....	70
.....	viii
Figure 61. Data flow for Citizen Show distribution market map.....	71
.....	viii
Figure 62. Data flow for Citizen Setting change password.....	71
.....	viii
Figure 63. Data flow for Citizen Setting change password.....	72
.....	viii
Figure 64. Data flow for Citizen Setting change phone.....	72
.....	viii
Figure 65. Data flow for Citizen Setting change phone.....	73
.....	viii
Figure 66. Data flow for Citizen Setting change language.....	73
.....	viii
Figure 67. Data flow for Citizen Setting change theme.....	74
.....	viii
Figure 68. Data flow for head of family create new card Service	74
.....	viii
Figure 69. Data flow for head of family create sub card Service	75
.....	viii
Figure 70. Data flow for head of family add family member Service	75
.....	viii
Figure 71. Data flow for Citizen Transfer governorate Service	76
.....	viii
Figure 72. Data flow for Citizen Technical support.....	76
.....	viii
Figure 73. ER Diagram.....	77
.....	viii
Figure 74. Deployment	81
.....	viii
Figure 75. UI of Home page.....	82
.....	viii
Figure 76. UI of login page.....	82
.....	viii
Figure 77. UI of QR code page.....	83
.....	viii
Figure 78. UI of Menu page.....	83
.....	viii
Figure 79. UI of Service page.....	83
.....	viii
Figure 80. UI of Control Users page part 1.....	83
.....	viii
Figure 81. UI of Distribution Markets page.....	84
.....	viii
Figure 82. UI of Control Users page part 2.....	84
.....	viii
Figure 83. UI of Setting page.....	84
.....	viii
Figure 1. Questionnaire of People work on Distribution Market page 1	6
Figure 2. Questionnaire of People work on Distribution Market page 2	7

Figure 3. Questionnaire of People work on Distribution Market page 3	8
Figure 4. Questionnaire of Employee in Ministry page 1	9
Figure 5. Questionnaire of Employee in Ministry page 2	10
Figure 6. Questionnaire of Employee in Ministry page 3	11
Figure 7. Questionnaire of Employee in Ministry page 4	12
Figure 8. Questionnaire of Employee in Ministry page 5	13
Figure 9. Time line	18
Figure 10. Use case of Head of family & other member	20
Figure 11. Use case of Distribution Market	21
Figure 12. Use case Scenario of "Register" Use case	22
Figure 13. Use case Scenario of "login for Employee" Use case.....	23
Figure 14. Use case Scenario of "login for citizen" Use case	24
Figure 15. Use case Scenario of "view card points & Data" Use case.....	25
Figure 16. Use case Scenario of "Create new card" Use case.....	26
Figure 17. Use case Scenario of "Create sub card " Use case	27
Figure 18. Use case Scenario of "Add family member" Use case	28
Figure 19. Use case Scenario of "Separate from family " Use case	29
Figure 20. Use case Scenario of "Transfer governorate" Use case	30
Figure 21. . Use case Scenario of "View responses" Use case.....	31
Figure 22. Use case Scenario of "View Distribution Market Owners' item info" Use case.....	32
Figure 23. . Use case Scenario of "Control Employee restrictions" Use case.....	33
Figure 24. . Use case Scenario of "Add employee" Use case.....	34
Figure 25. . Use case Scenario of "Check requests" Use case.....	35
Figure 26. Use case Scenario of "Make Join Request" Use case.....	36
Figure 27. Use case Scenario of "Login for Distribution Market Owner" Use case	37
Figure 28. Use case Scenario of "View and Edit Distribution Market Data" Use case	38
Figure 29. Use case Scenario of "Check requests" Use case	39
Figure 30. Use case Scenario of "Pay the insurance" Use case	40
Figure 31. Use case Scenario of "Order new Ration" Use case	41
Figure 32. Use case Scenario of "Edit Citizen Points" Use case	42
Figure 33. Use case Scenario of "Confirm ration Receiving" Use case	43
Figure 34. Use case Scenario of "Specify Merchant Ration" Use case.....	44
Figure 35. Use case Scenario of "View Requests Responses" Use case.....	45
Figure 36. Class Diagram part 1.....	46
Figure 37. Class Diagram part 2.....	47
Figure 38. Sequence of (Home page) for Head of family & other family member	49
Figure 39. Sequence of (control page) for Head of family	50
Figure 40. Sequence of Distribution Market map page	51
Figure 41. Sequence of (setting page) for Head of family & other family member	53
Figure 42. Sequence of (service page) for Head of family.....	55
Figure 43. Sequence of (service page) for other family member	57
Figure 44. Sequence of (Technical support page) for Head of family & other family member	58
Figure 45. Sequence of Home Page for Distribution Market	59
Figure 46. Sequence of login Page for Distribution Market	61
Figure 47. Sequence of Service Page for Distribution Market.....	63
Figure 48. The Proposed Structure Model.....	64
Figure 49 . Data flow for Distribution market create account	65
Figure 50. Data flow for Distribution market log in	65
Figure 51. Data flow for Distribution market log in (v.c)	66
Figure 52. Data flow for Distribution market delete from system	66
Figure 53. Data flow for Distribution market update data	67
Figure 54. Data flow for Distribution market add new rations	67

Figure 55. Data flow for Distribution market show responsive box page	68
Figure 56. Data flow for citizen login.....	68
Figure 57. Data flow for citizen login.....	69
Figure 58. Data flow for citizen show QR code	69
Figure 59. Data flow for Citizen Show other family member information's.....	70
Figure 60. Data flow for Citizen Edit other family member	70
Figure 61. Data flow for Citizen Show distribution market map	71
Figure 62. Data flow for Citizen Setting change password	71
Figure 63. Data flow for Citizen Setting change password.....	72
Figure 64. Data flow for Citizen Setting change phone.....	72
Figure 65. Data flow for Citizen Setting change phone.....	73
Figure 66. Data flow for Citizen Setting change language.....	73
Figure 67. Data flow for Citizen Setting change theme.....	74
Figure 68. Data flow for head of family create new card Service.....	74
Figure 69. Data flow for head of family create sub card Service.....	75
Figure 70. Data flow for head of family add family member Service	75
Figure 71. Data flow for Citizen Transfer governorate Service	76
Figure 72. Data flow for Citizen Technical support	76
Figure 73. ER Diagram.....	77
Figure 74. Deployment.....	81
Figure 76. UI of login page	82
Figure 75. UI of Home page.....	82
Figure 77. UI of QR code page	83
Figure 78. UI of Menu page.....	83
Figure 80. UI of Control Users page part 1.....	83
Figure 79. UI of Service page.....	83
Figure 82. UI of Control Users page part 2.....	84
Figure 81. UI of Distribution Markets page	84
Figure 83. UI of Setting page	84
 Figure 1. Questionnaire of People work on Distribution Market page 1 6	iv
Figure 2. Questionnaire of People work on Distribution Market page 2 7	iv
Figure 3. Questionnaire of People work on Distribution Market page 3 8	iv
Figure 4. Questionnaire of Employee in Ministry page 1 9	iv
Figure 5. Questionnaire of Employee in Ministry page 2 10	iv
Figure 1. Questionnaire of People work on Distribution Market page 1	6
Figure 2. Questionnaire of People work on Distribution Market page 2	7
Figure 3. Questionnaire of People work on Distribution Market page 3	8
Figure 4. Questionnaire of Employee in Ministry page 1	9
Figure 5. Questionnaire of Employee in Ministry page 2	10
Figure 6. Questionnaire of Employee in Ministry page 3	11
Figure 7. Questionnaire of Employee in Ministry page 4	12
Figure 8. Questionnaire of Employee in Ministry page 5	13
Figure 9. Time line	18
Figure 10. Use case of Head of family & other member	20
Figure 11. Use case of Distribution Market	21
Figure 12. Use case Scenario of "Register" Use case	22
Figure 13. Use case Scenario of "login for Employee" Use case.....	23
Figure 14. Use case Scenario of "login for citizen" Use case	24
Figure 15. Use case Scenario of "view card points & Data" Use case.....	25
Figure 16. Use case Scenario of "Create new card" Use case.....	26
Figure 17. Use case Scenario of "Create sub card " Use case	27

Figure 18. Use case Scenario of "Add family member" Use case	28
Figure 19. Use case Scenario of "Separate from family " Use case	29
Figure 20. Use case Scenario of "Transfer governorate" Use case	30
Figure 21. . Use case Scenario of "View responses" Use case.....	31
Figure 22. Use case Scenario of "View Distribution Market Owners' item info" Use case.....	32
Figure 23. . Use case Scenario of "Control Employee restrictions" Use case.....	33
Figure 24. . Use case Scenario of "Add employee" Use case.....	34
Figure 25. . Use case Scenario of "Check requests" Use case.....	35
Figure 26. Use case Scenario of "Make Join Request" Use case.....	36
Figure 27. Use case Scenario of "Login for Distribution Market Owner" Use case	37
Figure 28. Use case Scenario of "View and Edit Distribution Market Data" Use case	38
Figure 29. Use case Scenario of "Check requests" Use case	39
Figure 30. Use case Scenario of "Pay the insurance" Use case	40
Figure 31. Use case Scenario of "Order new Ration" Use case	41
Figure 32. Use case Scenario of "Edit Citizen Points" Use case	42
Figure 33. Use case Scenario of "Confirm ration Receiving" Use case	43
Figure 34. Use case Scenario of "Specify Merchant Ration" Use case.....	44
Figure 35. Use case Scenario of "View Requests Responses" Use case.....	45
Figure 36. Class Diagram part 1.....	46
Figure 37. Class Diagram part 2.....	47
Figure 38. Sequence of (Home page) for Head of family & other family member	49
Figure 39. Sequence of (control page) for Head of family	50
Figure 40. Sequence of Distribution Market map page	51
Figure 41. Sequence of (setting page) for Head of family & other family member	53
Figure 42. Sequence of (service page) for Head of family.....	55
Figure 43. Sequence of (service page) for other family member	57
Figure 44. Sequence of (Technical support page) for Head of family & other family member	58
Figure 45. Sequence of Home Page for Distribution Market	59
Figure 46. Sequence of login Page for Distribution Market	61
Figure 47. Sequence of Service Page for Distribution Market.....	63
Figure 48. The Proposed Structure Model.....	64
Figure 49 . Data flow for Distribution market create account	65
Figure 50. Data flow for Distribution market log in	65
Figure 51. Data flow for Distribution market log in (v.c)	66
Figure 52. Data flow for Distribution market delete from system	66
Figure 53. Data flow for Distribution market update data	67
Figure 54. Data flow for Distribution market add new rations	67
Figure 55. Data flow for Distribution market show responsive box page	68
Figure 56. Data flow for citizen login.....	68
Figure 57. Data flow for citizen login.....	69
Figure 58. Data flow for citizen show QR code	69
Figure 59. Data flow for Citizen Show other family member information's.....	70
Figure 60. Data flow for Citizen Edit other family member	70
Figure 61. Data flow for Citizen Show distribution market map	71
Figure 62. Data flow for Citizen Setting change password.....	71
Figure 63. Data flow for Citizen Setting change password.....	72
Figure 64. Data flow for Citizen Setting change phone.....	72
Figure 65. Data flow for Citizen Setting change phone.....	73
Figure 66. Data flow for Citizen Setting change language.....	73
Figure 67. Data flow for Citizen Setting change theme.....	74
Figure 68. Data flow for head of family create new card Service.....	74
Figure 69. Data flow for head of family create sub card Service.....	75

Figure 70. Data flow for head of family add family member Service	75
Figure 71. Data flow for Citizen Transfer governorate Service	76
Figure 72. Data flow for Citizen Technical support	76
Figure 73. ER Diagram	77
Figure 74. Deployment.....	81
Figure 76. UI of login page	82
Figure 75. UI of Home page.....	82
Figure 77. UI of QR code page	83
Figure 78. UI of Menu page.....	83
Figure 80. UI of Control Users page part 1.....	83
Figure 79. UI of Service page.....	83
Figure 82. UI of Control Users page part 2.....	84
Figure 81. UI of Distribution Markets page	84
Figure 83. UI of Setting page	84

List of Tables

Table 1. Gantt chart.....	17
Table 2. Data Dictionary for Owner table.....	78
Table 3. Data Dictionary for other member table.....	79
Table 4. Data Dictionary for card table.....	80
Table 5. Data Dictionary for Distribution Market table.....	80

1. Introduction

Technology plays an important role in our lives and helps in accomplishing most of the work. Technology is a Greek word and it consists of two syllables. The first techno means art or skill or industry, and the second is logistic and it means science or study and thus technology means performance science or application science or skill science. Since the beginning of electronic development, several standards have been changed to deal with some organizations, as the support system for individuals has changed in terms of bread and supplies, as the matter developed for each family to obtain a ration card that enables them to obtain their dues, but some problems occurred in terms of not getting all family members On the deserved support, most of the time, as some individuals face problems in cases of travel or moving temporarily in the disbursement of food supplies and the desire to live due to the use of a single ration card for all family members, which may be with the head of the family in the event of travel or the possibility of damage, which leads to the disruption of the process Disbursing dues, and in this case, they go to the nearest supply office to make a replacement request for a damaged one and here comes another problem, which is the dealings and services that the citizen goes to the nearest supply office to submit an application for, such as (issuing a new ration card - issuing a replacement for a supply card - issuing a replacement for a damaged supply card - Activating the ration card - social separation - joining family members - transferring from one governorate to another) as he faces many obstacles besides delaying the response and solving his problem due to the review of many Requests submitted manually with the difficulty of arranging and searching in the documents submitted, and there are also problems in dealing with the card as there are some problems in the current machines used to exchange goods.

The proposed project use Service-Oriented Architecture (SOA) , defines a way to make software components reusable via service interfaces. These interfaces utilize common communication standards in such a way that they can be rapidly incorporated into new applications without having to perform deep integration each time. Each service in an SOA embodies the code and data integrations required to execute a complete, discrete business function (e.g., checking a customer's credit, calculating a monthly loan payment, or processing a mortgage application). The service interfaces provide loose coupling, meaning they can be called with little or no knowledge of how the integration is implemented underneath. The services are exposed using standard network protocols—such as simple object access protocol (SOAP)/HTTP or JavaScript Object Symation (JSON)/HTTP—to send requests to read or change data. The services are published in a way that enables developers to quickly find them and reuse them to assemble new applications. These services can be built from scratch but are often created by exposing functions from legacy systems of record as service interfaces.

The project use Enterprise resource planning (ERP) refers to a type of software that organization use to manage day-to-day business activities such as accounting, procurement, project

management, risk management and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report on an organization's financial results. ERP systems tie together a multitude of business processes and enable the flow of data between them. By collecting an organization's shared transactional data from multiple sources, ERP systems eliminate data duplication and provide data integrity with a single source of truth. ERP systems are designed around a single, defined data structure (schema) that typically has a common database. This helps ensure that the information used across the enterprise is normalized and based on common definitions and user experiences. These core constructs are then interconnected with business processes driven by workflows across business departments (e.g. finance, human resources, engineering, marketing, operations), connecting systems and the people who use them. Simply put, ERP is the vehicle for integrating people, processes, and technologies across a modern enterprise.

The project use a management information system (MIS) is an information system used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization. The study of the management information systems involves people, processes and technology in an organizational context. In a corporate setting, the ultimate goal of the use of a management information system is to increase the value and profits of the business. This is done by providing managers with timely and appropriate information allowing them to make effective decisions within a shorter period of time.

The project also use Digital transformation (DT) is the integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It's also a cultural change that requires organizations to continually challenge the status quo, experiment, and get comfortable with failure.

Therefore, a set of proposed solutions has been developed to solve these problems, as the current cards have been replaced with cards containing a QR code, accordingly the current machines used in the exchange will be replaced. The shares due to machines that scan the QR code, and the new proposal includes the creation of subsidiary cards that the rest of the family has the right to deal with, transactions and services, he can also complete them electronically through the mobile application or website where he can complete the operations Through it.

The return from this project is the completion of a website and a mobile application for the citizen to use and converting the transaction into an electronic form, in addition to creating new cards containing a QR code that can also be used through the application as being equal to the card in addition to creating sub cards, which play an important role in the new system.

This development has contributed to the arrival of the allocated quotas to all individuals through the subsidiary cards, saving time and effort by converting transactions into electronic form and the absence of the need for catering offices, which will also help in avoiding the accumulations that lead to diseases and some other problems and also facilitated the process of

quick response and sorting of requests In an organized manner, which in turn led to a reduction in paper handling and waste, which preserves the cleanliness of the environment.

2. Literature

The proposed project keeps up the current development of technology to develop the current system which relies heavily on paper documents, requires a large number of employees, in spite of that the good point of the current system is dealing with External System, like Ministry of Military Production to know about Citizens Traveling abroad and property, but the current System have many drawbacks, which the proposed system Seeking to solve it.

- Drawbacks of the current system:
- The whole current system missing the organizing process.
- The citizen may miss month ration if the card is damaged or lost.
- The family member that are in another governorate will not benefit from their ration.
- The citizen needs to go ministry office many times to create request as (create new card request - create sub card request - etc.)
- Requests take much time until they responded by the ministry employees.
- The current system depends on the card and the card reader device so if one of them is damaged, the citizen will be harmed, as he will not be able to benefit from the current month's ration.

3. Proposed Solution

Therefore, a set of proposed solutions has been developed to solve these problems, as the current cards have been replaced with cards containing a QR code instead of the copper chip to avoid damage to it from damage and others besides the ease of dealing with the QR code in general and accordingly the current machines used in the exchange will be replaced The shares due to machines that scan the QR code to complete the process, and the new proposal includes the creation of subsidiary cards that the rest of the family has the right to deal with, such as the main card, but with specific shares that enable the individual to obtain the rations allocated to him to avoid not all family members benefiting from the rations allocated to them. With a maximum of 4 sub-cards for each family, and the cardholder has reached the age of 18 years, to facilitate the process of benefiting from the shares in the event of travel or any emergency situation. As for services, transactions and services, he can also complete them electronically through the mobile application or website where he can complete the operations Through it, where he submits a request and waits for a response without the need to go to the catering offices, as well as the ability to display the remaining points on the application without going to the distribution stores with The advantage of knowing the location of the nearest distribution store and the goods available to it, as it displays the QR code on its card.

4. Domain Analysis

The old supply system was based on the paper ration card, whereby citizens were allocated on each card a certain number of individuals who were provided with support by allocating certain goods to each individual with a small amount of money being paid during the disbursement of food supplies.

Which in turn, caused some problems such as not all family members benefiting from the supply, ignoring the rest of the family after this specific limit, and wrapping or cutting paper linens, as there was tampering with distribution stores and selling goods at higher prices in addition to the bakery owners' disposing of the rations received by them by using some of them. The sale of the other part, which indicates lack of control.

Based on this, the current system was created to overcome these obstacles, which differed in many things by converting paper ration cards into smart cards, which are established in the nearest supply office and are used on specific machines that have been distributed to all distribution stores and bakeries, and each card contains rations. Allocated to each family, which varies according to the number, so there will be a specific support of 50 pounds for the first four members and it becomes 25 pounds starting from the fifth individual and a number of points that are used to spend bread loaves are determined and the remaining points are converted at the end of the month to a specific amount that enables the card holder to exchange goods Additional and replacing it with points, and family members are added by submitting a request to increase the number of individuals to the card, and some conditions exist for creating a new card, such as not being eligible for some people who receive large salaries and removing people who travel for a period of more than 6 months outside the country, and the distribution shops also pay a deposit On the spent commodities so that they can take the goods, and specific shares are distributed to the bakery owners to avoid embezzlement operations.

These operations led to an increase in the organization process over what was before it and increased supervision, in addition to providing services and seeking assistance from some other government agencies to facilitate operations to citizens, and it also overcame the problem of ignoring individuals who exceeded the permissible limit in the old cards.

Some problems also resulted in the failure of all members of the family to benefit from the support provided to them due to some cases such as travel, which enables all individuals to use the same card to spend the allocated rations, in addition to damage or loss of the card, which requires submitting an application for a new card, which takes a long time and causes Sometimes the ration for this month is lost on the family due to some procedures and the organization of requests, and there are also some faults in the machines used.

The reason for most of these problems is the lack of the current system to not switch to electronic dealing to organize operations, speed of response and address problems, as well as

reduce stress and facilitate use of both employees and citizens.

Therefore, some solutions have been proposed in this project, which is the creation of subsidiary cards that enable all family members to benefit from the rations by dividing the shares allocated to the cards created on the family to avoid some of the resulting damage. And the devices used are less expensive, in addition to the possibility of using the QR code on the phone application that will be created as an alternative to the card, creating a website and mobile application that enables the citizen to complete some transactions and services such as (issuing a new ration card - issuing a replacement for a ration card - issuing a replacement for a damaged card Supply - activating the ration card - social separation - joining family members - transferring from one governorate to another) instead of going to the nearest supply office as well as reducing paperwork. The application can also know the nearest distribution location, as well as knowing the remaining points on the card.

4.1 Data Gathering

The data Gathering process was carried out by setting up some personal interviews and going to the catering offices as well as personal communication with different people in different departments like managers , employees responsible for issuing a new ration card and other services , employees on ration office and people work on distribution markets who have experience and knowledge about the current system by asking some questions that help in determining the powers and limitations of the system and the services available in it

Some of the meetings used to take place face to face and the data was recorded at the moment and inquired about any obstacle or any information that was not clarified, while the other part was through electronic communication via social networking sites or some other programs or sending a questionnaire to be filled out and sent to the designated mail.

4.1.1 Questionnaire

4.1.1.1 Distribution Market questionnaire

Food Purveyance Development System

الغرض من هذه الاسئلة لتطوير نظام التموين الحالي وتجميع اكبر عدد من المعلومات لتحقيق اكبر استفادة للمواطن و نرجو من سيادتكم الرد علي هذه الاسئلة بحد اقصي خلال 3 ايام مع خالص الشكر والتقدير

(1) ما هي الاجراءات المطلوبة منك لكي توافق وزارة التموين لضمك كتاجر موزع للسلع الغذائية.

(2) هل تواجه صعوبة في عملية اكمال الاجراءات لقبول طلبك.

نعم اجد صعوبة في بعض الاجراءات لا يوجد صعوبة

(3) كم من الوقت كانت تأخذ منك الاجراءات

اكتر ثلاثة ايام - خمس ايام اسبوع يوم - يومين

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Figure 6. Questionnaire of People work on Distribution Market page 1

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٤) هل تفضل ان تتم الاجراءات بشكل الكتروني ام ورقي.



ورقي



الكتروني

٥) اذا قمت باختيار الكتروني هل ترى انه سوف يوفر الوقت والجهد (نعم \ لا)

٦) هل تواجه مشكلة في التعامل الالكتروني عن طريق الحاسب الالي او الهاتف المحمول ()

٧) كيف تتم عملية استلام السلع.

٨) هل تقوم بعملية جرد مستمر للسلع المتبقية (نعم \ لا)

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Figure 7. Questionnaire of People work on Distribution Market page 2

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(9) كيف تتم عملية الرقابة التموينية.

(10) كيف تتم عملية استيراد الارباح العائدة عليك.

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يرجى ارسل الرد على هذا الايميل

Figure 8. Questionnaire of People work on Distribution Market page 3

4.1.1.2 Ministry questionnaire

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الغرض من هذه الاسئلة لتطوير نظام التموين الحالي و تجميع اكبر عدد من المعلومات لتحقيق اكبر استفادة للمواطن و نرجو من سعادتكم الرد علي هذه الاسئلة بجد اقصي خلال 7 ايام مع خالص الشكر والتقدير

(1) ما هو نصيب الفرد في التموين

(2) ما هو نصيب الفرد في النقاط

(3) ما شروط قبول الأفراد في منظومة الدعم

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Figure 9. Questionnaire of Employee in Ministry page 1

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(4) كيف تتم عملية تقديم طلب للشخص المستحق للدعم وما هي الاوراق المطلوبة منه

(5) ما هي الاوراق المطلوبة من رب الاسرة اكي يضيف زوجته وابنائه

(6) ما هو السن المسموح به لرب السرة لكي يتقدم بطلب اضافة لابنه كفرد لدى الدعم

استبيان موجه الي الموظفين في الوزارة صفحة | 2

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يرجى ارسل الرد على هذا الايميل

Figure 10. Questionnaire of Employee in Ministry page 2

٧) ما هي الاجراءات التي يجب اتخاذها في حالة تلف البطاقة

٨) ما هي الاجراءات التي يجب اتخاذها في حالة ضياع البطاقة

٩) ما هي الشروط التي يجب تنفيذها لتم عمليه صرف التموين

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يرجى ارسل الرد على هذا الايميل

Figure 11. Questionnaire of Employee in Ministry page 3

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(10) هل يتصل نظام تشغيل في الوزارة بـ اي انظمة اخري مثل "السجل المدني" او منفصل

(11) في حالة قبول المتقدم بطلب لاستخراج بطاقة تموينيه. كيف تتم عملية تسليمها له ؟

(12) هل هناك اي اعتراض علي امكانية تقسيم البطاقة الي بطاقات فرعية يمكن استخدامها من خلال جميع افراد الاسره لضمان حل مشكلات مثل السفر والتلف

استبيان موجه الي الموظفين في الوزارة صفحة | 4

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يرجى ارسل الرد على هذا الايميل

Figure 12. Questionnaire of Employee in Ministry page 4

(13) ما هي الاجراءات المطلوبة للفصل الاجتماعي

(14) كيف تتم عملية النقل من محافظة الى محافظة اخرى

استبيان موجه الي الموظفين في الوزارة صفحة | 5

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يرجى ارسل الرد على هذا الايميل

Figure 13. Questionnaire of Employee in Ministry page 5

4.2 Requirements

4.2.1 Functional Requirements

- The system allows the user to complete the operations electronically, such as (submitting an application for a ration card - social separation - a lost replacement - damaged replacement - transfer from one governorate to another).
- The system allows the user to know the information related to his card and the number of points remaining for him at any time.
- The system allows for applications to include supply receipts electronically.
- The system allows the user to know the location of the nearest merchant and the goods available to him.
- The system automatically determines the goods available to the supply switchers, as each product is entered upon completion of any withdrawal process, the new product is added.
- The system allows automatic scanning of deaths in cooperation with the Ministry of Health.
- The system allows sending and receiving responses to complaints, comments and requests sent.
- The system sets up powers to control the points awarded to each card through the main account of the head of the family, as it distributes the points to the created subsidiary cards or leaves them as they are on the main card.

4.2.2 Non-Functional Requirements

- Accessibility: "direct access" this is about making the system accessible to all.
- Maintainability: Make the system capable of renewal and improvement continuously, order to maintain systems.
- Extensibility: the ability to make extend a system and this is by can be through the modification of previously existing functionality or through addition of new functionality in the system.
- Usability: the system provide for user capability to use in order to achieve a particular goal.
- Privacy: the system must be able to protect the citizen or goods distributors' information from unauthorized persons.
- Security: the ability to provide protection to the system from attack and intrusions.

4.3 Risks and Constraints

4.3.1 Constraints

Software lives within the context of the real-world, and the real-world has constraints. In this section we will define these constraints so it's clear for working within them and obvious how they affect to architecture decisions, in the proposed Project, the solutions restricted to the terms of the ministry of supply.

- one of the proposed solutions is creating a new option in the System that enable citizens to create sub card/s for their family member, so they can easily take a ration that is identified by the head of the family as points, and if he didn't the points will be back to the head of the family card.
- In the current system, Citizens must Exchange their card points from market distribution within the same month.
- Citizens also must Exchange their points in its governorate, if he wants to change his governorate, he should make a request of that.

4.3.2 Risks

4.3.2.1 Analysis risk:

- Dealing with some employees who do not have enough information about the current system
- Difficulty meeting with some managers to gather information due to lack of time
- Gathering the rules and restrictions within the scope of the current system

4.3.2.2 Design risk:

- Dealing with people of different ages with different levels of culture, which requires the creation of UI more flexible more usable

4.3.2.3 Implementation risk:

- The difficulty of dealing with the system by employees and distribution markets
- The difficulty of the user's handling of the system
- Not owning mobile phones for all citizens
- Data Security (Using dual authentication process)

4.4 Hardware and software requirements

The proposed System will be implemented to run in three different Platforms (Web, IOS, Android).The project require special requirements to Works efficiently.

Hardware requirements for the developers:

- The proposed System require Storage server, service server, and the database requires a hardware configuration with a fast database system running on high rpm hard-disk permitting complete data redundancy and back-up systems to support the primary goal of reliability.

The Recommended Hardware and Software requirements for Employees:

- Computer connected to the internet (i5 7th-4GB Ram-500gb hard drive)
- Barcode Printer.
- Barcode Scanner.
- Paper Scanner.

The Recommended Hardware and Software requirements for Merchants:

- Computer connected to the internet (i5 7th-4GB Ram-500gb hard drive)
- Barcode Scanner.

The Recommended Hardware and Software requirements for Citizens:

- Any Computer connected to the internet.
- (Android-IOS) Smart phone connected to the internet.

4.5 Project Plan

Table 2. Gantt chart

	DESCRIPTION	START DATE	END DATE	DURATION (Days)	% Complete
1	Analysis of Project	16/12/20	18/12/20	3d	100%
1.1	• Data Gathering	18/12/20	21/12/20	3d	100%
1.2	• Detect Requirements	21/12/20	23/12/20	3d	100%
1.3	• Studying Risk management and Constraints of project	23/12/20	25/12/20	3d	100%
1.4	• Detect Hardware and software requirements	25/12/20	25/12/20	1d	100%
1.5	• Detect Proposed System	25/12/20	27/12/20	3d	100%
1.6	• System Architecture	29/12/20	4/1/21	5d	100%
1.7	• System Use-Cases	4/1/21	15/1/21	10d	100%
1.8	• Use cases Scenario	15/1/21	21/1/21	5d	100%
1.9	• Class Diagram	21/1/21	25/1/21	5d	100%
1.10	• Sequence Diagram	25/1/21	29/1/21	5d	100%
1.11	• The Proposed Structure Model	29/1/21	29/1/21	1d	100%
1.12	• Data Flow Diagram	1/2/21	9/2/21	9d	100%
1.13	• ER Diagram	9/2/21	11/2/21	3d	100%
1.14	• Data Dictionary	11/2/21	15/2/21	5d	100%
2	Design of Project	15/2/21	26/2/21	10d	100%
3	Implementation of Project	26/2/21	6/5/21	50d	0%
3.1	• implement graphic user interface	26/2/21	10/3/21	9d	0%
3.2	• Implement business logic	10/3/21	18/5/21	50d	0%
4	Test of Project	6/5/21	12/5/21	5d	0%
4.1	• functional - non functional	6/5/21	7/5/21	2d	0%
4.2	• performance	7/5/21	10/5/21	2d	0%
4.3	• security	10/5/21	11/5/21	2d	0%
4.4	• contiguity	11/5/21	12/5/21	1d	0%
5	Deployment	12/5/21	18/5/21	5d	0%

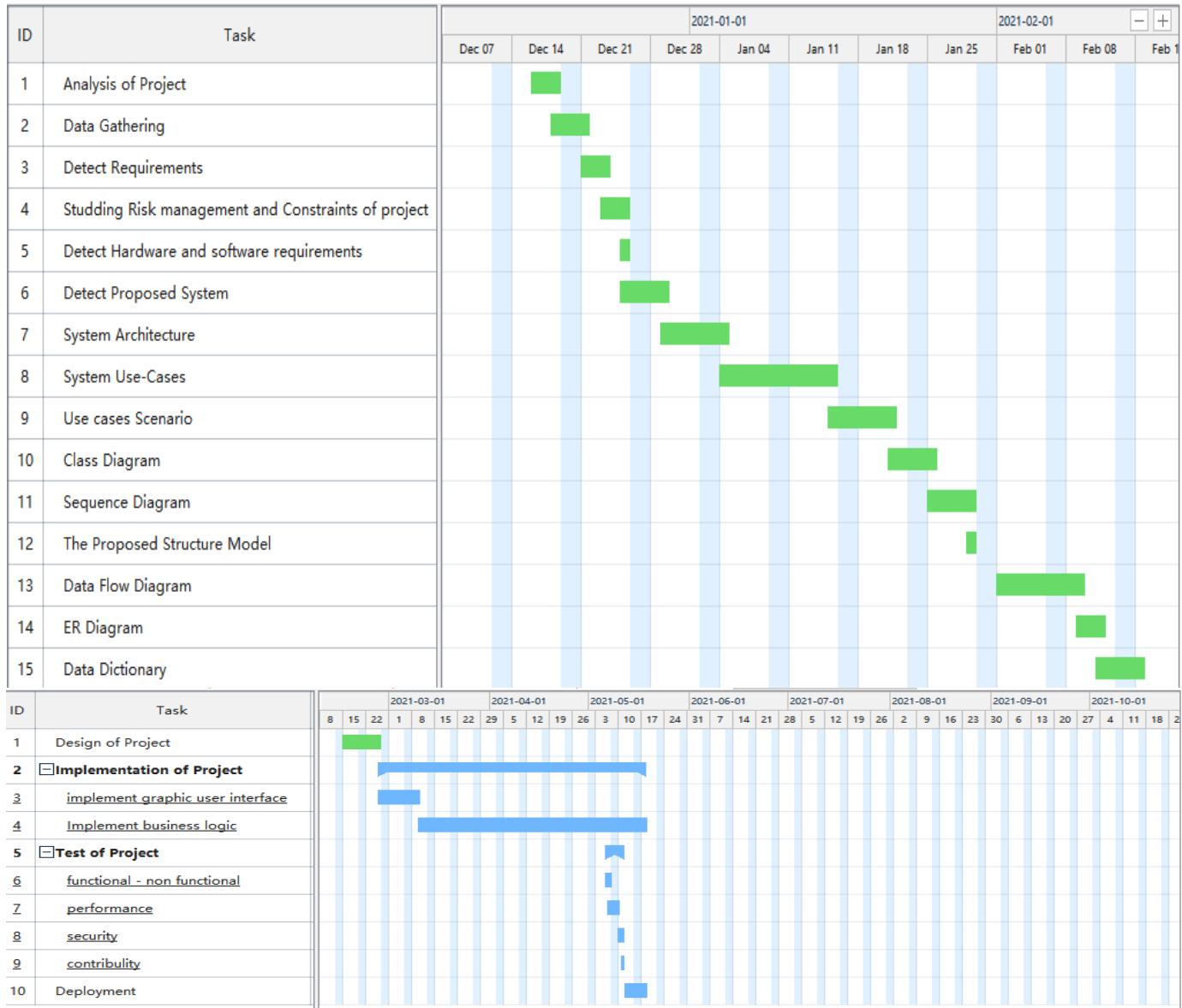


Figure 14. Time line

4.6 Quality Assurance Plan

- Reducing diseases :

Reducing overcrowding and to reduces the spread of diseases by transform the system to full automated system.

- Qr code :

For Saving user time and effort and ensuring a monthly quota

- Sub card :

That enable citizens to create sub card/s for their family member, so they can easily take a ration that is identified by the head of the family as points, and if he didn't the points will be back to the head of the family card.

- iOS/Android application for :

1. iOS app for mac
2. APK application for android devices

- A website for computers:

There is more than one way to log in to an account

- Map for Distribution Markets :

Saving time for the citizen as it show close distribution market and goods that available in the market.

4.7 System Use-Cases

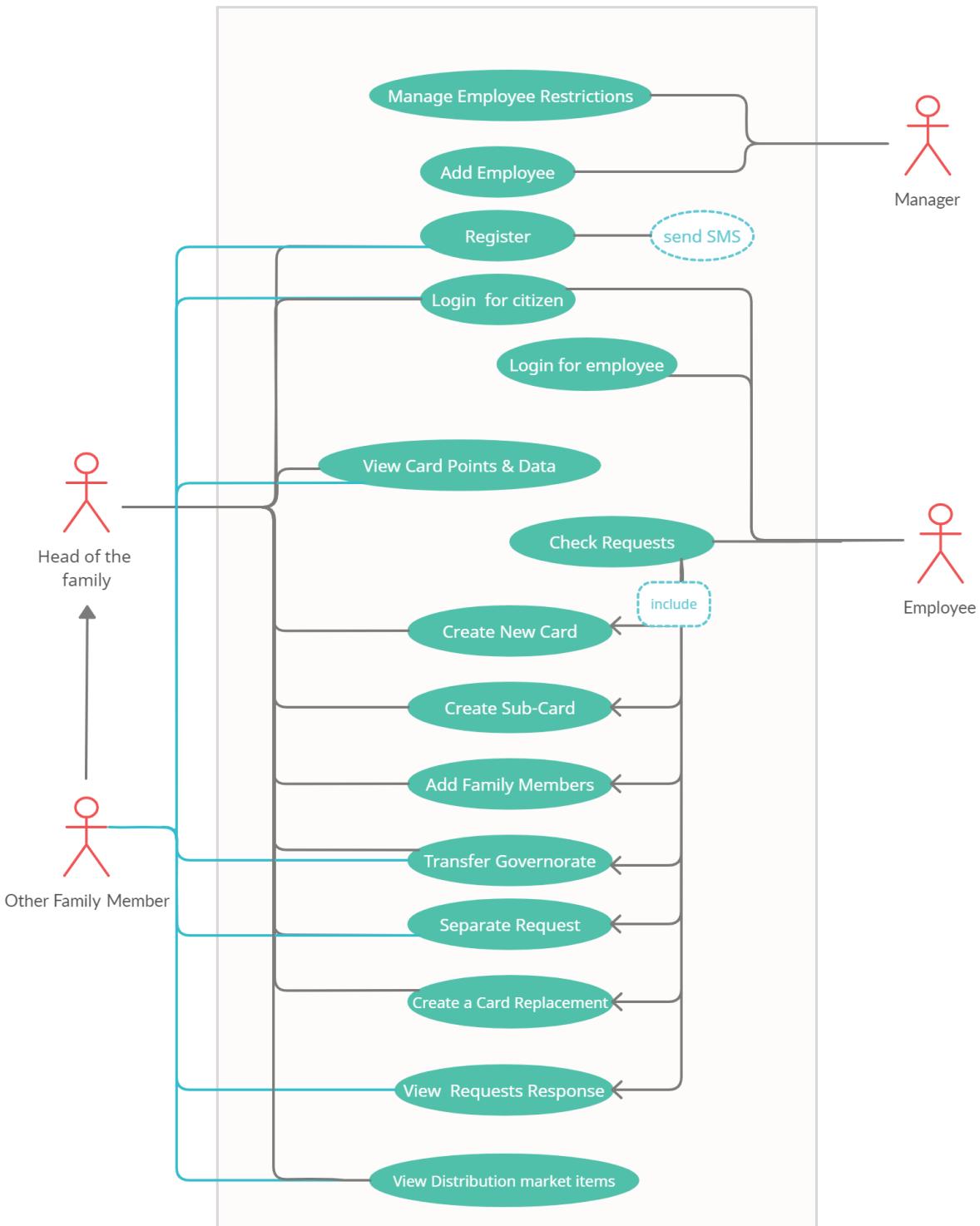


Figure 15. Use case of Head of family & other member

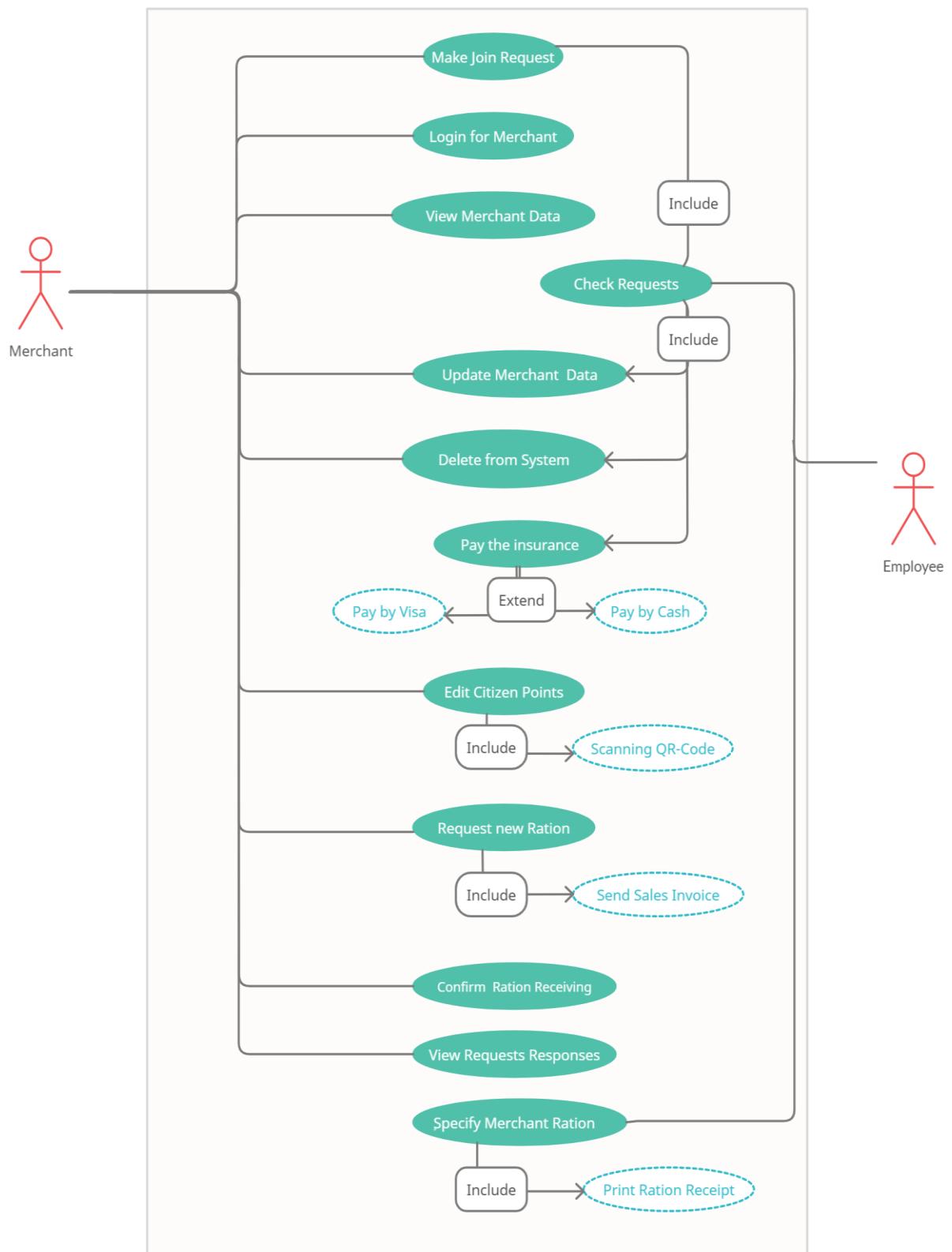


Figure 16. Use case of Distribution Market

4.8 Use cases Scenario

Use Case Name:	Register
Use Case Description:	Allow Citizen to Register Before Login to The System.
Actors:	Head of The Family, Other Family Member.
Area:	Registration
Level:	Blue
Pre-condition:	System must be connected to the network.
Post-condition:	After Successful Registration, notification message is sent to mobile phone, and the user will be able to login to the system.
Triggering event:	Citizen wants to access to the system.
Steps Performed (Main Path):	<p>information for steps:</p> <p>citizen SSID record</p> <p>Password</p> <p>password</p>
1.user enter SSID	
2.user enter Strong Password Consists of (At least 8 characters, A mixture of both uppercase, lowercase letters and numbers)	
3.user confirm Password by write it again	
4.User enter mobile phone number	phone number
5.show successful registration message	
Extensions or Alternative Scenarios:	
1.User enter invalid SSID	
1.1System shows error message “invalid SSID,not 14 digit”	
2.User enter weak Password that doesn’t met requirements	
2.1 System shows error message” Weak Password”	
3.user enter invalid mobile phone, not11 number	
3.1System shows error message “enter right mobile phone”	
Success guarantee:	user able to make a successful registration
Minimum guarantee:	user was able to enroll register page
Priority:	high
Risk:	medium

Figure 17. Use case Scenario of "Register" Use case

Use Case Name	Login for employee
Use Case Description	Allow employee to login to access to system services.
Actors	employee.
Area	accessing system services
Level	Blue
Pre-condition	user must be register by the manager first.
Post-condition	The system displays the relevant home page.
Triggering event	employee wants to access to the system services
Steps Performed (Main Path)	information for steps
1.user enter username using the secure web server	username
2.user enter his/her Password	Password
3.The System validates SSID and Password	
4.The System displays the Merchant page.	
1.User enter invalid username	username
1.1System shows error message “invalid username”	
2.User enter wrong Password	password
2.1 System shows error message” wrong Password”	
3.user can't remember password	
3.1System shows message “please contact with the administrator”	
Success guarantee	user able to make a successful login
Minimum guarantee	user able to reach login page
Priority	high
Risk	medium

Figure 18. Use case Scenario of "login for Employee" Use case

Use Case Name:	login for citizen
Use Case Description:	Allow Citizen to login to access to system services.
Actors:	Head of The Family, Other Family Member.
Area:	accessing system services
Level:	Blue
Pre-condition:	user must be register first.
Post-condition:	The system displays the relevant home page.
Triggering event:	Citizen wants to access to the system services
Steps Performed (Main Path):	information for steps
1.user enter SSID using the secure web server	citizen SSID record
3.The System validates SSID and Password	
4.The System displays the Distribution Market Owner page.	
1.user enter invalid ssid	citizen SSID record
1.1system shows error message "invalid ssid"	
2.user enter wrong password	
2.1 system shows error message" wrong password"	
3.user can't remember password	
3.1system shows password recovery "button"	
3.2system ask user to enter his/her registered mobile phone.	
3.3.system send code to the mobile phone and ask the user to enter it	Verification message
3.4.if the code is right then allow user to create new password	Password
3.5.User can use new password to login	
Success guarantee	user able to make a successful login
Minimum guarantee	user able to reach login page
Priority	high
Risk	medium

Figure 19. Use case Scenario of "login for citizen" Use case

Use Case Name	View card points& Data
Use Case Description:	Allow Citizen to view his/her points and view the all the registered family member in the card
Actors:	Head of The Family, Other Family Member.
Area:	Registration
Level:	Blue
Pre-condition:	User must login first.
Post-condition:	User was able to view the remain points, the name of family member and their SSID.
Steps Performed (Main Path):	information for steps
1. the system retrieve the current points of the card.	card points record
2. the system retrieve the name and SSID of all the registered family Member	citizens name, citizen SSID.
Success guarantee:	user able to view card points and data
Priority:	medium
Risk:	medium

Figure 20. Use case Scenario of "view card points & Data" Use case

Use Case Name	Create new card
Use Case Description:	Citizen want to make a request to create a new card.
Actors:	Head of The Family.
Pre-condition:	Citizen must login first.
Post-condition:	After the user made request to create a new card, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	information for steps
1. User Enter his/her SSID. 2.1 User enter his/her full name, upload his SSID card, upload Marriage Contract, upload father SSID card. 2.2. System checks the user inputs. 2.3. User choose between deliver card to my address and deliver to nearest office 2.4. If user choose to deliver card to his address, he must enter his address Including governorate, street name, building number, apartment number 2.5. If user choose to deliver card to nearest office, he must enter his governorate, town, and choose from the offered office that retrieved by the system, Including governorate, street name, building number, apartment number 2.5 System shows message "your request under review, kindly wait the response"	Citizen SSID citizen name, citizen SSID, Marriage contract, parent SSID ST name governorate, building name/number, apartment number.
Extensions or Alternative Scenarios	
1. User Enter his/her SSID. 1.1 if user already registered on another card System shows message "invalid username"	Citizen SSID
Success guarantee:	user able to create card request
Minimum guarantee:	user able to see he is registered on another card, or he isn't eligible to create new card
Priority:	medium
Risk:	medium

Figure 21. Use case Scenario of "Create new card" Use case

Use Case Name	Create sub card
Use Case Description	Citizen want to make a request to create a sub card for his son /daughter.
Actors	Head of The Family.
Pre-condition	Citizen must login first, and the user is head of the family.
Post-condition	After the user made request to create a sub card, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	information for steps
1.User Enter his/her SSID.	Citizen SSID
1.2User upload his/her son, daughter SSID card or birth card.	Citizen birth card, SSID
1.3 User enter the reason of creating the sub card.	Creating reason
2.3. User choose between deliver to my address and deliver to nearest office	
2.4. If user choose to deliver card to his address, he must enter his address Including governorate, street name, building number, apartment number	governorate, st name , building name/number, apartment number.
2.5. If user choose to deliver card to nearest office, he must enter his governorate, town, and choose from the offered office Including governorate, street name, building number, apartment number	Governorate, town, delivery office, st name, street name, building number, apartment number.
Extensions or Alternative Scenarios	
1.User Enter his/her SSID.	Citizen SSID
1.1if user isn't the head of the family, System shows message "you aren't allow to do this"	
Success guarantee:	user able to create sub card request
Minimum guarantee:	user able to see" he isn't allowed to do this "message
Priority:	medium
Risk:	Medium

Figure 22. Use case Scenario of "Create sub card " Use case

Use Case Name:	Add family member
Use Case Description:	Citizen want to add his sons /her daughters or his wife to his card.
Actors:	Head of The Family.
Pre-condition:	Citizen must login first, and the user is head of the family.
Post-condition:	After the user made request to add family members, he will wait until his request is checked and know the response.
Steps Performed (Main Path) :	<p>information for steps</p> <p>1.User Enter his/her SSID. Citizen SSID</p> <p>2.1User upload his/her son, daughter SSID card or birth card. citizen birth card, SID.</p> <p>Or wife SSID card</p> <p>2.2User confirm the change by clicking submit.</p> <p>2.3. User choose between deliver card to my address and deliver to nearest office</p> <p>2.4. If user choose to deliver card to his address, he must enter his address Including governorate, street name, building number, apartment number</p> <p>2.5. If user choose to deliver card to nearest office, he must enter his governorate, town, and choose from the offered office. Including governorate, street name, building number, apartment number</p>
Extensions or Alternative Scenarios:	<p>governorate, st name, building name, apartment number</p> <p>Governorate ,town, delivery office, st name, street name, building number, apartment number.</p>
1.User Enter his/her SSID. 1.1if user isn't the head of the family, System shows message "you aren't allowed to do this"	Citizen SSID
Success guarantee:	user able to create adding family request
Minimum guarantee:	user able to see " he isn't allowed to do this " message
Priority:	high
Risk:	medium

Figure 23. Use case Scenario of "Add family member" Use case

Use Case Name	Separate from the family
Use Case Description:	Citizen want to separate from his parent card and create an independent card.
Actors:	Head of the family, other family member.
Pre-condition:	Citizen must login first.
Post-condition:	After the user made request to separate from family, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	information for steps
1.User Enter his/her SSID.	Citizen SSID
1.2User upload his/her SSID card.	SSID card
2. User enter the reason for separating from the family.	Separate reason
2.2User confirm the change by clicking submit.	
2.3. User choose between deliver card to my address and deliver to nearest office	
2.4. If user choose to deliver card to his address, he must enter his address Including governorate, street name, building number, apartment number	governorate, st, name, building name, apartment number
2.5 If user choose to deliver card to nearest office, he must enter his governorate, town, and choose from the offered office Including governorate, street name, building number, apartment number	Governorate, town, delivery office, building number, apartment number.
Success guarantee	user able to create separating request
Minimum guarantee:	user able to see " he isn't eligible to do this "message
Priority	medium
Risk	medium

Figure 24. Use case Scenario of “Separate from family ” Use case

Use Case Name	Transfer governorate
Use Case Description:	Citizen want to create a request to Transfer from a governorate to another.
Actors:	Head of The Family.
Pre-condition:	Citizen must login first, and the user must be the head of the family.
Post-condition:	After the user made request to transfer from a governorate to another, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	information for steps
1.User Enter his/her SSID.	Citizen SSID
2.User select the new government he wants.	Government
2.1 User enter the reason why he wants to transfer.	Explanation
2.2User confirm the change by clicking submit.	
2.3. User choose between deliver card to my address and deliver to nearest office	
2.4. If user choose to deliver card to his address, he must enter his address Including governorate, street name, building number, apartment number	Governorate, st name, building name, apartment number
2.5. If user choose to deliver card to nearest office, he must enter his governorate, town, and choose from the offered office , Including governorate, street name, building number, apartment number	Governorate, town, delivery office, st name, street name, building number, apartment number.
Extensions or Alternative Scenarios:	
1.User Enter his/her SSID.	Citizen SSID
1.1if user isn't the head of the family, System shows message "you aren't allowed to do this"	
Success guarantee:	user able to create governorate transfer request
Minimum guarantee:	user able to see" he isn't allowed to do this message
Priority:	medium
Risk:	medium

Figure 25. Use case Scenario of “Transfer governorate” Use case

Use Case Name:	View Responses.
Use Case Description:	Citizen want to know the response of his request.
Actors:	Head of The Family.
Pre-condition:	Citizen made a request that can be (add family member, create new card,...etc.) Citizen must login first, and the user is the head of the family.
Post-condition:	After the user made request, he will know the response of his request.
Triggering event:	Check Requests.
Steps Performed (Main Path):	<p>information for steps</p> <p>1.User Enter his/her SSID.</p> <p>2.System retrieve the response of the citizen request.</p> <p>3.if the citizen request is accepted, system show "your request is accepted, kindly wait The receiving of your card"</p> <p>4.if the citizen request is denied, system retrieve explanation report why its refused</p>
Extensions or Alternative Scenarios:	
1.User Enter his/her SSID.	Citizen SSID
1.1if user doesn't make any requests, System shows message "you don't make any request"	
Success guarantee:	user able to view the response of his request.
Minimum guarantee:	user able to see "you don't make any request message"
Priority:	Medium
Risk:	Medium

Figure 26. . Use case Scenario of "View responses" Use case

View Distribution Market Owners' items info	
Use Case Name:	
Use Case Description:	Citizen can know the available items that Distribution Market Owners have.
Actors:	Head of The Family, other family member.
Pre-condition:	Citizen must login first.
Post-condition:	After the user made request to add family members, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	information for steps
1.user select the Distribution Market Owner that he wants to know about.	Distribution Market Owner
2.System retrieve the available current items and how many are they.	Distribution Market Owner items
2.System also retrieve the location of available current items and how many are they.	Distribution Market Owner Location
Success guarantee:	user able to View Distribution Market Owners' items info.
Priority:	medium
Risk:	low

Figure 27. Use case Scenario of "View Distribution Market Owners' item info" Use case

Use Case Name:	Control employee restrictions
Use Case Description:	The Administrator identify the restrictions and rules for every employee.
Actors:	Administrator.
Pre-condition:	The employees was registered.
Post-condition:	After the Administrator identify tasks for every employee, the employee will be access to do his defined tasks, and he can't access to the others.
Steps Performed (Main Path):	information for steps:
1. Administrator search for the Employees by name.	
2. Administrator select the employee.	Employee name
2.1 System retrieves all name of jobs/ tasks.	Jobs
2.2 Administrator select the jobs /tasks for the employee.	Employee tasks
Extensions or Alternative Scenarios:	
1. Administrator search for not existing Employee.	Employee name
1.1System shows "enter right employee name" message	
Success guarantee:	Administrator successfully able to identify the restrictions and rules for every employee request
Minimum guarantee:	Administrator able to see" enter right employee name "message
Priority:	high
Risk:	high

Figure 28.. Use case Scenario of "Control Employee restrictions" Use case

Use Case Name	Add employee
Use Case Description:	Administrator wants to add new employee and make a username and Password to let him later access to the System.
Actors:	Administrator.
Post-condition:	After the Administrator add Employee, the Employee will have username and password so he can access to the System.
Steps Performed (Main Path):	<p>information for steps:</p> <p>1. Administrator Enter the employee's name. employee name</p> <p>2. Administrator enter username for the employee (it mustn't be overwritten) Employee username</p> <p>2. Administrator enter password for the employee. (Strong Password Consists of At least 8 characters, A mixture of both uppercase, lowercase letters and numbers) Employee password</p> <p>3. System checks the validity user inputs</p> <p>4. System retrieve the username and password after checking Employee username Employee password</p>
Extensions or Alternative Scenarios:	<p>1. Administrator Enter existing employee name. Employee name</p> <p>1.1System shows "this employee already registered " message</p>
Success guarantee	Administrator successfully able to add employee
Minimum guarantee	Administrator see "this employee already registered " message
Priority	high
Risk	low

Figure 29.. Use case Scenario of "Add employee" Use case

Use Case Name:	Check requests
Use Case Description:	Employee checks the citizens requests and make a decision for it.
Actors:	Employee.
Pre-condition:	Citizen made a request (create new card,.....,etc.).
Post-condition:	After the employee made a decision for the citizens requests, the citizen can view the response of his requests.
Triggering event:	Citizen Requests (create new card,...,etc.).
Included use case:	create new card, Create Sub-Card, Add Family Members, Transfer Governorate, Separate Request, Create a Card Replacement, View Requests Response.
Steps Performed (Main Path):	<p>information for steps</p> <p>1. System retrieve the citizens requests in a table.</p> <p>2. Employee select a request (create new card, create sub-card).</p> <p>3. Employee view the request and make a decision which approved or Denied, and explain the reason for the denied requests</p> <p>3.1 Send message to the applicant citizen via the phone number or Email, to inform them with the request response.</p>
Success guarantee:	Employee successfully make a decision for Citizens requests.
Minimum guarantee:	Employee able to view Distribution Market owner requests.
Priority:	medium
Risk:	medium

Figure 30. . Use case Scenario of "Check requests" Use case

Use Case Name:	Make Join Request
Use Case Description:	Allow Distribution Market Owner to create a join request as a distributor.
Actors:	Distribution Market Owner.
Level:	Blue
Pre-condition:	Distribution Market Owner view distributor constraints.
Post-condition:	After the Distribution Market Owner made a request to join, he will wait until his request is checked and know the response.
Steps Performed (Main Path):	<p>information for steps:</p> <p>1. Distribution Market Owner Upload his ID Card. Distribution Market Owner ID</p> <p>2. Distribution Market Owner Upload his Market Photos. Market info</p> <p>3. Distribution Market Owner Enter his Address Distribution Market Owner Address</p> <p>4. Distribution Market Owner Enter his Age Distribution Market Owner Age</p> <p>5. Ask the Distribution Market Owner if he has Relatives working in Supply Ministry Distribution Market Owner Relatives</p> <p>6. Distribution Market Owner click Submit</p> <p>7. System shows "Your Request is successfully sent" message</p>
Success guarantee:	Distribution Market Owner successfully create the join request.
Minimum guarantee:	Distribution Market Owner was able to enroll join request page
Priority:	high
Risk:	medium

Figure 31. Use case Scenario of "Make Join Request" Use case

Use Case Name:	Login for Distribution Market Owner
Use Case Description:	Allow Distribution Market Owner to login to access to system services.
Actors:	Distribution Market Owner.
Area:	Accessing system services
Level:	Blue
Pre-condition:	Distribution Market Owner must register first.
Post-condition:	The system displays the relevant home page.
Steps Performed (Main Path):	<p>information for steps</p> <p>1. Distribution Market Owner enter SSID. Distribution Market Owner SSID record</p> <p>2. Distribution Market Owner enter his/her Password Password</p> <p>3.The System validates SSID and Password</p> <p>4.The System displays the Distribution Market Owner page.</p>
Extensions or Alternative Scenarios:	
1. Distribution Market Owner enter invalid SSID	Distribution Market Owner SSID record
1.1system shows error message “invalid SSID”	
2. Distribution Market Owner enter wrong password	
2.1 system shows error message” wrong password”	
3. Distribution Market Owner can’t remember password	
3.1system shows password recovery “button”	
3.2system ask user to enter his/her registered mobile phone.	
3.3.system send code to the mobile phone and ask the user to enter it	Verification message
3.4.if the code is right then allow user to create new password.	Password
3.5.user can use new password to login	
Success guarantee:	user able to make a successful login
Minimum guarantee:	user able to reach login page
Priority:	high
Risk:	medium

Figure 32. Use case Scenario of "Login for Distribution Market Owner" Use case

Use Case Name:	View and Edit Distribution Market Data
Use Case Description:	Allow Distribution Market owner to view his data, and update it like changing the default password, update his market address.
Actors:	Distribution Market owner.
Level:	Blue
Pre-condition:	Distribution Market Owner must register first.
Post-condition:	The system displays "Distribution Market Data updated successfully" message.
Steps Performed (Main Path):	<p>information for steps:</p> <p>Distribution Market Owner SSID record</p> <p>Password, Distribution Market name, address</p>
<p>1. System retrieve Distribution Market Owner Data.</p> <p>2. If Distribution Market Owner wants to edit his data, he should click "edit data" button.</p> <p>2.1. The System should change the data (default password, Distribution Market name, address) that shown in labels into textbox to allow Distribution Market owner to update them.</p> <p>4. The System Validates data.</p> <p>5. The system displays "Distribution Market Data updated successfully" message.</p>	
Extensions or Alternative Scenarios:	
<p>1. Distribution Market Owner enter invalid Data in some field.</p> <p>1.1 system shows error message "invalid data", And The color of the text box radius that contain wrong data should changed to red, and let user to enter new input</p> <p>1.2. The System Validates data.</p> <p>1.3. The system displays "Distribution Market Data updated successfully" message.</p> <p>3. Distribution Market Owner can't remember password</p> <p>3.5 User can use new password to login</p>	<p>Distribution Market Owner SSID record</p>
Success guarantee	Distribution Market Data updated successfully.
Minimum guarantee	user able to reach login page
Priority	high
Risk	medium

Figure 33. Use case Scenario of "View and Edit Distribution Market Data" Use case

Use Case Name:	Check requests
Use Case Description:	Employee checks the Distribution Market owner join requests and make a decision for it.
Actors:	Employee.
Pre-condition:	Distribution Market owner made a request (Join request, Update Distribution Market Data , Request new Rationetc.).
Post-condition:	After the employee made a decision for the Distribution Market owner requests, the Distribution Market owner can view the response of his requests via application or receiving message or e-mail.
Triggering event:	Distribution Market owner requests (Join request, Update Distribution Market Data , Request new Rationetc.).
Included use case:	Request new Ration, Join request, Update Distribution Market Data , Request new Ration
Steps Performed (Main Path):	<p>information for steps:</p> <p>1. System retrieve the Distribution Market owner requests in a table.</p> <p>2. Employee select a request(Join request, Update Distribution Market Data , Request new Rationetc.).</p> <p>3. Employee view the request and make a decision which approved or Denied, and explain the reason for the denied requests</p> <p>3.1 Send message to the applicant citizen via the phone number or Email, to inform them with the request response.</p>
Success guarantee:	Employee successfully make a decision for Distribution Market owner requests.
Minimum guarantee:	Employee able to view Distribution Market owner requests.
Priority:	medium
Risk:	medium

Figure 34. Use case Scenario of "Check requests" Use case

Use Case Name:	Pay the insurance
Use Case Description:	Allow Distribution Market owner to pay the insurance to complete the enrollment process
Actors:	Distribution Market owner.
Level:	Blue
Pre-condition:	Distribution Market Owner join request is accepted.
Post-condition:	The Distribution Market Owner successfully enrolling to the ministry as a distributor.
Extended use cases:	Pay by Visa, Pay by Cash
Steps Performed (Main Path):	information for steps:
1. System retrieve Distribution Market Owner Data.	Distribution Market Owner SSID record
2. System displays "Pay the insurance page", which containing two choices "Pay by Visa, Pay by Cash"	
2.1. If Distribution Market Owner choose "pay by visa".	Password, Distribution Market name, address
2.2. the system ask user to enter "visa number, secret code, expiration data".	visa number, secret code, expiration data
2.3. The System checks the validity the visa.	visa
2.4. If the payment process complete, the system displays "The payment Done"	
Success guarantee:	Distribution Market owner pay the insurance successfully.
Minimum guarantee:	Distribution Market owner Visa is invalid.
Priority:	high
Risk:	high

Figure 35. Use case Scenario of "Pay the insurance" Use case

Figure 36. Use case Scenario of "Order new Ration" Use case

Use Case Name:	Order new Ration
Use Case Description:	Distribution Market owner specify the ration he needs for his market.
Actors:	Distribution Market.
Level:	Blue
Pre-condition:	Distribution Market Owner previously registered in the system.
Post-condition:	The Distribution Market Owner will receive a message containing ration details.
Included use case:	Send Sales Invoice
Steps Performed (Main Path):	<p>information for steps:</p> <p>1. The System displays a list of current goods.</p> <p>1.2. The Distribution Market Owner chooses the goods he wants and determining the quantities as well.</p> <p>1.3. After the Distribution Market Owner has identified the items he needs, he clicks on submit.</p> <p>1.4 The Distribution Market Owner identify the time and date to receive his order</p> <p>1.5. The System displays “your request successfully sent” message.</p>
Extensions or Alternative Scenarios:	<p>1. The Distribution Market Owner chooses the goods he wants and determining the quantities as well, but there are no enough goods for his order.</p> <p>1.2.The system display ” your order cannot be proceed executed at this time. Please contact customer service ”.</p>
Success guarantee:	Distribution Market owner order a ration successfully.
Minimum guarantee:	Distribution Market owner identify his order.
Priority:	high
Risk:	medium

Use Case Name:	Edit Citizen Points
Use Case Description:	Allow Distribution Market owner to edit citizen points in the card when citizen by goods.
Actors:	Distribution Market.
Level:	Blue
Pre-condition:	Distribution Market Owner have QR-code scanner device, and the citizen have the ration card.
Post-condition:	The points of the citizen that in the ration card, will be updated to the new value after taking ration.
Included use case:	Scanning QR-Code
Steps Performed (Main Path):	<p>information for steps:</p> <p>card owner name, current points</p> <p>card points</p> <p>card points</p>
<ol style="list-style-type: none"> 1. when the Distribution Market Owner enter citizen card, the information of card should be displayed (card owner name, current points). 2. the Distribution Market Owner checks the current points, if there are enough points for the payment, the Distribution Market enter the total points of the goods. <p>2.1. After the Distribution Market enter the total points of the goods, they will be updated for the citizen.</p> <p>2.2. then click submit.</p>	
Extensions or Alternative Scenarios:	
<ol style="list-style-type: none"> 1. the Distribution Market Owner checks the current points, if there are no enough points for the payment. <p>1.1The payment of goods won't complete.</p>	
Success guarantee:	Distribution Market owner update the points in the card successfully.
Minimum guarantee:	The payment of goods won't complete, because of no enough points.
Priority:	high
Risk:	high

Figure 37. Use case Scenario of "Edit Citizen Points" Use case

Use Case Name:		Confirm Ration Receiving
Use Case Description:	For more safety and to ensure the safe delivery of Distribution Market owner.	
Actors:	Distribution Market owner.	
Level:	Blue	
Pre-condition:	Distribution Market Owner previously made an order.	
Post-condition:	The Distribution Market Owner successfully received his claimed order.	
Triggering event:	Distribution Market owner order a ration.	
Steps Performed (Main Path):	information for steps:	
1. The System displays order receipt details.	Order receipt.	
1.2. The Distribution Market Owner should check the received order, if there is no problem with the order, he clicks on "confirm order receiving".	Goods quantity, goods type.	
1.5. The System displays "Thanks for confirming the order" message.		
Extensions or Alternative Scenarios:		
1.0. If there is a problem with the received order, The Distribution Market Owner write a complaint, to define the reason.	Complaint	
1.1. The System displays "your complaint successfully sent" message.		
Success guarantee:	Distribution Market owner successfully receive order.	
Minimum guarantee:	Distribution Market owner define the problems with the order.	
Priority:	medium	
Risk:	medium	

Figure 38. Use case Scenario of "Confirm ration Receiving" Use case

Use Case Name:	Specify Merchant Ration
Use Case Description:	The Employee specify the ration he needs for his market.
Actors:	Employee.
Level:	Blue
Pre-condition:	Distribution Market Owner previously made an order.
Triggering event:	Order new Ration
Post-condition:	The Distribution Market Owner will receive a message containing ration details.
Included use case:	Print Ration Receipt
Steps Performed (Main Path):	information for steps:
<p>1. The System displays a list of Distribution Market Owner order requests.</p>	Order receipt.
<p>1.2. The employee chooses a request from those shown.</p>	
<p>1.3. The employee defines the goods and determining the quantities as well, that the distribution Market Owner (The Employee must follow the instructions for distributing).</p>	Goods quantity, goods type.
<p>1.3. After the employee has identified the goods for Distribution Market, he clicks on submit.</p>	
<p>1.4. The System displays “you successfully define the ration order for ‘Distribution Market Owner’ ” message.</p>	
Success guarantee:	Employee identify the ration order for Distribution Market.
Priority:	high
Risk:	medium

Figure 39. Use case Scenario of "Specify Merchant Ration" Use case

Use Case Name:	View Requests Responses
Use Case Description:	Distribution Market owner wants to know the response of his requests.
Actors:	Distribution Market owner.
Pre-condition:	Distribution Market owner made a request that can be (Join request, Update Distribution Market Data , Request new Rationetc.), and he must log in first.
Post-condition:	After the Distribution Market owner made a request, he will know the response of his request.
Triggering event:	Check Requests.
Steps Performed (Main Path):	information for steps:
<p>1. Distribution Market owner Enter his/her SSID.</p> <p>2. System retrieve the response of the Distribution Market owner request.</p> <p>3. if the Distribution Market owner request is accepted, system show "your request is accepted, kindly wait The receiving of your card"</p> <p>4. if the Distribution Market owner request is denied, system retrieve explanation report why its refused</p>	<p>Distribution Market owner SSID</p> <p>request response</p>
Extensions or Alternative Scenarios:	
<p>1. Distribution Market owner Enter his/her SSID.</p> <p>1.1if Distribution Market owner doesn't make any requests, System shows message "you don't make any request"</p>	<p>Distribution Market owner SSID</p>
Success guarantee:	Distribution Market owner able to view the response of his request.
Minimum guarantee:	Distribution Market owner able to see" you don't make any request "message
Priority:	Medium
Risk:	Medium

Figure 40. Use case Scenario of "View Requests Responses" Use case

4.9 Class Diagram

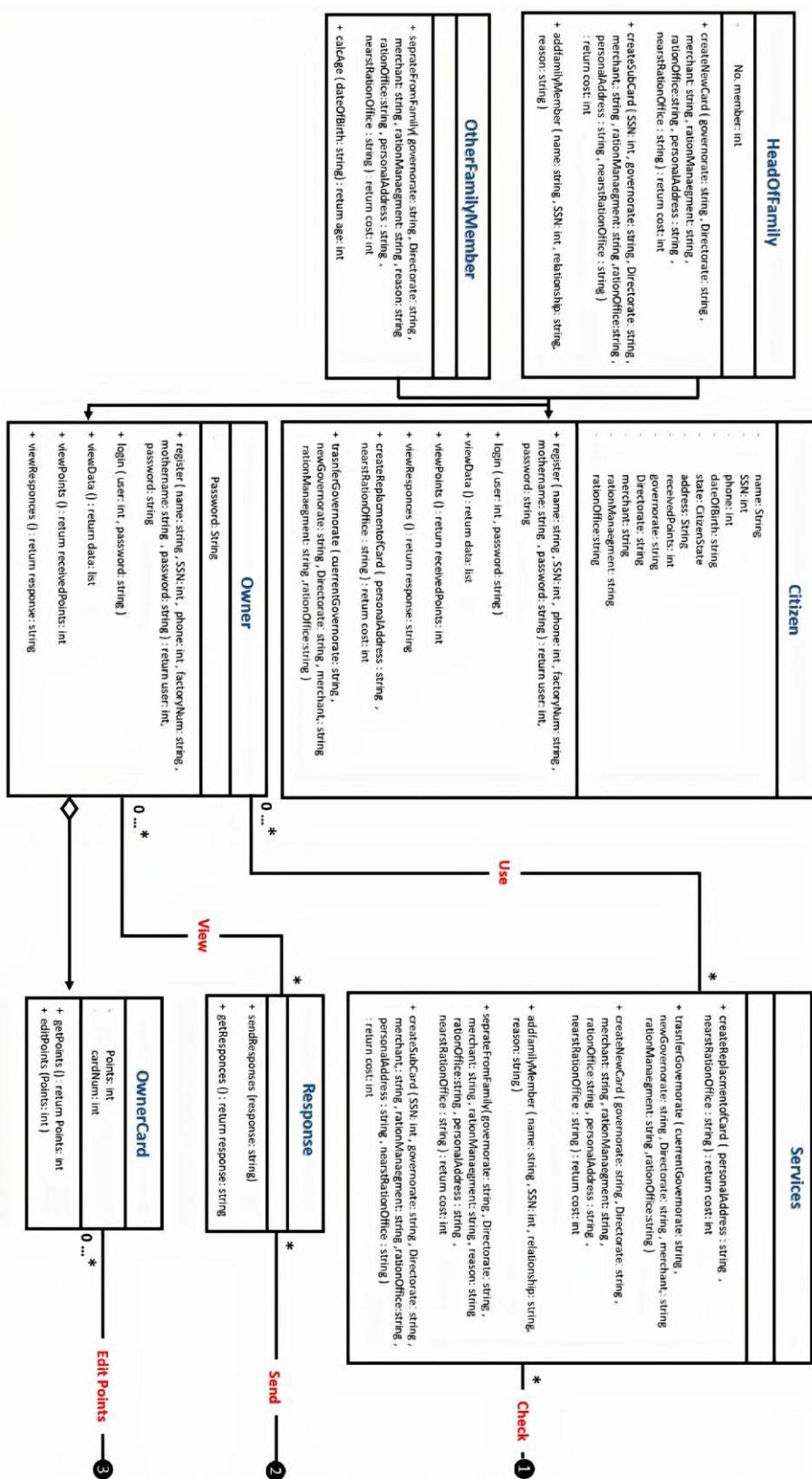


Figure 41. Class Diagram part 1

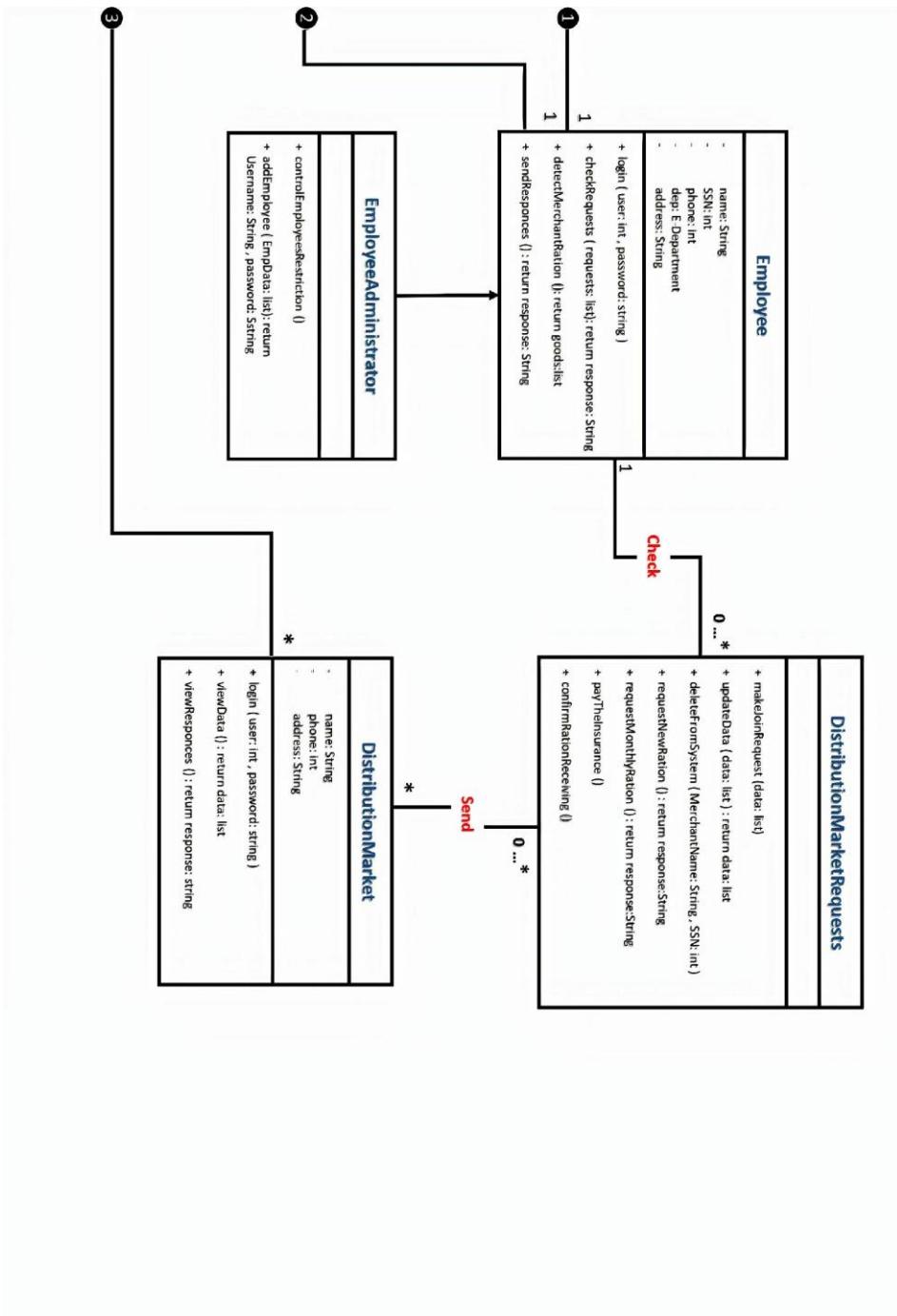
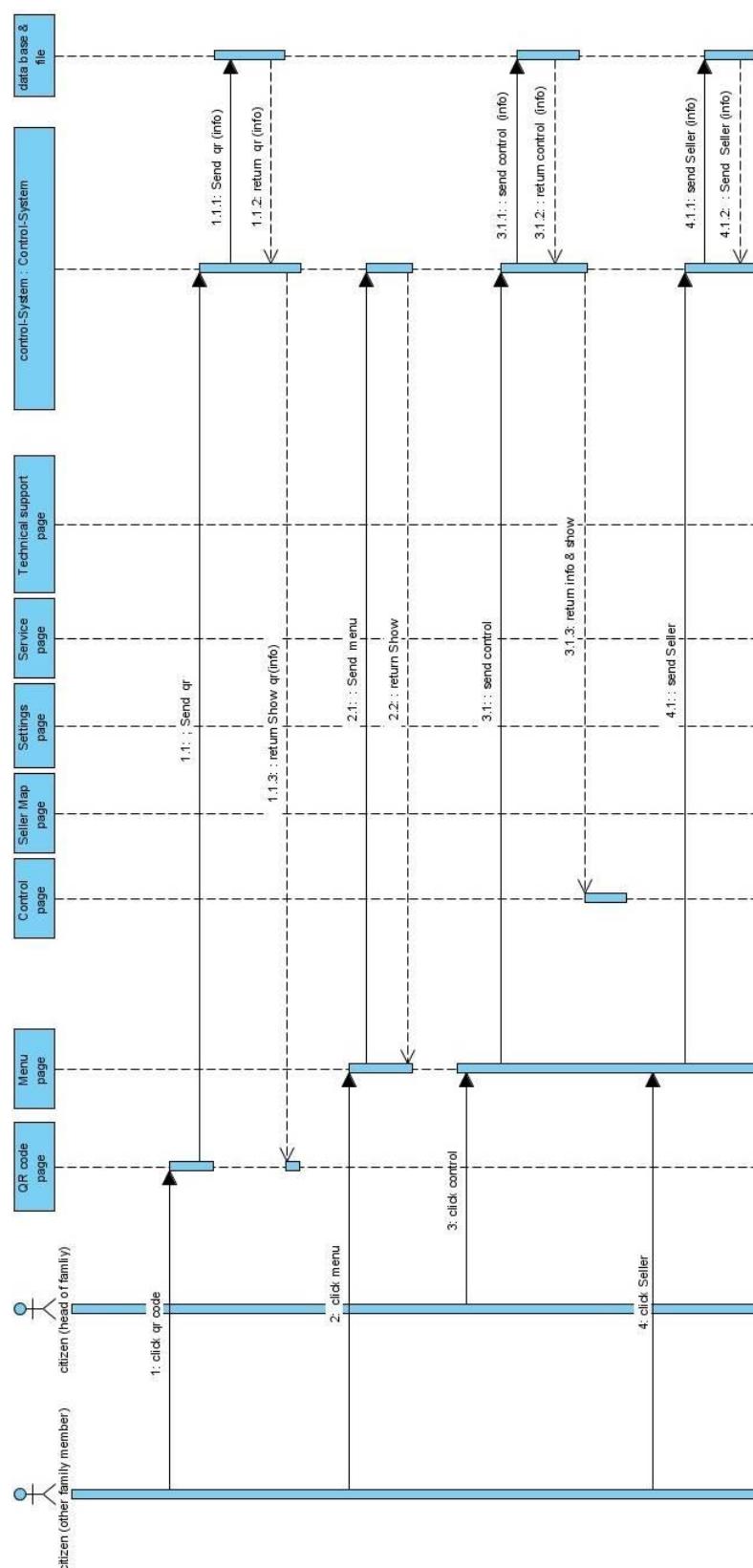


Figure 42. Class Diagram part 2

4.10 Sequence Diagram



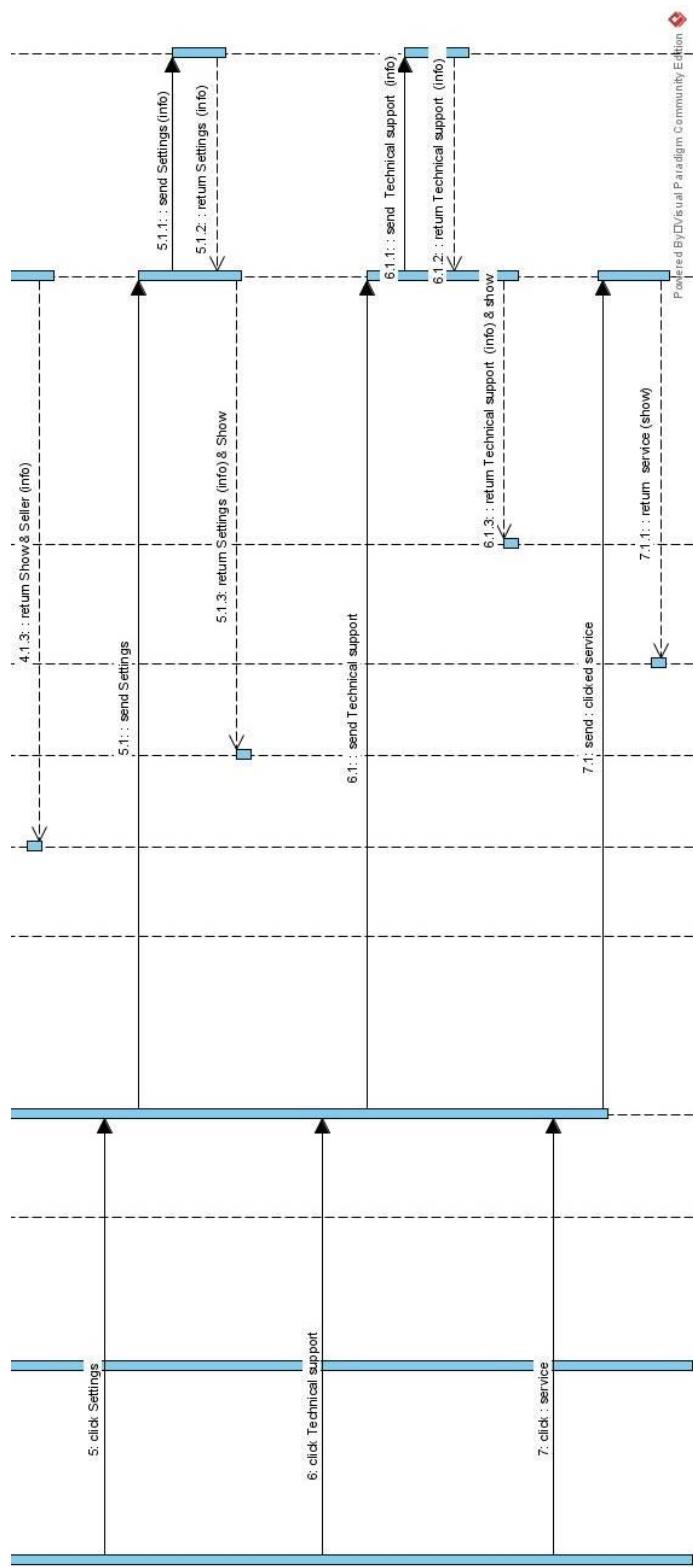


Figure 43. Sequence of (Home page) for Head of family & other family member

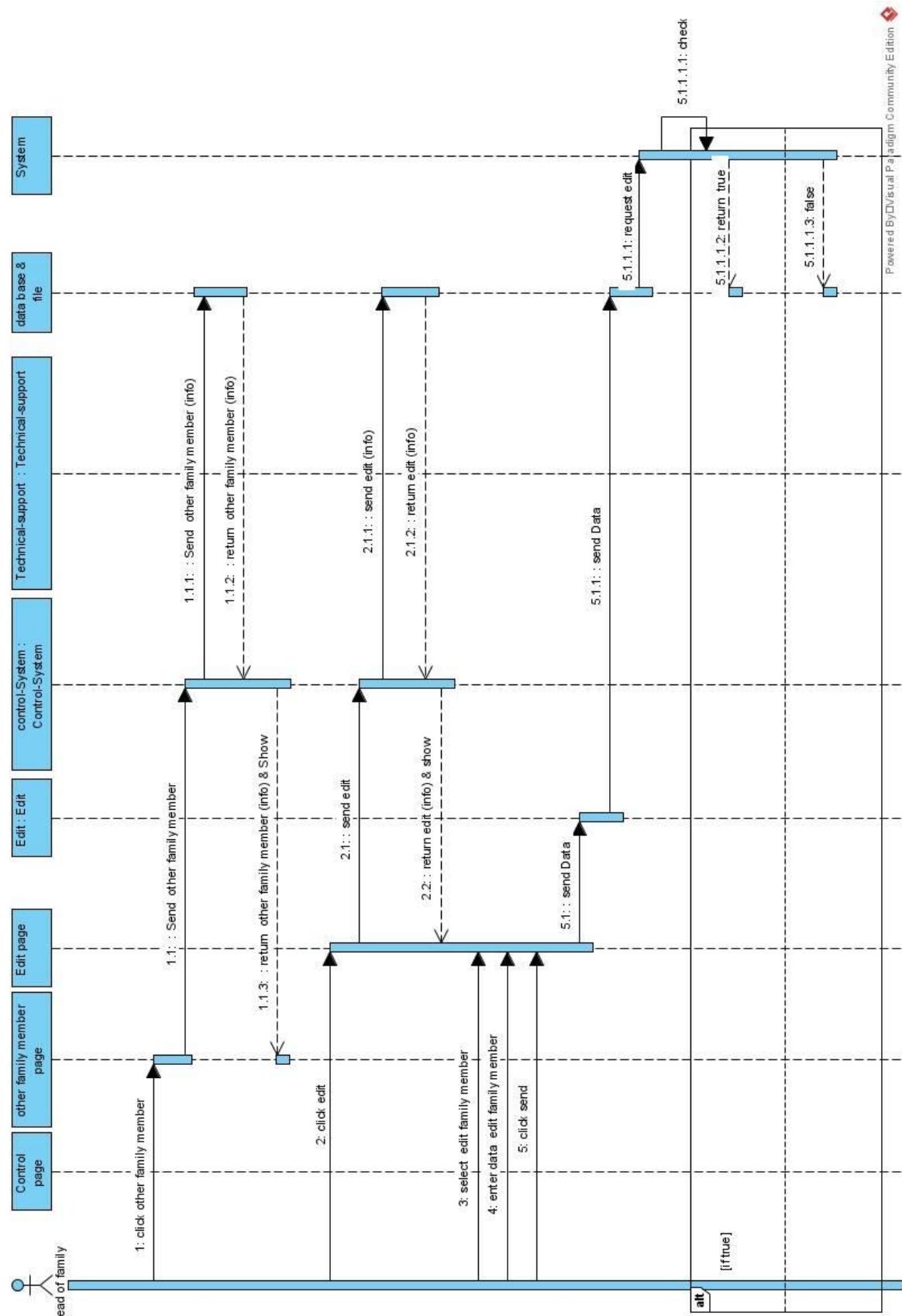


Figure 44. Sequence of (control page) for Head of family

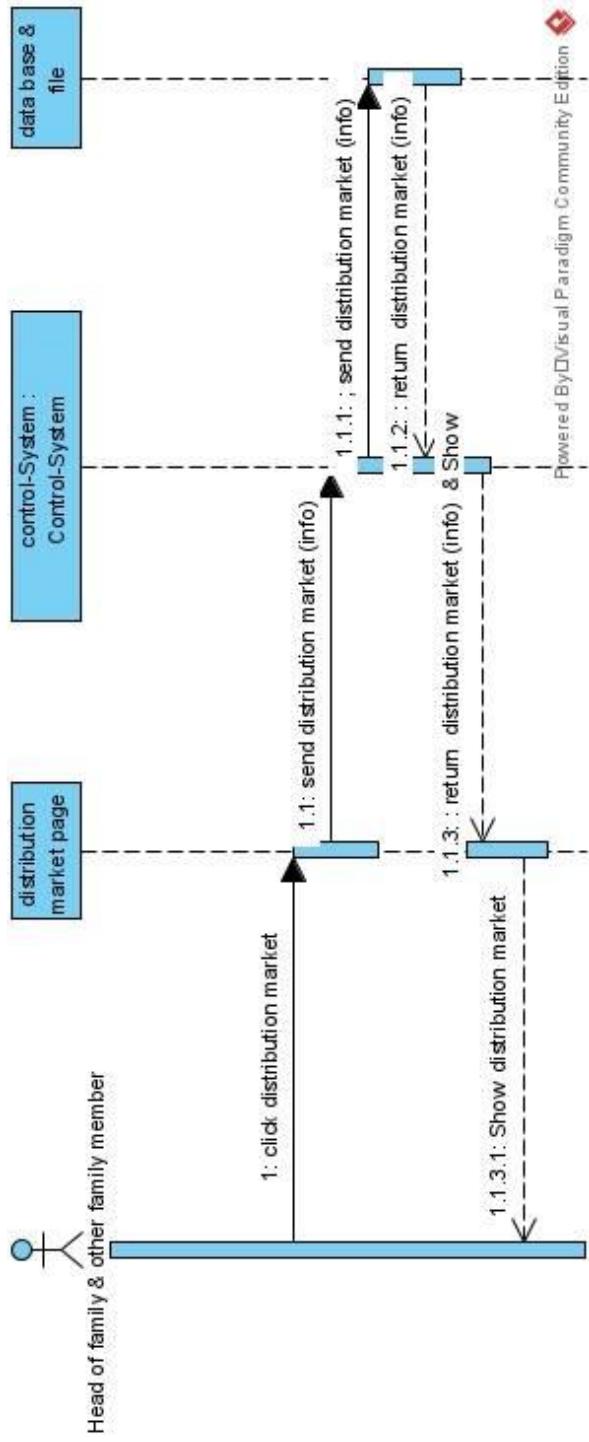
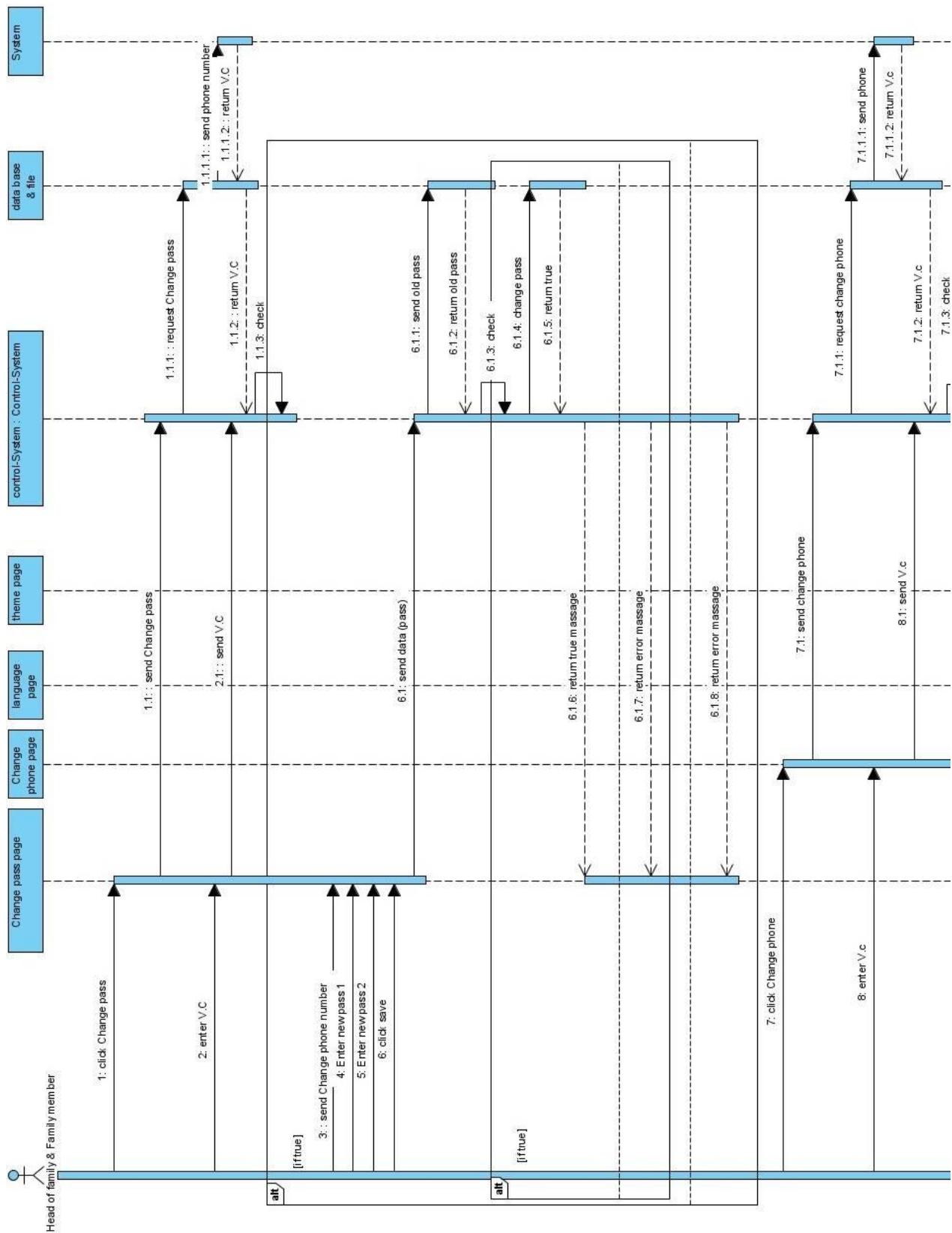


Figure 45. Sequence of Distribution Market map page



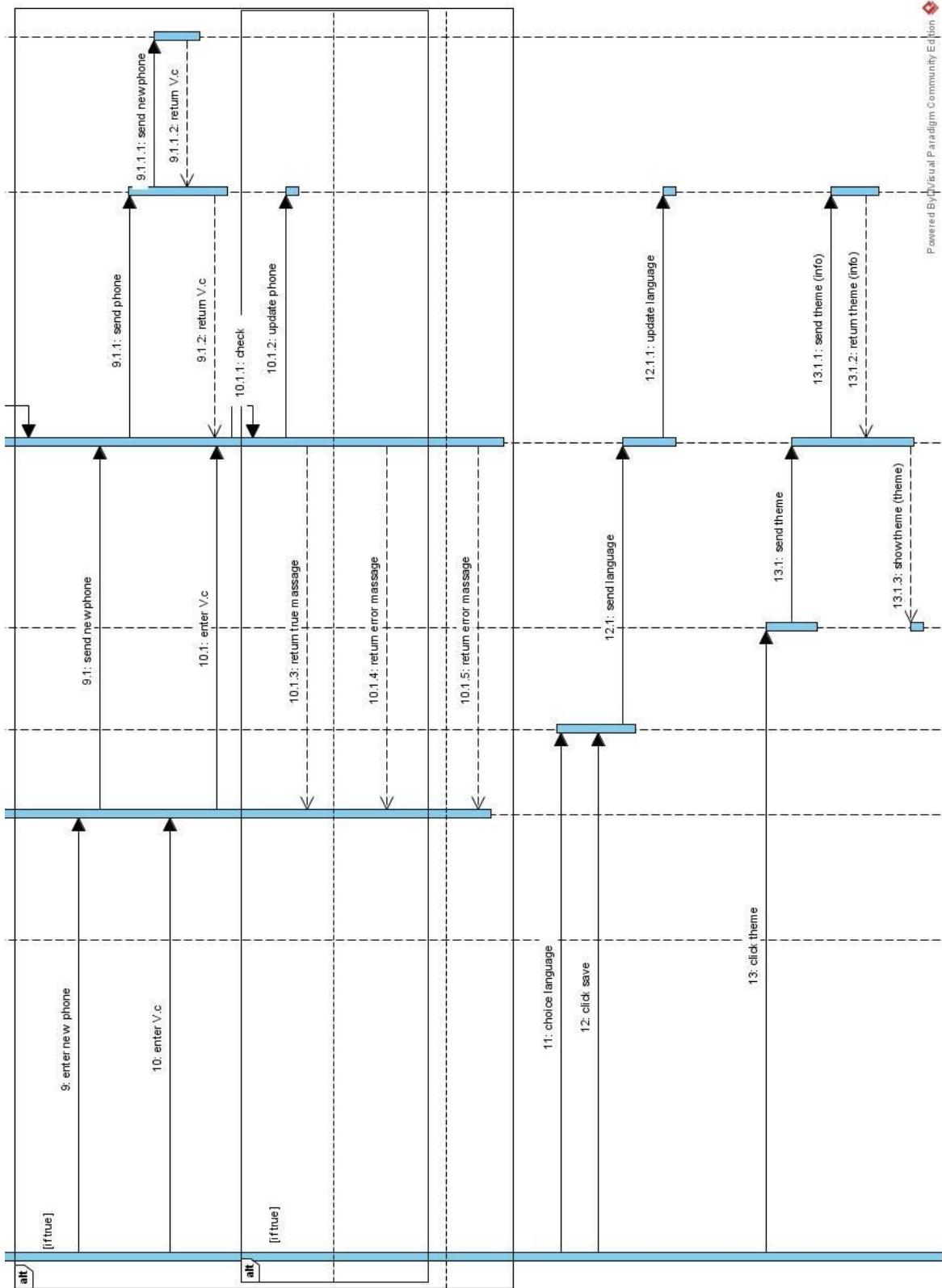
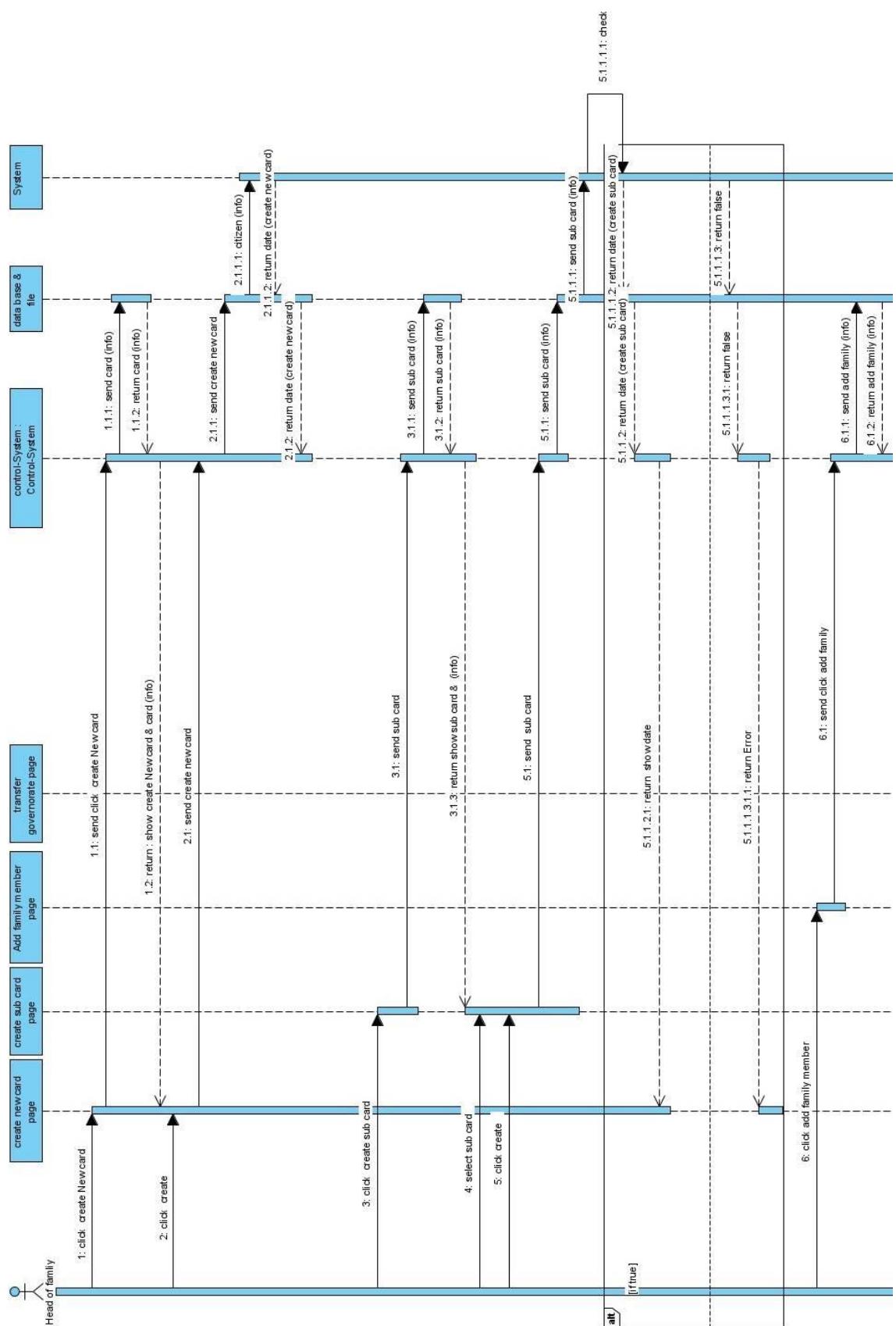


Figure 46. Sequence of (setting page) for Head of family & other family member



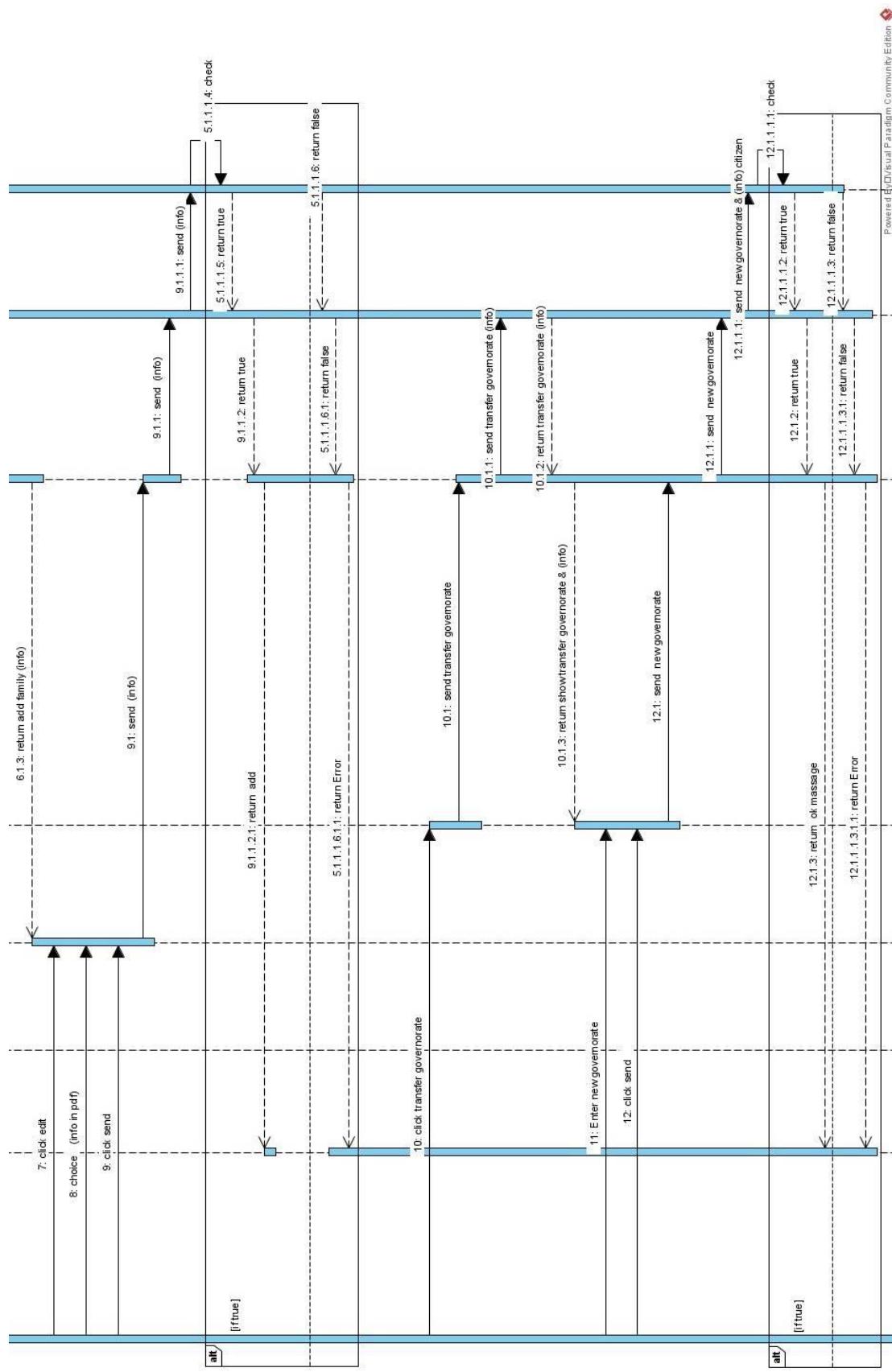
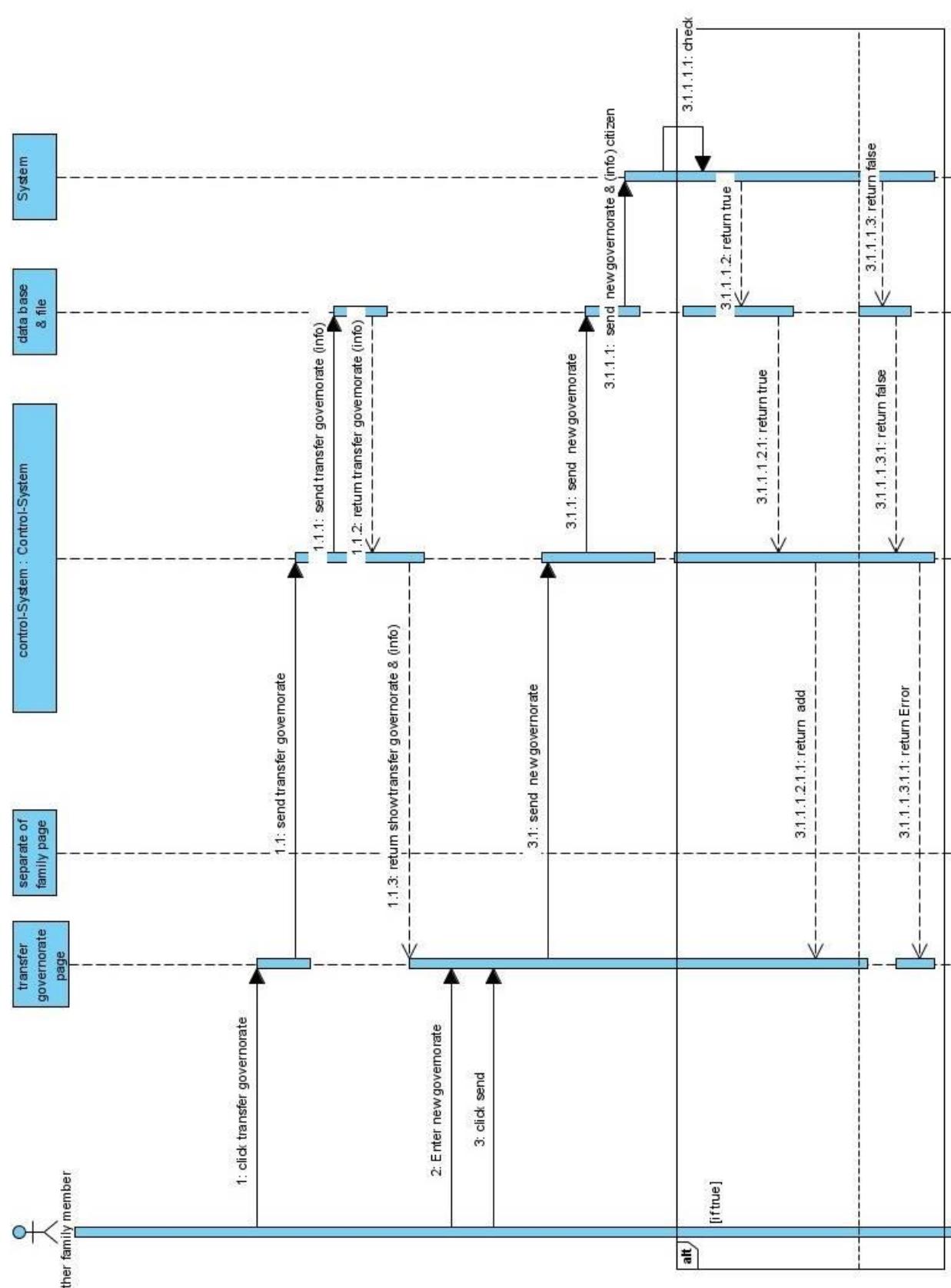


Figure 47. Sequence of (service page) for Head of family



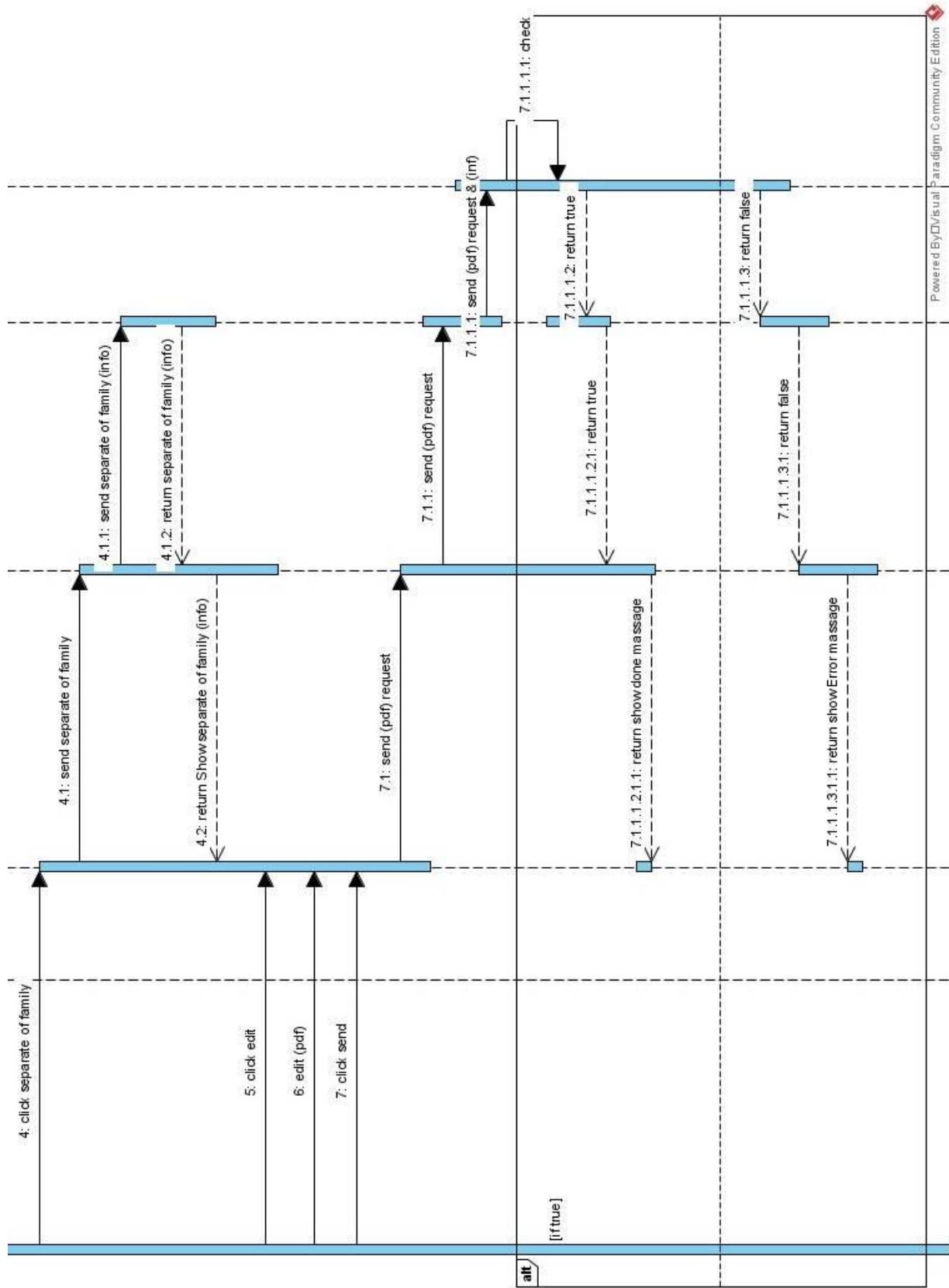


Figure 48. Sequence of (service page) for other family member

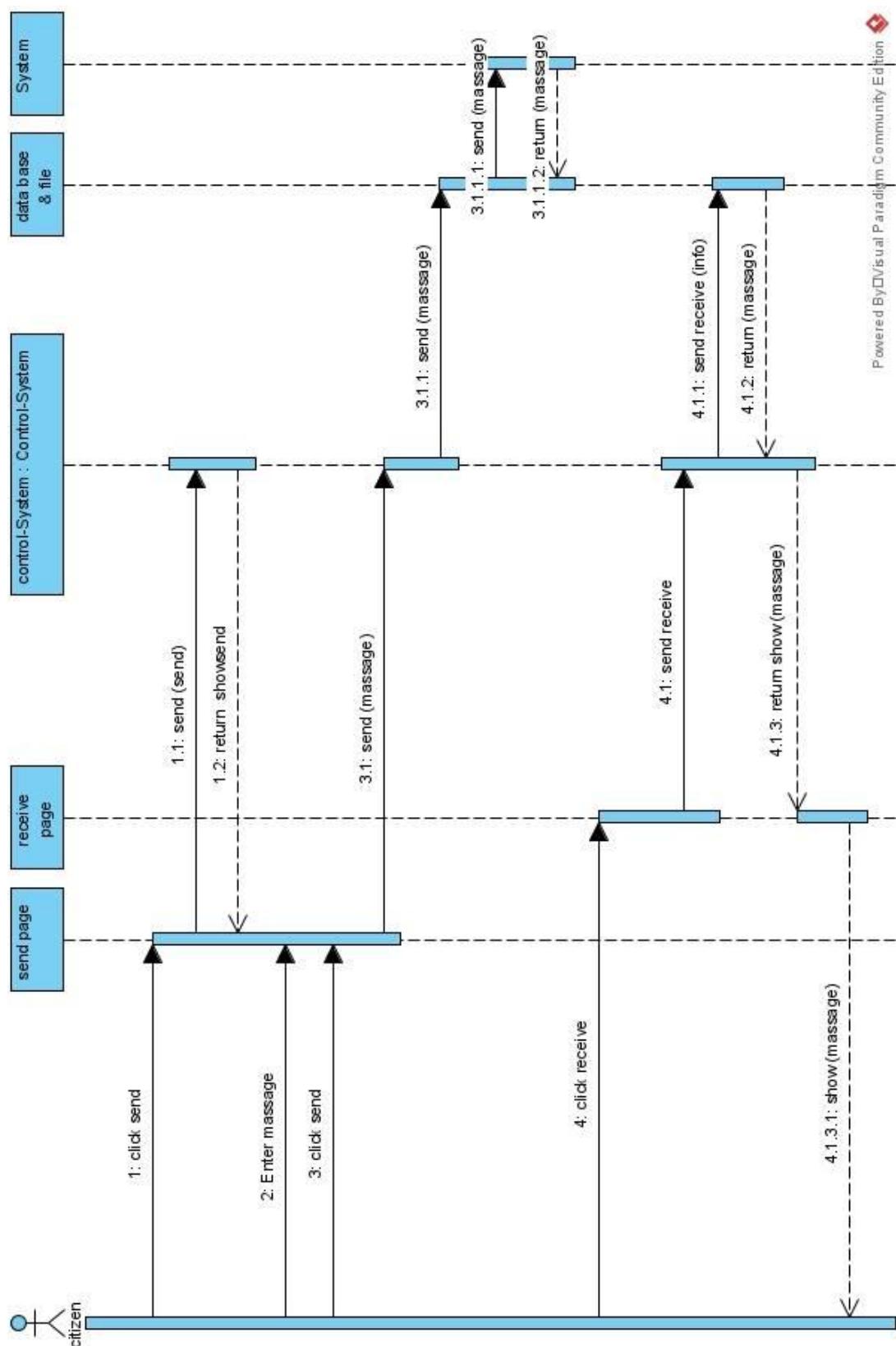


Figure 49. Sequence of (Technical support page) for Head of family & other family member

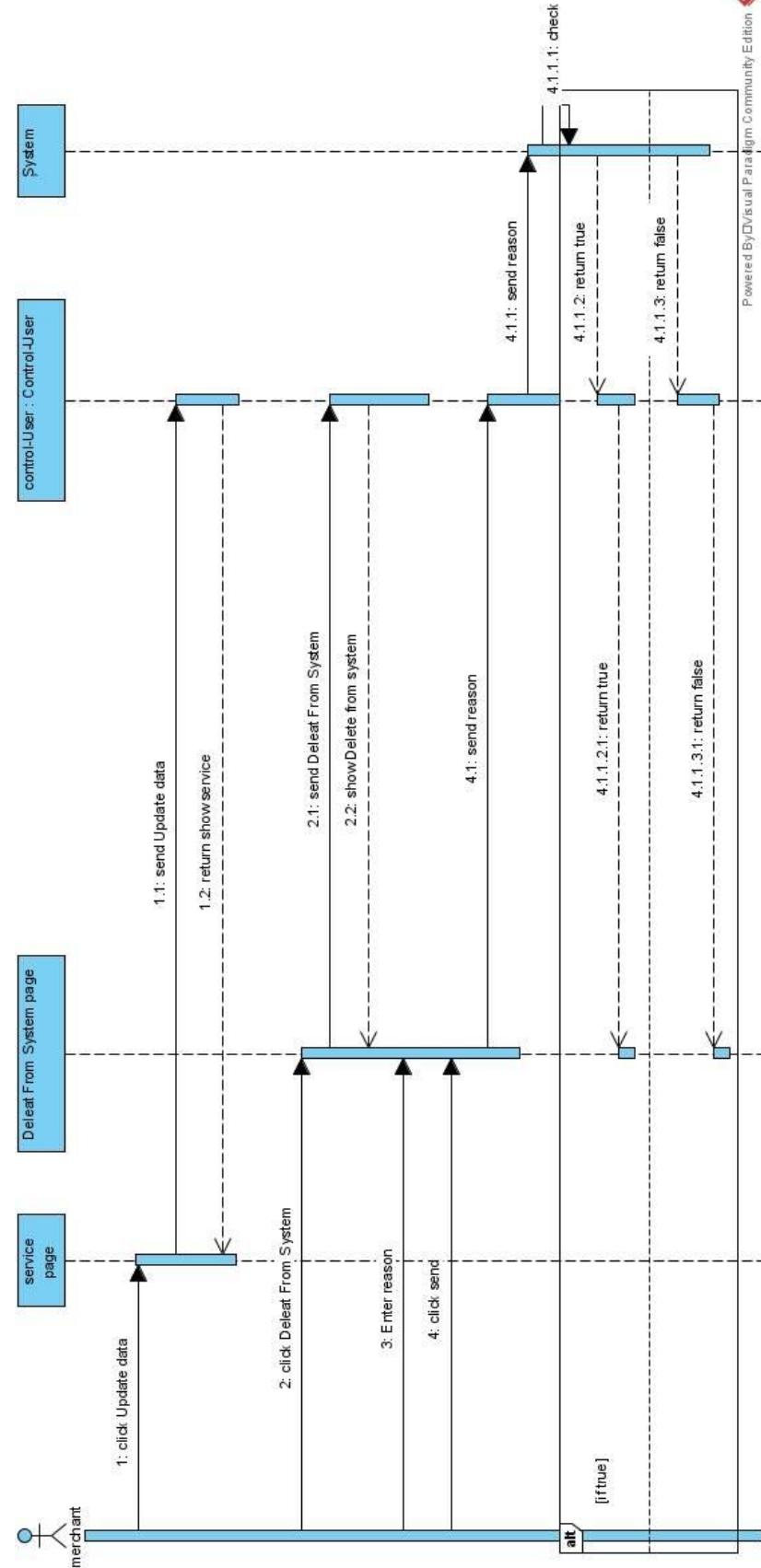
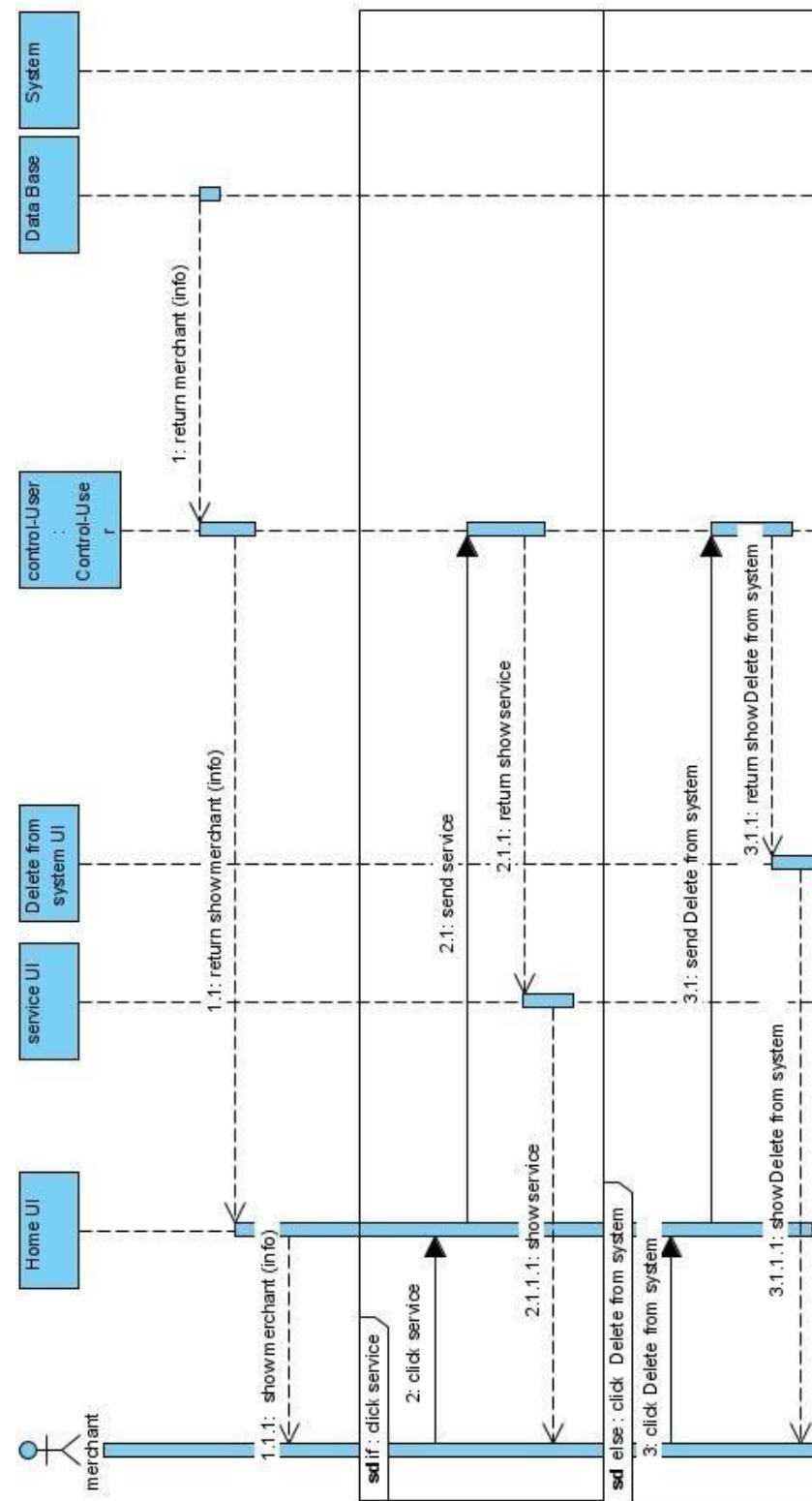


Figure 50. Sequence of Home Page for Distribution Market



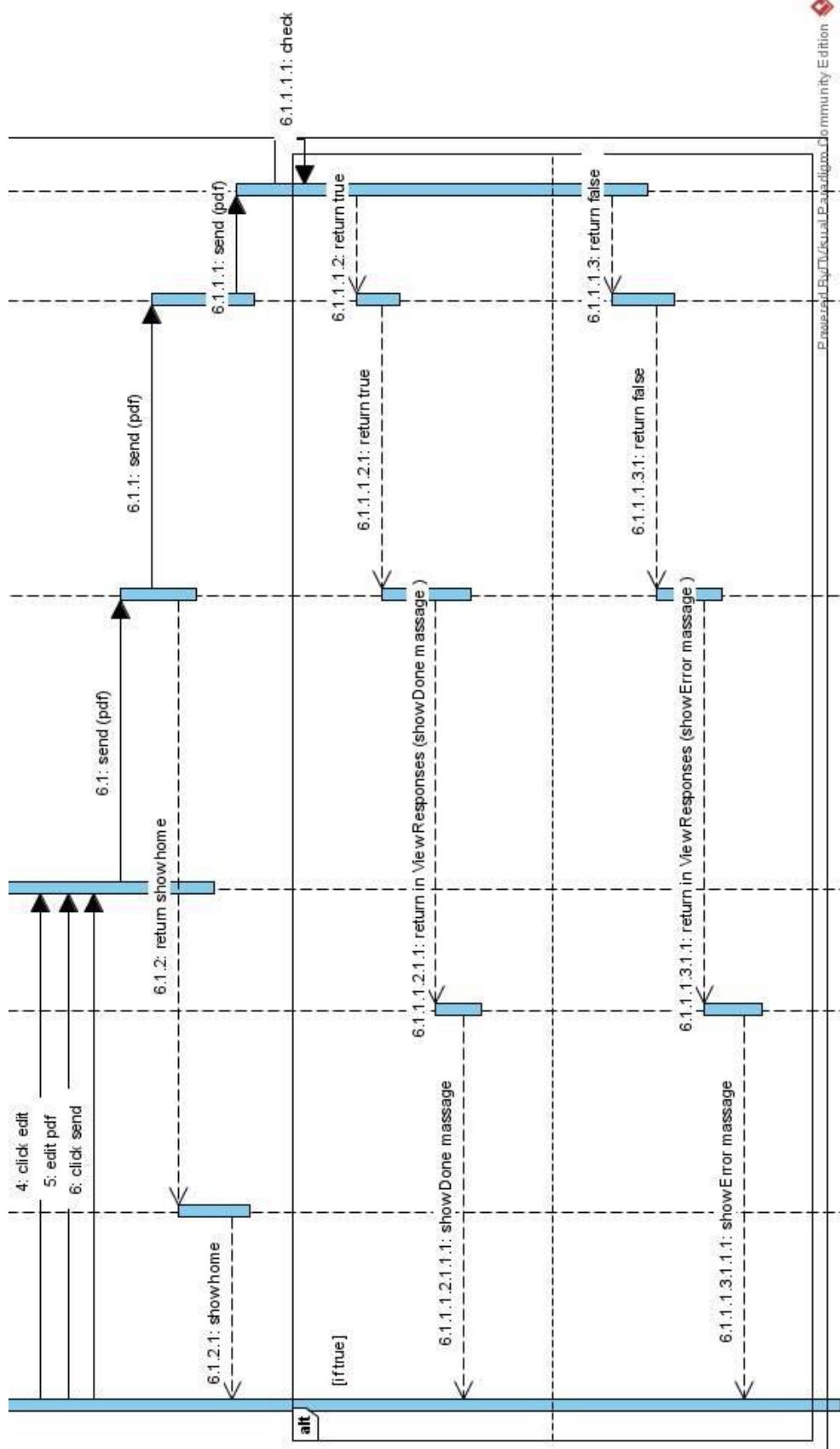
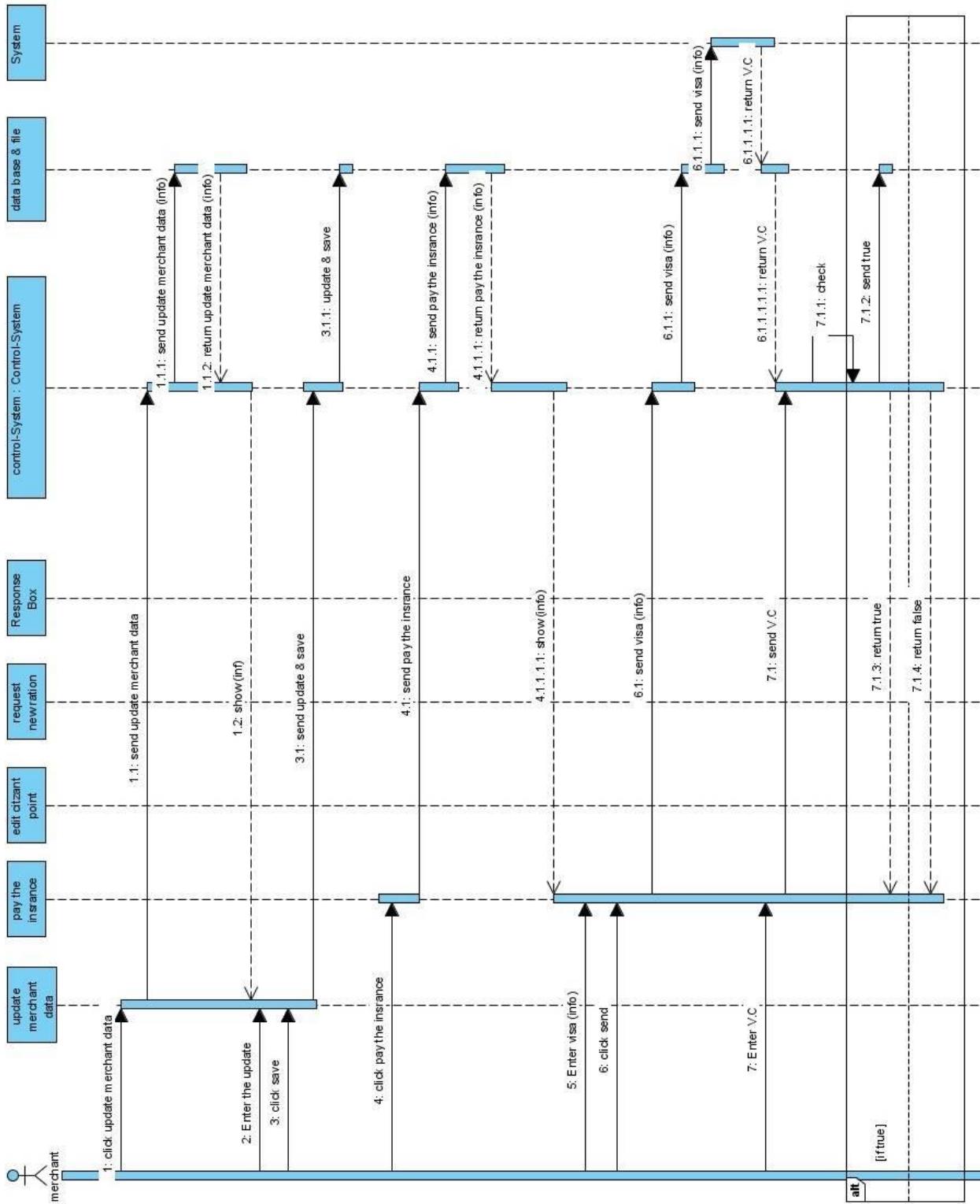


Figure 51. Sequence of login Page for Distribution Market



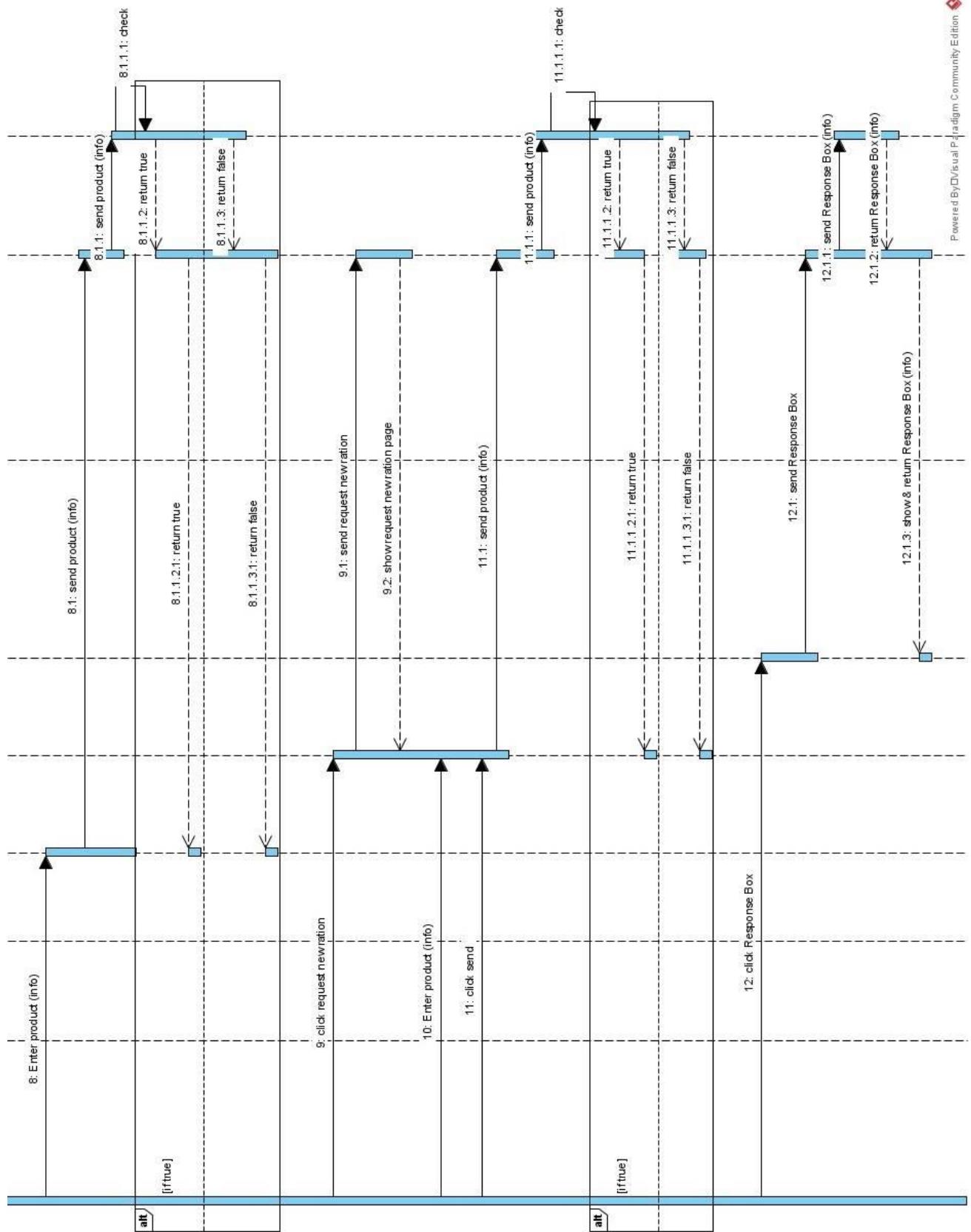


Figure 52. Sequence of Service Page for Distribution Market

4.11 The Proposed Structure Model

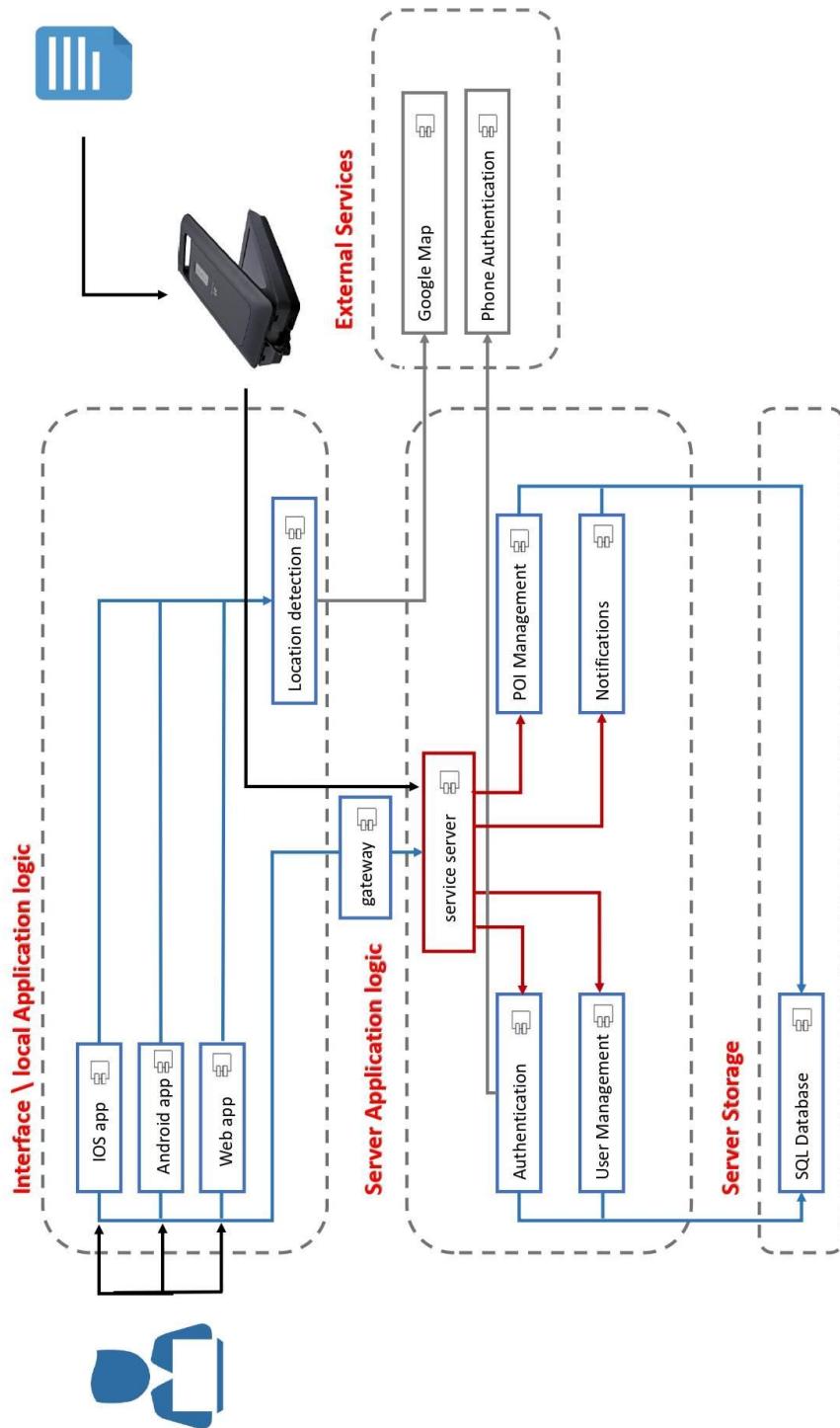


Figure 53. The Proposed Structure Model

4.12 Data flow Diagram

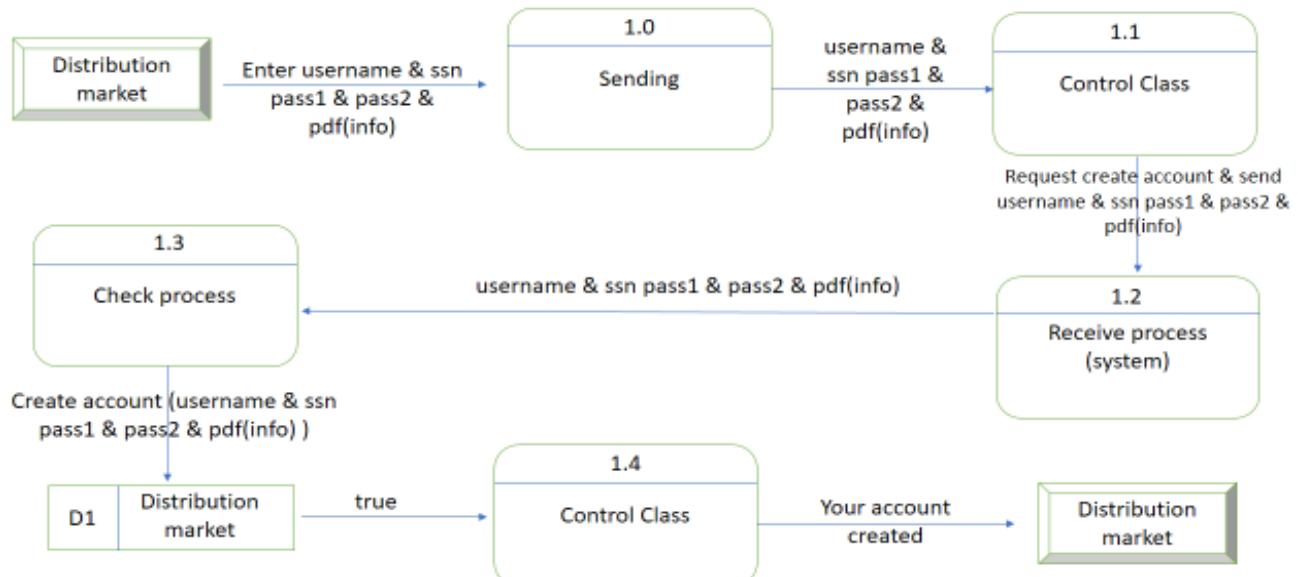


Figure 54 . Data flow for Distribution market create account

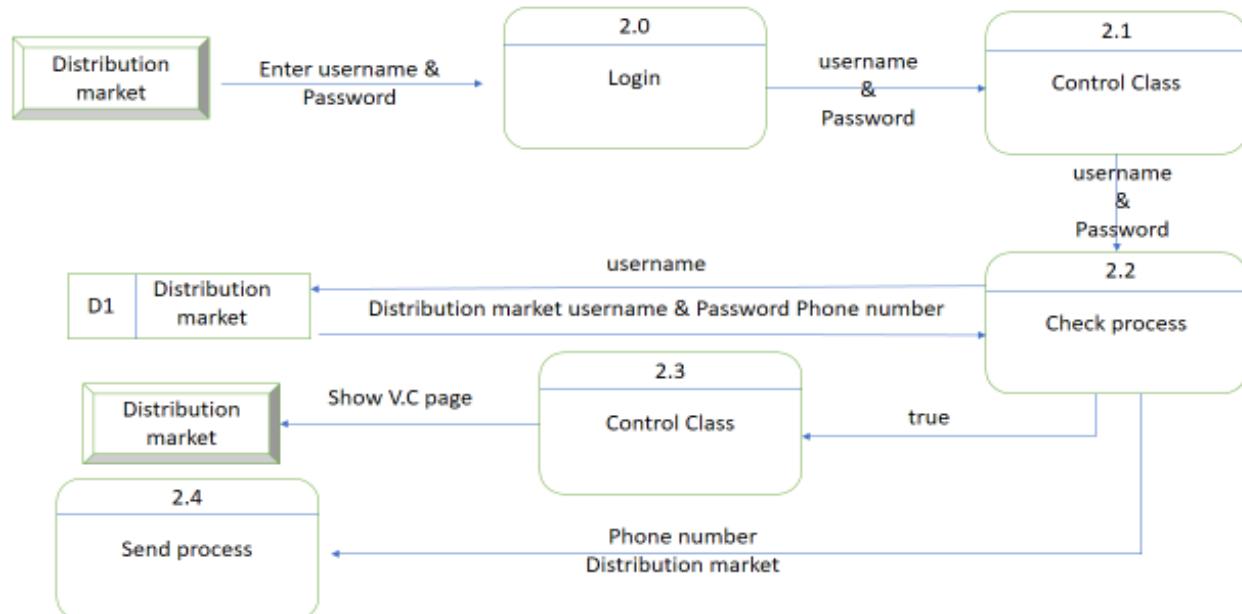


Figure 55. Data flow for Distribution market log in

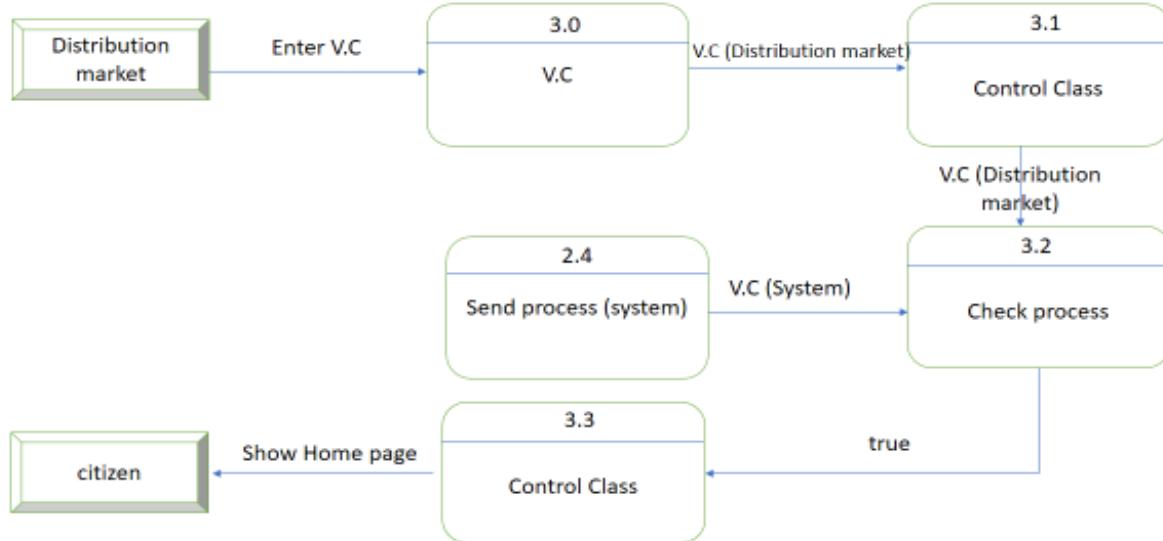


Figure 56. Data flow for Distribution market log in (v.c)

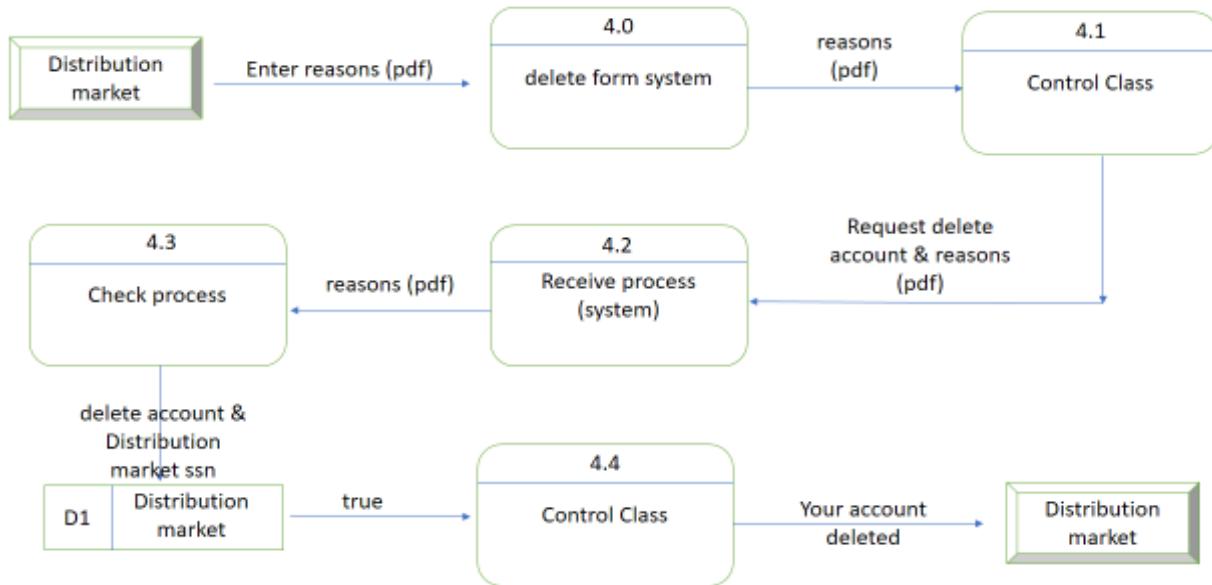


Figure 57. Data flow for Distribution market delete from system

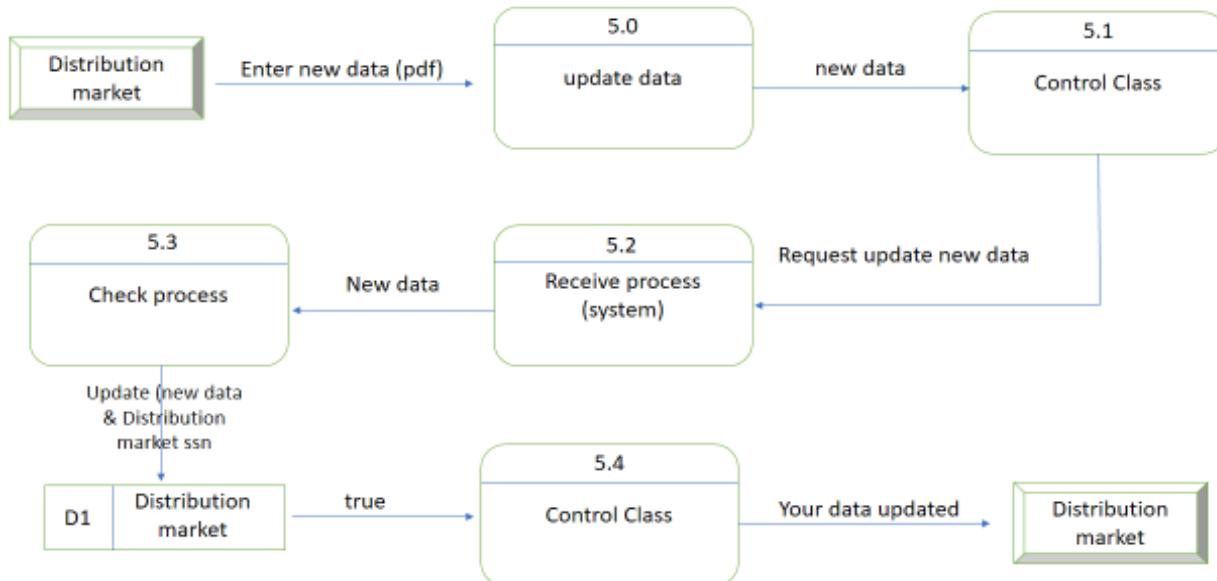


Figure 58. Data flow for Distribution market update data

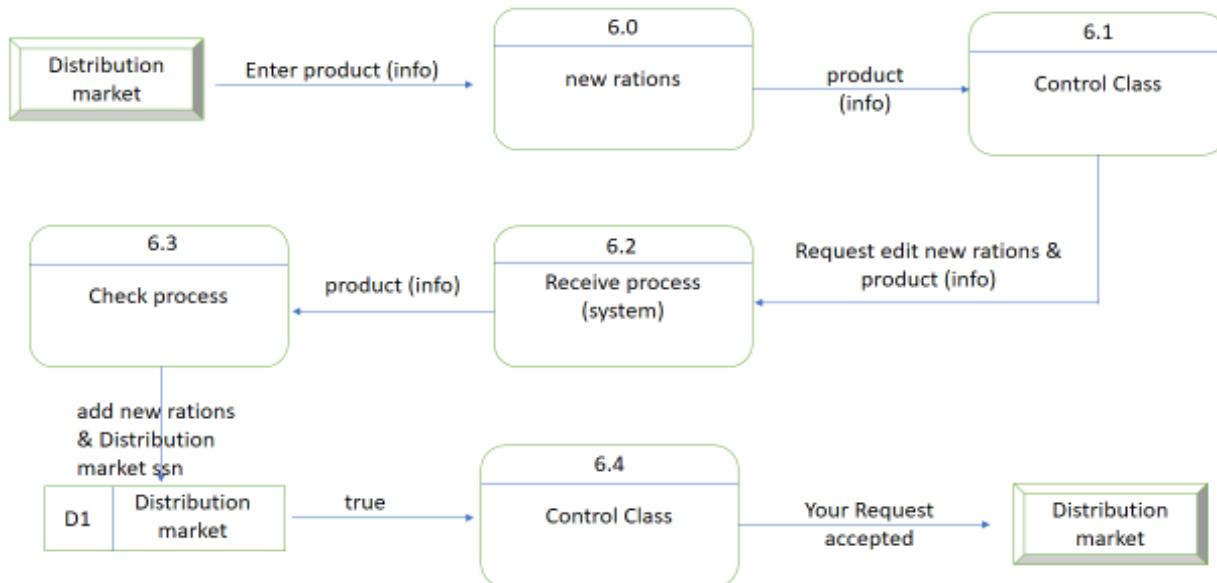


Figure 59. Data flow for Distribution market add new rations

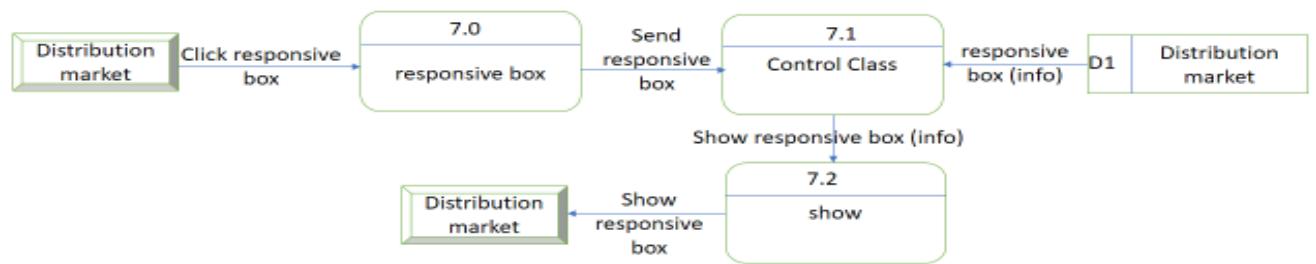


Figure 60. Data flow for Distribution market show responsive box page

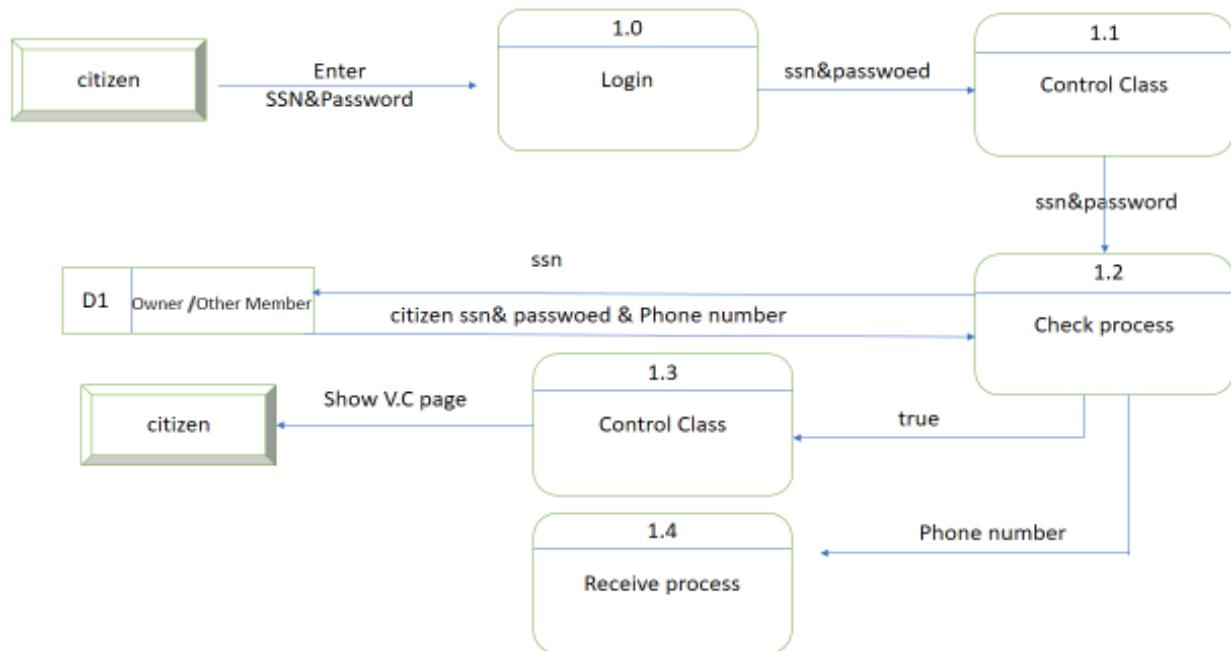


Figure 61. Data flow for citizen login

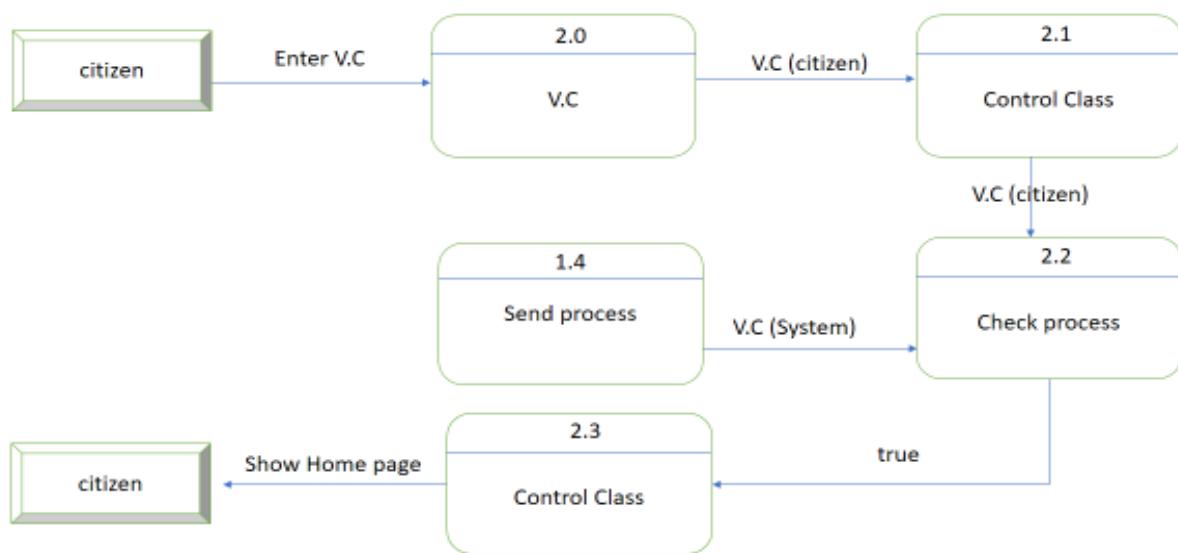


Figure 62. Data flow for citizen login

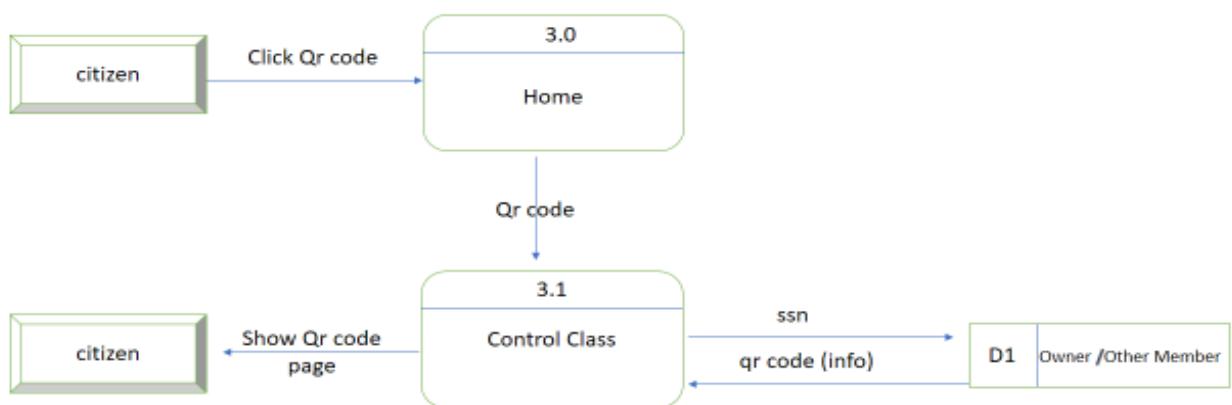


Figure 63. Data flow for citizen show QR code

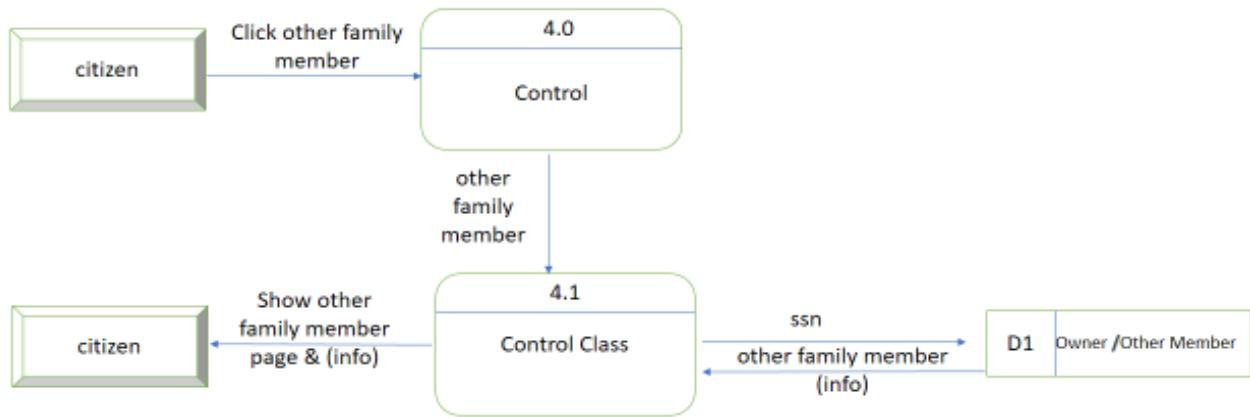


Figure 64. Data flow for Citizen Show other family member information's

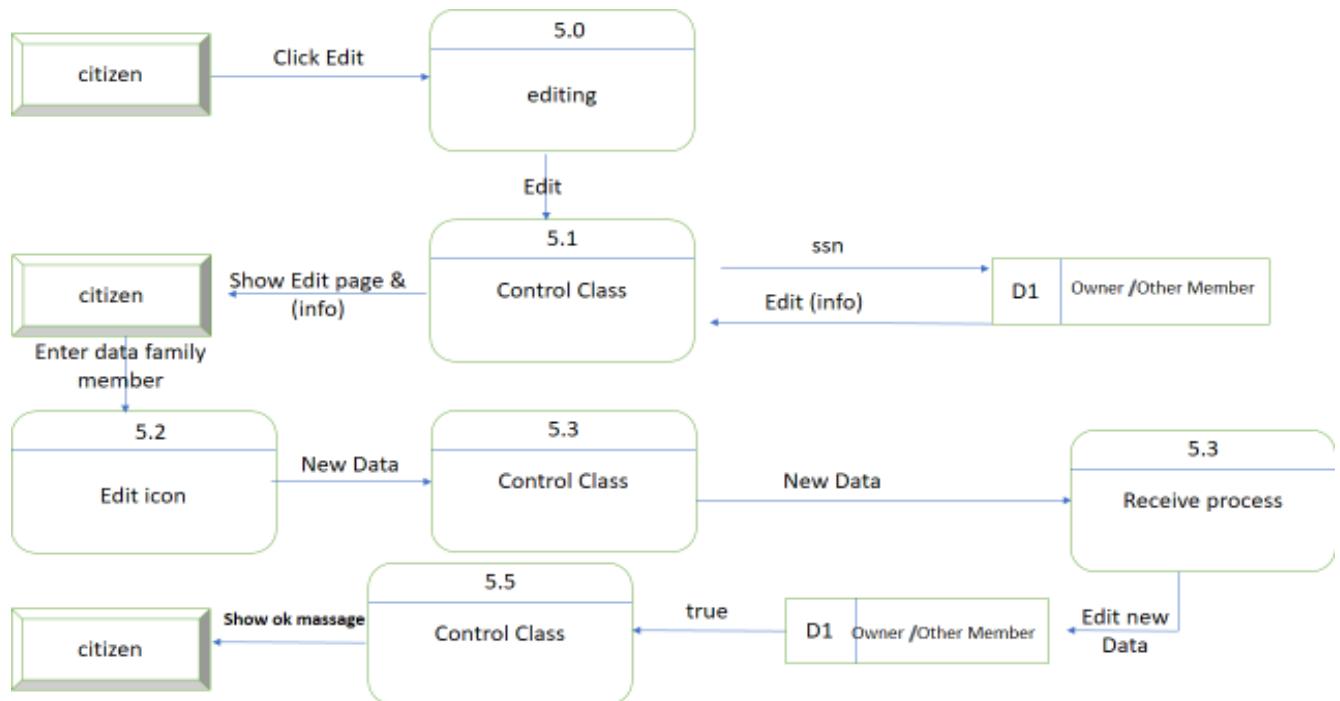


Figure 65. Data flow for Citizen Edit other family member

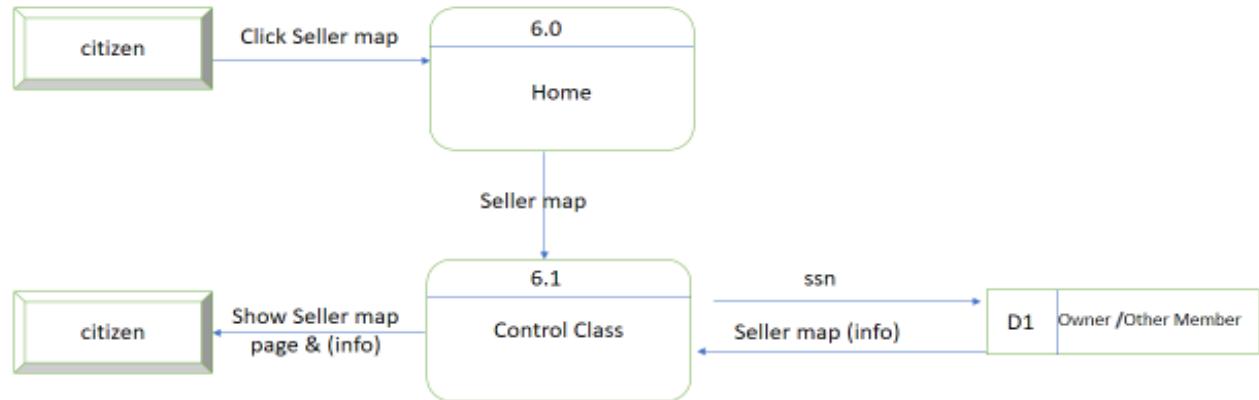


Figure 66. Data flow for Citizen Show distribution market map

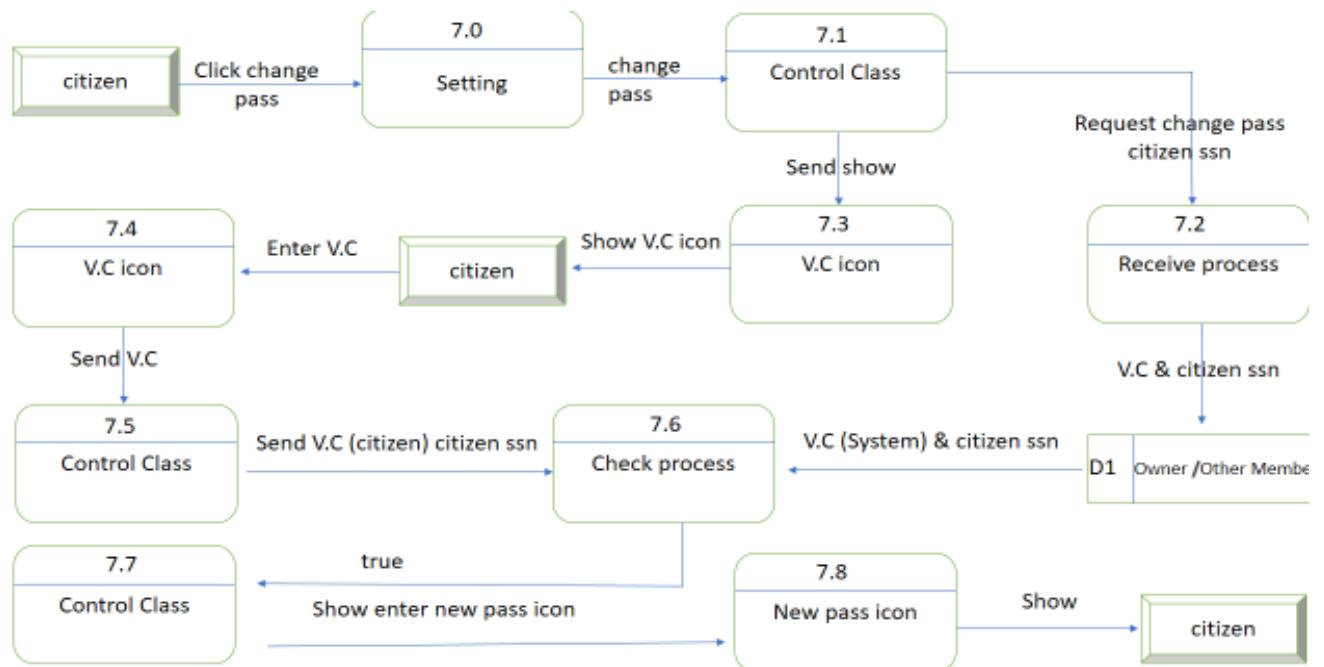


Figure 67. Data flow for Citizen Setting change password

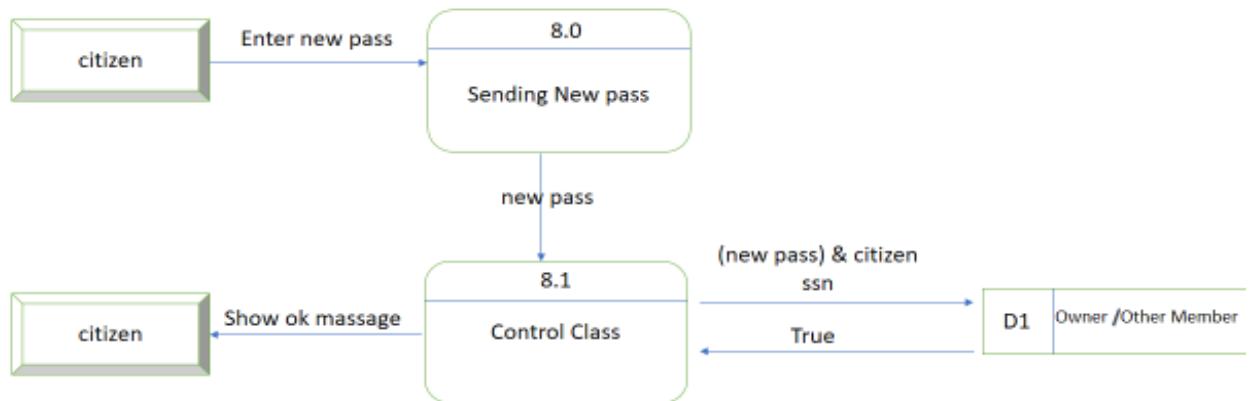


Figure 68. Data flow for Citizen Setting change password

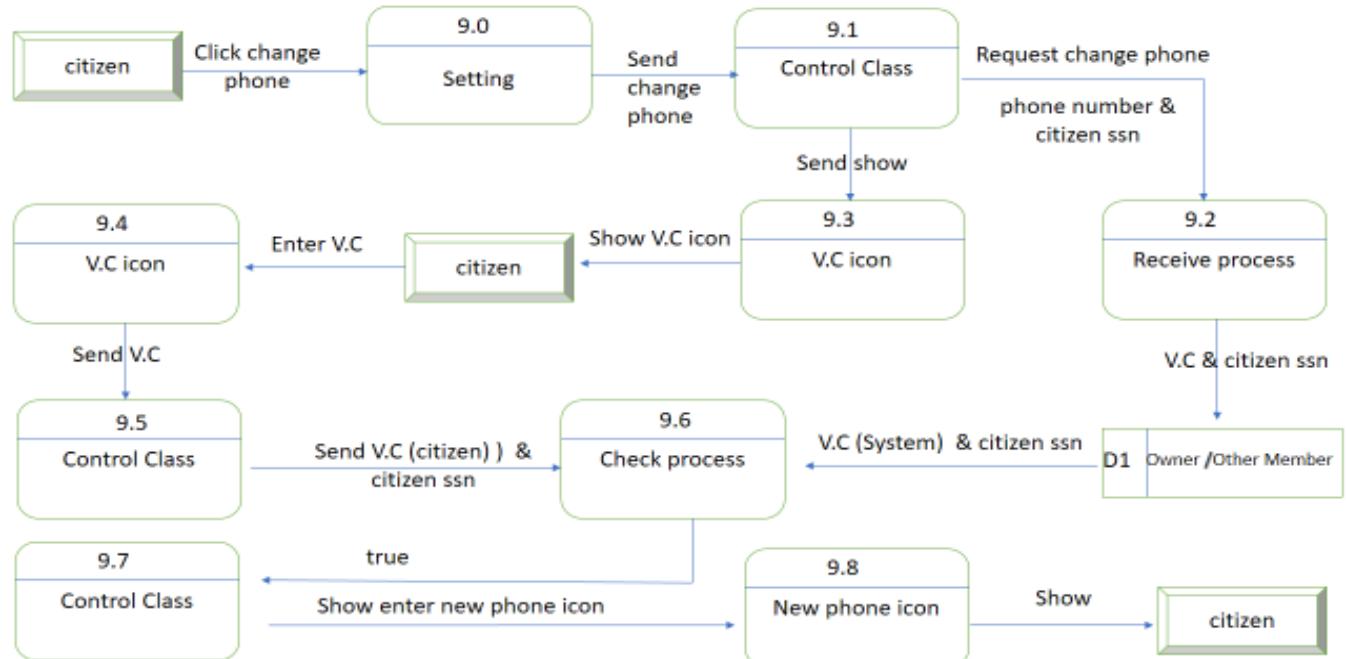


Figure 69. Data flow for Citizen Setting change phone

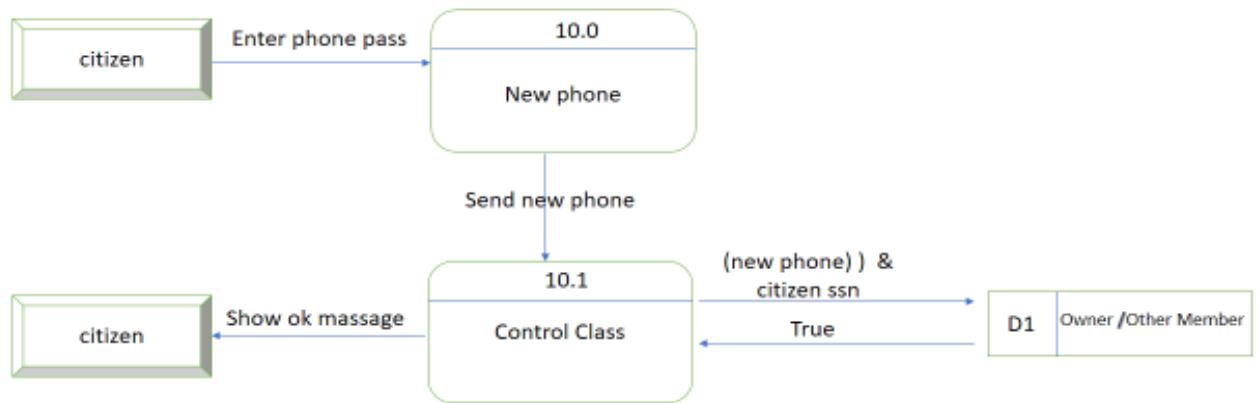


Figure 70. Data flow for Citizen Setting change phone

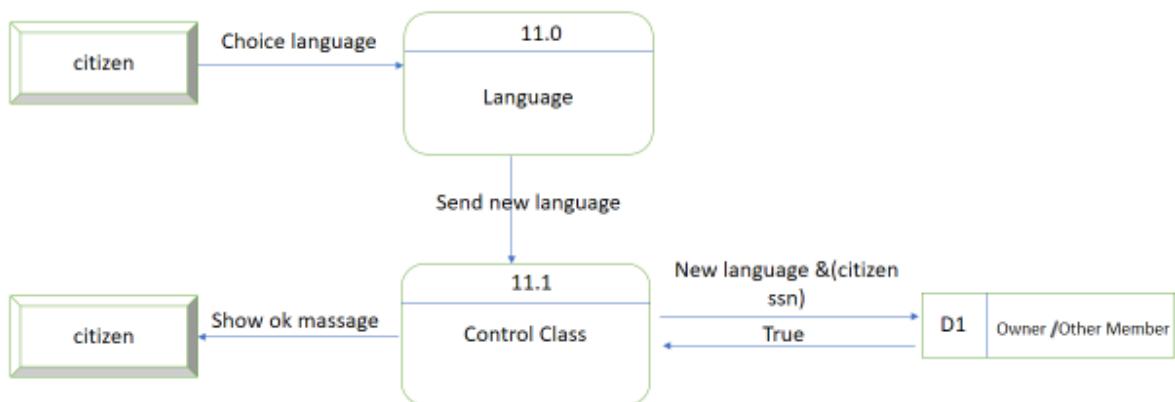


Figure 71. Data flow for Citizen Setting change language

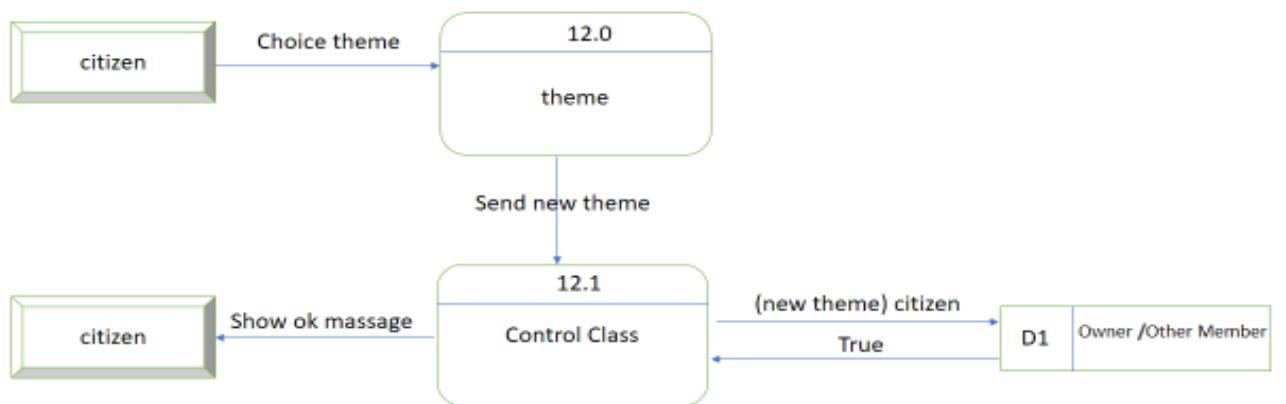


Figure 72. Data flow for Citizen Setting change theme

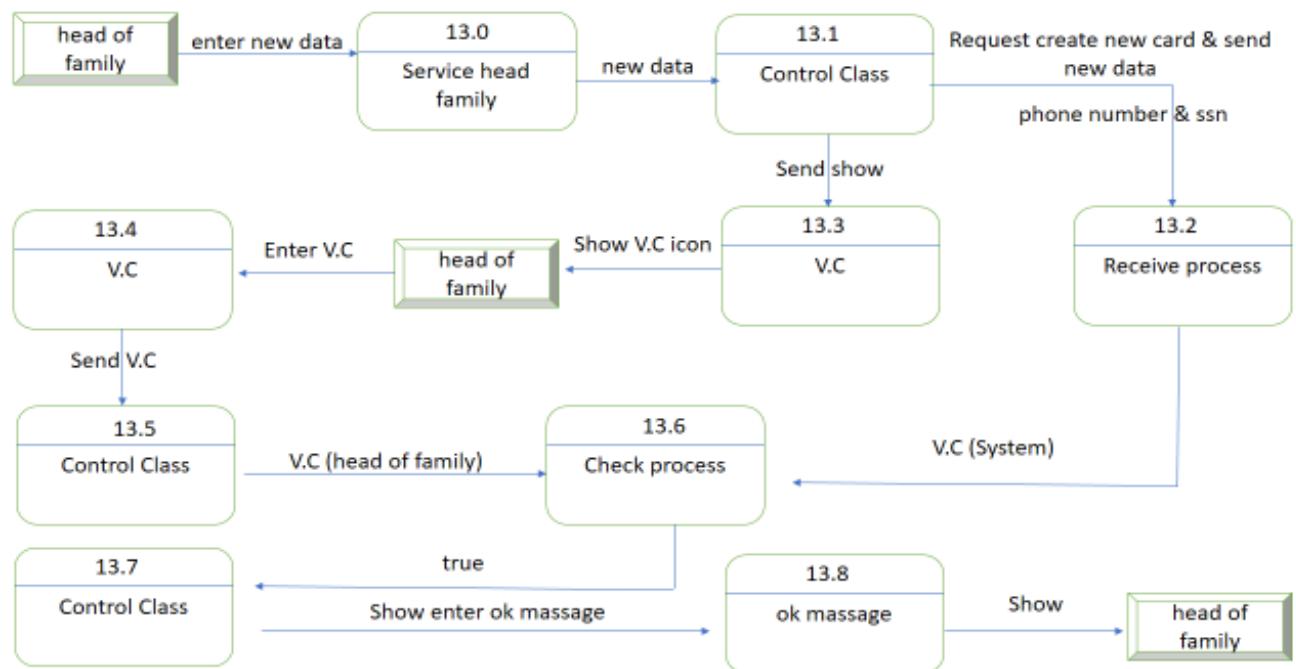


Figure 73. Data flow for head of family create new card Service

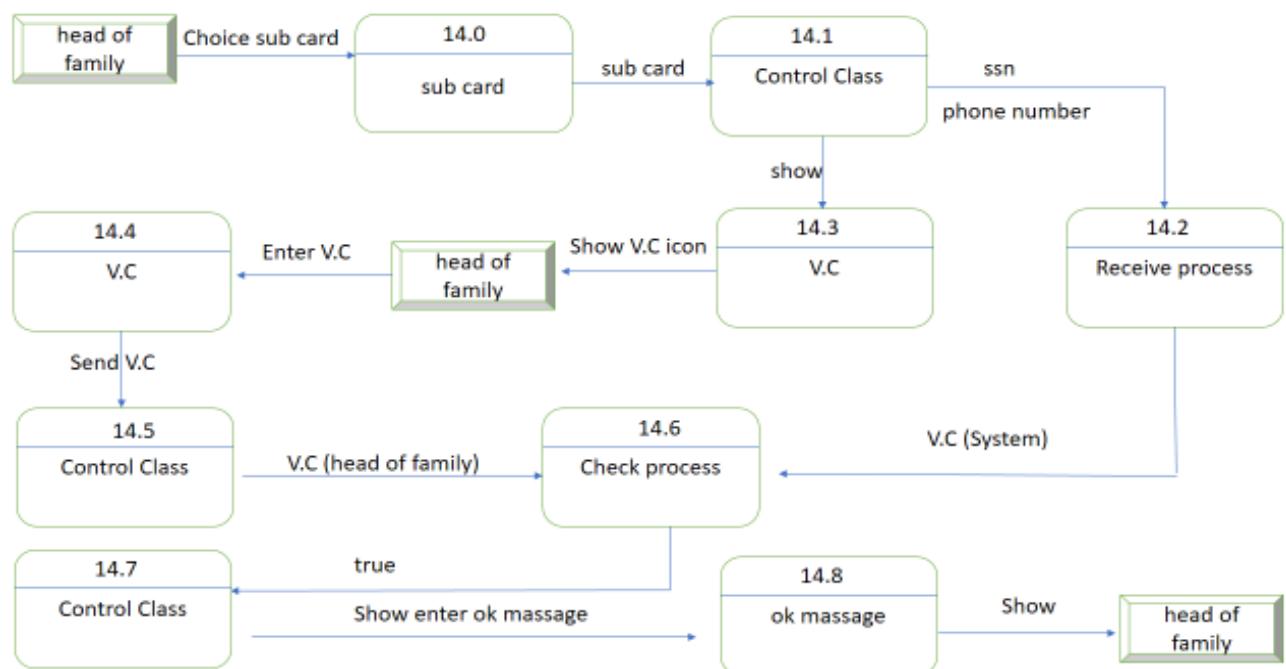


Figure 74. Data flow for head of family create sub card Service

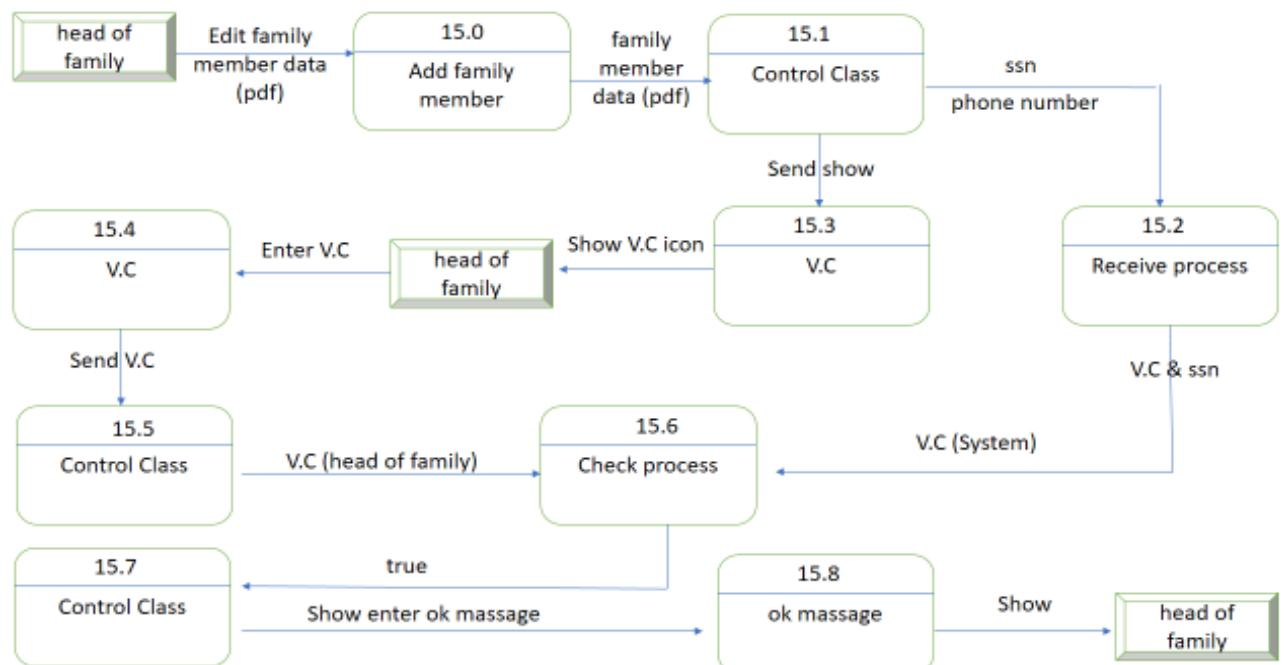


Figure 75. Data flow for head of family add family member Service

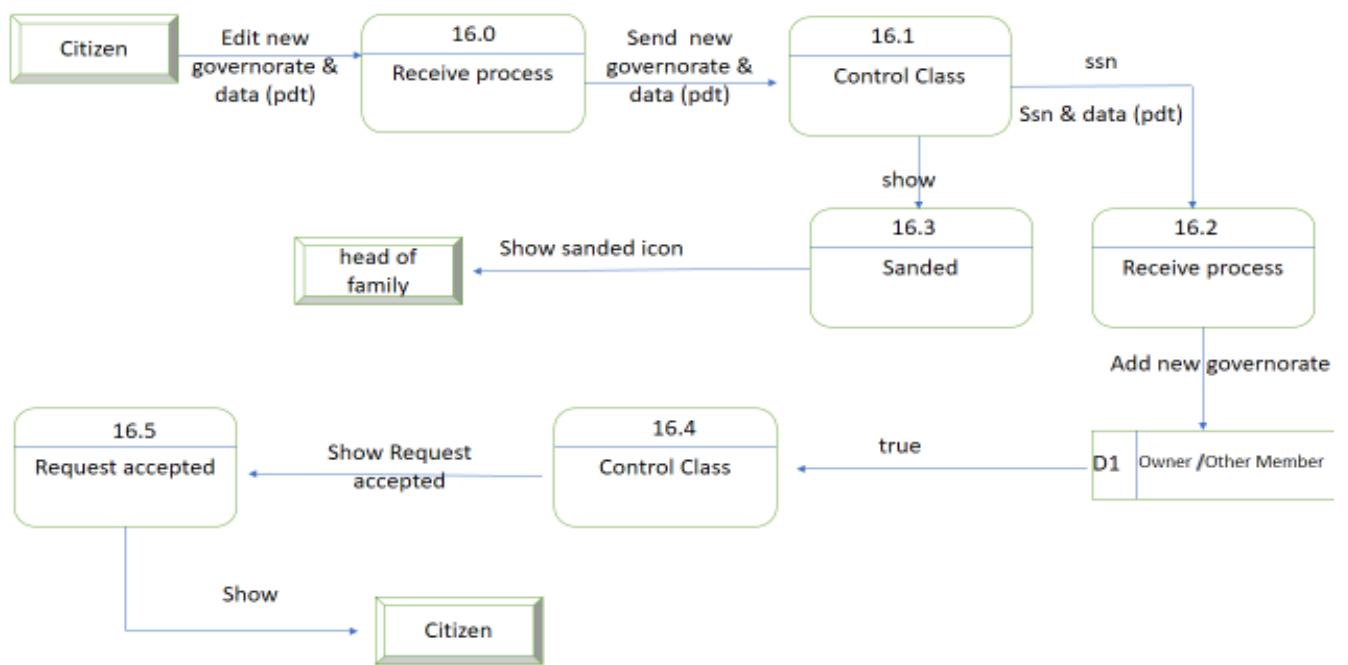


Figure 76. Data flow for Citizen Transfer governorate Service

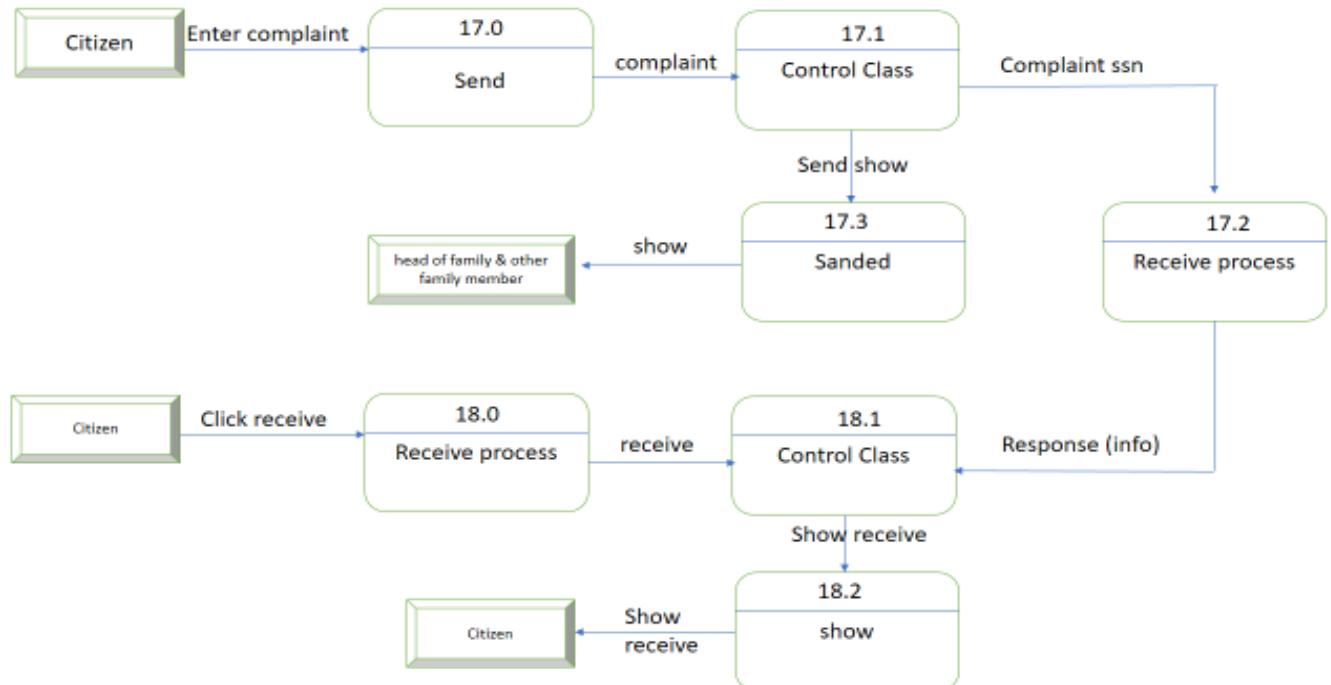


Figure 77. Data flow for Citizen Technical support

4.13 ER Diagram

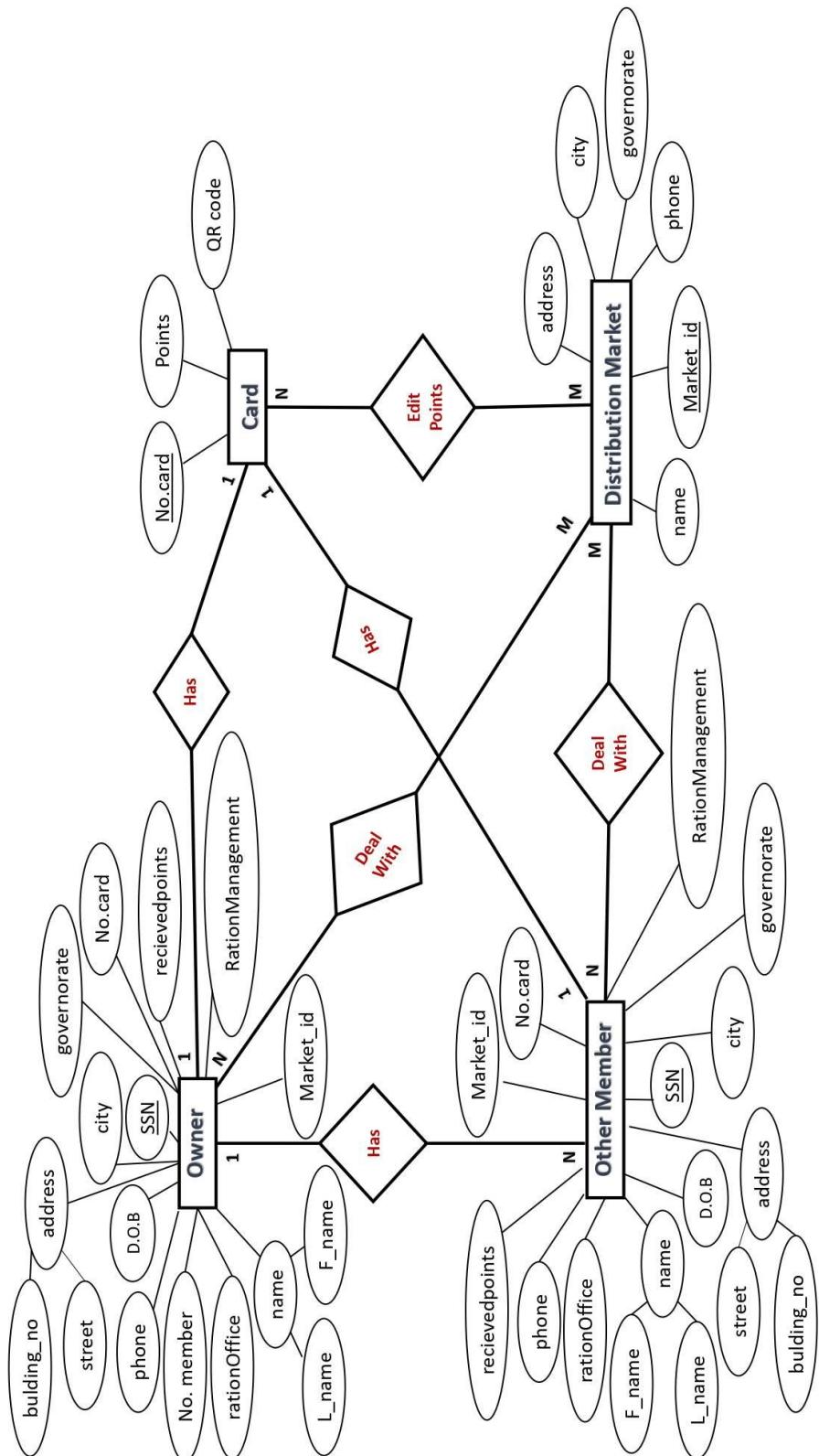


Figure 78. ER Diagram

4.14 Data Dictionary

Table 2. Data Dictionary for Owner table

	Data Item	Data Type	Data Format	Number of Bytes for Storage	Size for Display	Description	Validation
	F_name	String		15	15	First name for owner	
	L_name	String		15	15	Last name for owner	
	phone	Int		11	11	Phone number for owner	
🔑	SSN	Int		14	14	National id for owner	
	D.O.B	Floating Points (Date format)	DD/MM/YY	4	10	Birth Date of owner	Date > Today – 18 years
	address	String		200	200	Address of owner including (street – building number)	
	city	String		20	20	City of owner	
	governorate	String		20	20	Governorate of owner	
	No. Card	Int	XXXXXX	6	6	Number of owner's card	
	No.Member	Int		2	2	Number of members on the card	
	Received points	Int	XXXX	4	4	Number of points on the card	
	Ration management	String		50	50	Ration management ,which owner has joint to it	
	rationOffice	String		50	50	Nearest ration office which owner go to it	
	Market_id	Int		3	3	Refers to number of Distribution market which owner deal with	Inside the same governorate in address

Table 3. Data Dictionary for other member table

Data Item	Data Type	Data Format	Number of Bytes for Storage	Size for Display	Description	Validation
F_name	String		15	15	First name for other member	
L_name	String		15	15	Last name for other member	
phone	Int		11	11	Phone number for other member	
SSN	Int		14	14	National id for other member	
D.O.B	Floating Points (Date format)	DD/MM/YY	4	10	Birth Date of other member	Date > Today – 18 years
address	String		200	200	Address of other member including (street – building number)	
city	String		20	20	City of other member	
governorate	String		20	20	Governorate of other member	
No. Card	Int	XXXXXX	6	6	Number of other member's card	
Received points	Int	XXXX	4	4	Number of points on the card	
Ration management	String		50	50	Ration management ,which other member has joint to it	
rationOffice	String		50	50	Nearest ration office which other member go to it	
Market_id	Int		3	3	Refers to number of Distribution market which other member deal with	Inside the same governorate in address

Table 4. Data Dictionary for card table

Data Item	Data Type	Data Format	Number of Bytes for Storage	Size for Display	Description	Validation
	points	Int	XXXXXX	6	6	Number of points on the card
🔑	No. card	Int	XXXX	4	4	Number of card
	QR code	Image				QR code on the card which contain data about card

Table 5. Data Dictionary for Distribution Market table

Data Item	Data Type	Data Format	Number of Bytes for Storage	Size for Display	Description	Validation
	name	String		15	15	name of Distribution Market
🔑	Market_id	Int		3	3	Refers to number of Distribution market
	phone	Int		11	11	Phone number for Distribution market
	address	String		200	200	Address of Distribution market
	city	String		20	20	City of Distribution Market
	governorate	String		20	20	Governorate of Distribution Market

4.15 Deployment

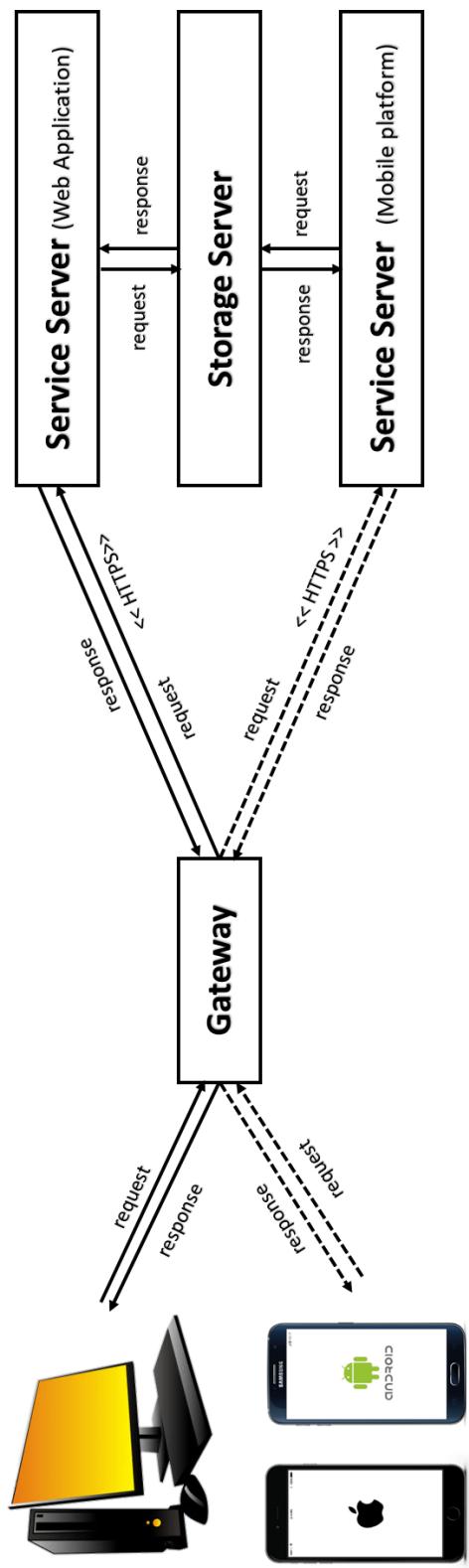


Figure 79. Deployment

5. System Architecture

The proposed project uses (SOA), defines a way to make software components reusable via service interfaces. These interfaces utilize common communication standards in such a way that they can be rapidly incorporated into new applications without having to perform deep integration each time. Each service in an SOA embodies the code and data integrations required to execute a complete, discrete business function (e.g., checking a customer's credit, calculating a monthly loan payment, or processing a mortgage application). The service interfaces provide loose coupling, meaning they can be called with little or no knowledge of how the integration is implemented underneath. The services are exposed using standard network protocols—such as SOAP (simple object access protocol)/HTTP or JSON/HTTP—to send requests to read or change data. The services are published in a way that enables developers to quickly find them and reuse them to assemble new applications. These services can be built from scratch but are often created by exposing functions from legacy systems of record as service interfaces.

6. Design Phase

6.1 User Interface Mockup



Figure 80. UI of login page



Figure 81. UI of Home page



Figure 82. UI of QR code page



Figure 83. UI of Menu page



Figure 85. UI of Service page

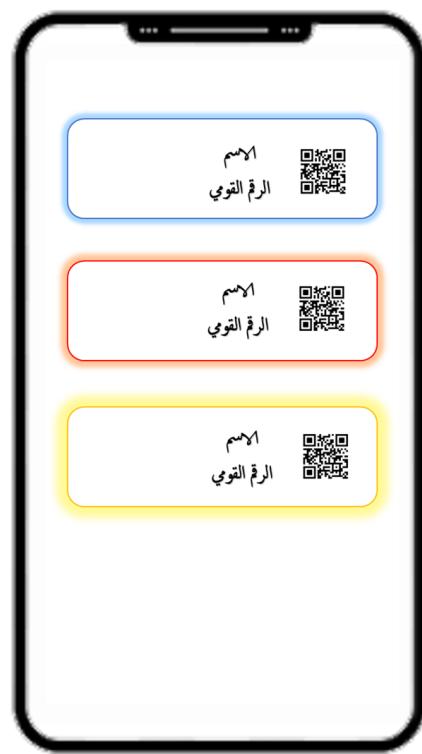


Figure 84. UI of Control Users page part 1



Figure 86. UI of Control Users page part 2



Figure 87. UI of Distribution Markets page



Figure 88. UI of Setting page

7. Project Status

Analysis and Design

98

Implementation

30

8. Conclusion

Technology is a way of thinking and problem solving, and it is the way of thinking that brings the individual to the desired results, and the limited concept of it is the computer and modern devices, but they are the result of the development of technology, technology is the optimal use of scientific knowledge and its applications and development to serve the human being and his well-being. Which the proposed System achieves that.

This development has contributed to the arrival of the allocated quotas to all individuals through the subsidiary cards, saving time and effort by converting transactions into electronic form and the absence of the need for catering offices, which will also help in avoiding the accumulations that lead to diseases and some other problems and also facilitated the process of quick response and sorting of requests In an organized manner, which in turn led to a reduction in paper handling and waste, which preserves the cleanliness of the environment.

Therefore, a set of proposed solutions has been developed to solve these problems, as the current cards have been replaced with cards containing a QR code, and the new proposal includes the creation of sub-card cards that the rest of the family member has the right to deal with, such as the main card, but with specific shares that enable the individual to obtain the rations allocated to him to avoid not all family members benefiting from the rations allocated to them. As for services, transactions and services, he can also complete them electronically through the mobile application or website where he can complete the operations Through it, where he submits a request and waits for a response without the need to go to the catering offices, as well as the ability to display the remaining points on the application without going to the distribution stores with The advantage of knowing the location of the nearest distribution store and the goods available to it, as it displays the QR code on its card.

9. Reference

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