YUSUF MAITAMA SULE UNIVERSITY KANO

DEPARTMENT OF COMPUTER SCIENCE

CSC 4401- SOFTWARE ENGINEERING

GROUP ASSIGNMENT

GROUP MEMBERS

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1.0 INTRUDUCTION

1.1 Background of study

Problem Statement

The current method of documenting and maintaining of product in shops, companies and industries does not cope with the advancing of today's technology. Computing has a vital role to play in every aspect of human life to assist and make work easier and secured.

Business Requirement

The idea of store manager app will improve the way product and stock are monitored and will reduce human suffering of stalking product manually in plain papers and book by automating this to mobile apps.

Business opportunity

store manager app compare to existing solutions on products in stores and warehouses that is managed in book, will give a good account on the product we have, Quantity of product at hand keep tracks of time and dates of in and out of product, which is at your hands in your mobile phone, you can access it all the time, keep an eye on your products ,know the quantity of products you have whenever you wish to do so without checking the books that will be always at office.

2.0 SYSTEM REQUIREMENTS SPECIFICATION

2.1 FUNCTIONAL REQUIREMENT

1. The application should provide the end user ability to insert products.
2. The application should provide the end user ability to update products.
3. The application should provide the end user ability to display products.
4. The application should provide the end user ability to display picture of a product.
5. The application should provide the end user ability to insert solid products.
6. The application should provide the end user ability to select theme mode.
7. The application should provide the end user ability to see the history transaction of each product.
8. The application should provide the end user ability to display quantity of each product.
9. The application should provide the end user ability to insert as much as he wish in the app database.
10. The application should provide the end user ability to delete a product.
11. The application should provide end use ability to create a page/account.
12. The application should provide end user ability to register his/her name.
13. The application should provide end user ability to register his/her email.
14. The application should provide end user ability to create a strong password.
15. The application should provide end user ability to upload a picture for his/her profile.
16. The application should provide end user ability to recover password when forgotten.
17. The application should provide end user ability to login when he has an existing account already using mail and password.
18. The application should provide end user ability to register his/her fingers for biometric authentication, which he can use for login.
19. The application should provide end user ability to see reports of transaction.
20. The application should provide end user ability to insert incoming products.
21. The application should provide end user ability to navigate within the application using the navigation drawer.

22. The application should provide end user ability to create a customer's list.

23. The customer's list should be able to be updated.

24. The customer's list should have names of the customer.

25. The customer's list should have email/contact of the customer.

26. The customer's list should have the address of the customer.

27. The application should allow the user generate monthly, weekly, daily reports document.

28. The application should allow the end user create an admin account.

29. The admin account should be able to add a member to his account.

30. The member should be able to insert sold products.

31. The member should be able to select theme mode.

32. The member should be able to see the history of transaction.

33. The member should be able to join the Admin's account.

34. The member should not be able to update product.

35. The member should not be able to insert product.

36. The member should not be able to delete product.

37. The application should provide the ability to send notifications to customers

38. The customers list should be able to be updated.

39. The customers list should be able to be deleted.

2.2 NON-FUNCTIONAL REQUIREMNT

40. The application should be available 95% of the time.

41. The application should be able to run on android 4.4 above version.

42. The application should provide simple and structured user interface to the end user.

43. The application should provide high level of speed (how fast it responds to command).

44. The application should provide a secure data base.

45. The application should have a high level of capacity.

46. The application should be completely reliable.

47. The application should not require internet connection.

48. The application should not provide data backup.

49. The application should be able to be compatible (functions well when other apps are running on a device).

50. Case of use

51. Robustness

52. Fast response time of about 4 seconds on login.

53. The application should be able to use network connection.

54. Changes and update should be made immediately when having connection.

55. The system should be portable.

56. The system should be efficient.

57. The system should be consistent.

58. The user's phone number must be at least eleven digits.

2.3 PROCESS REQUIREMENT

59. Android studio

60. Emulator/Android device

61. KOTLIN programming language

2.4 SYSTEM REQUIREMENT

62. Smart phone with android O.S version 4.4 (KOTLIN) or higher

63. Minimum 512MB of RAM

64. A process with speed above 1.2 GHz

65. 16MB of storage for app and extra for the data stored, the size of the app increases as the number of entries are increased.

66. Android API version 19

67. Permission to install Application

68. Permission to Access storage (mobile storage)

3.0 SYSTEM MODELS

3.1 USE CASE DIAGRAM
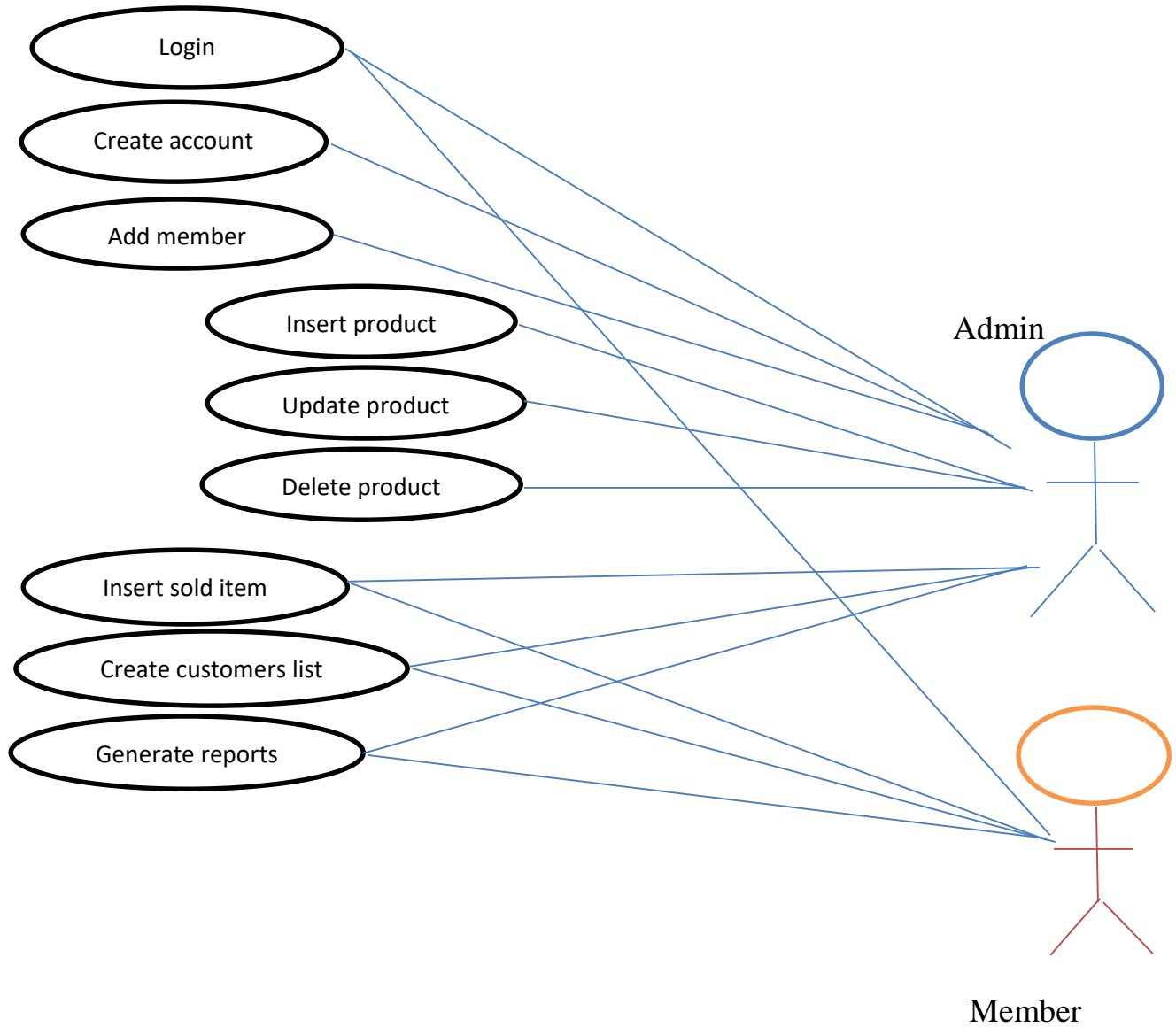
3.2 ACTIVITY DIAGRAMS

3.2.1 Login And Register Account Activity Diagram

```
                                                        No
   ●                        Have an                              ┌──────────────────────┐
   │                        account ?                            │  Create Account form │
   ▼                                                             └──────────────────────┘
┌──────────────────┐    ◇
│ Navigate to app  │──▶
└──────────────────┘

        Yes                              ┌──────────────────────────┐      ┌──────────────┐
                                         │ Enter data email, password│─────▶│  Save data   │
┌──────────────────────────────────┐    └──────────────────────────┘      └──────────────┘
│ Prompt user name and password input│
└──────────────────────────────────┘                                      ┌──────────────┐
                                                                          │  Validation  │
                                                                          └──────────────┘

              No                              Valida
                                              tion ?
                                                 ◇

                                                        Yes
                                         ┌──────────────────────┐
                                         │  Display Dashboard   │
                                         └──────────────────────┘
                                                    │
                                                    ▼
                                                    ●
```
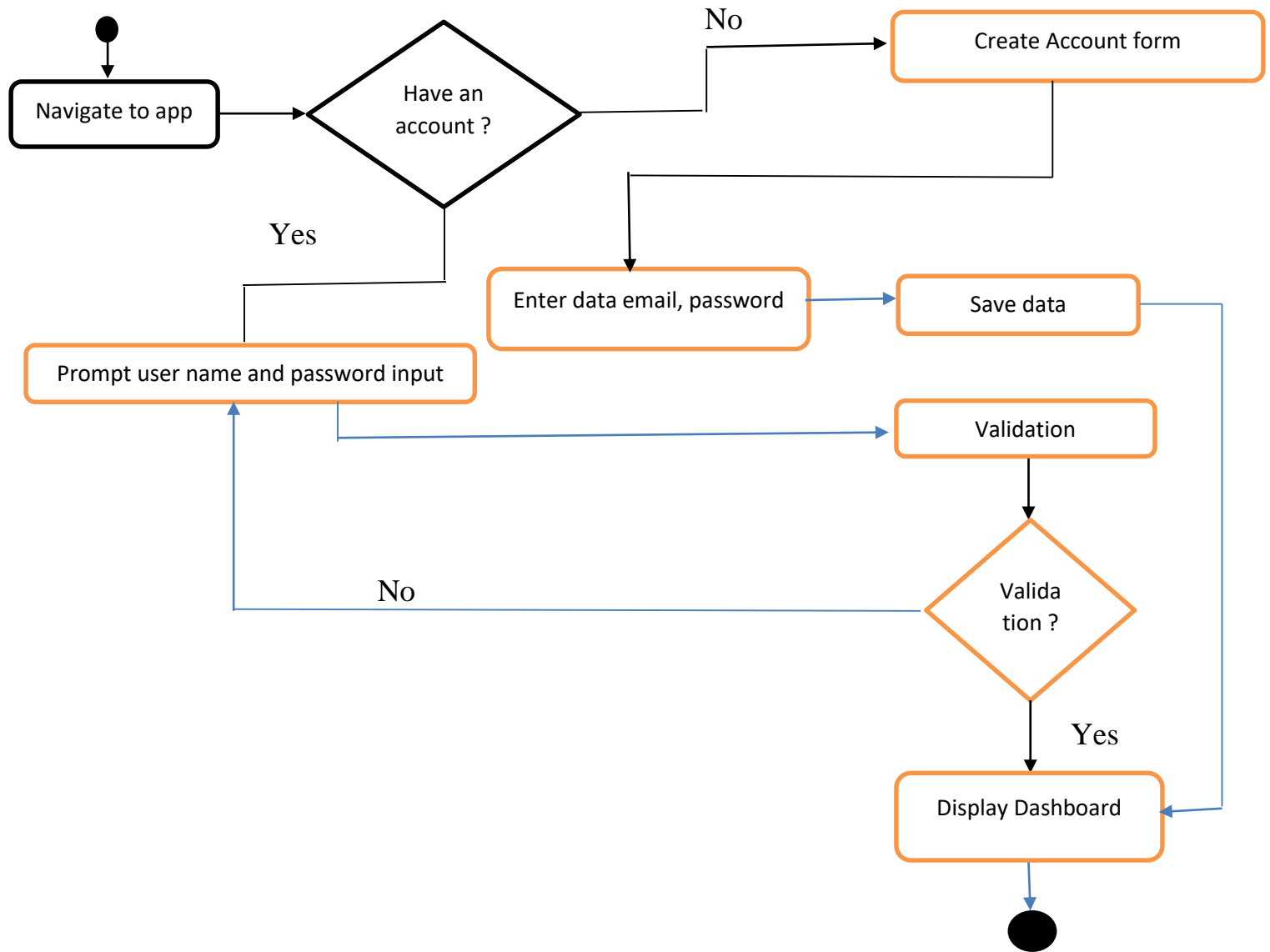
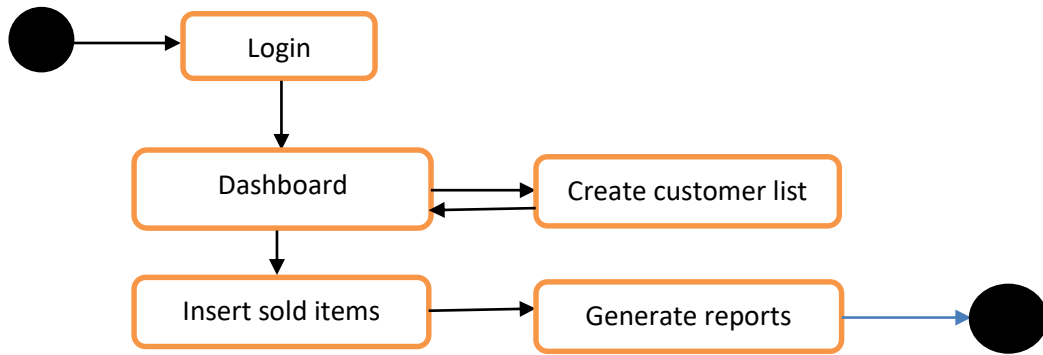## 3.2.2 Add member Activity Diagram
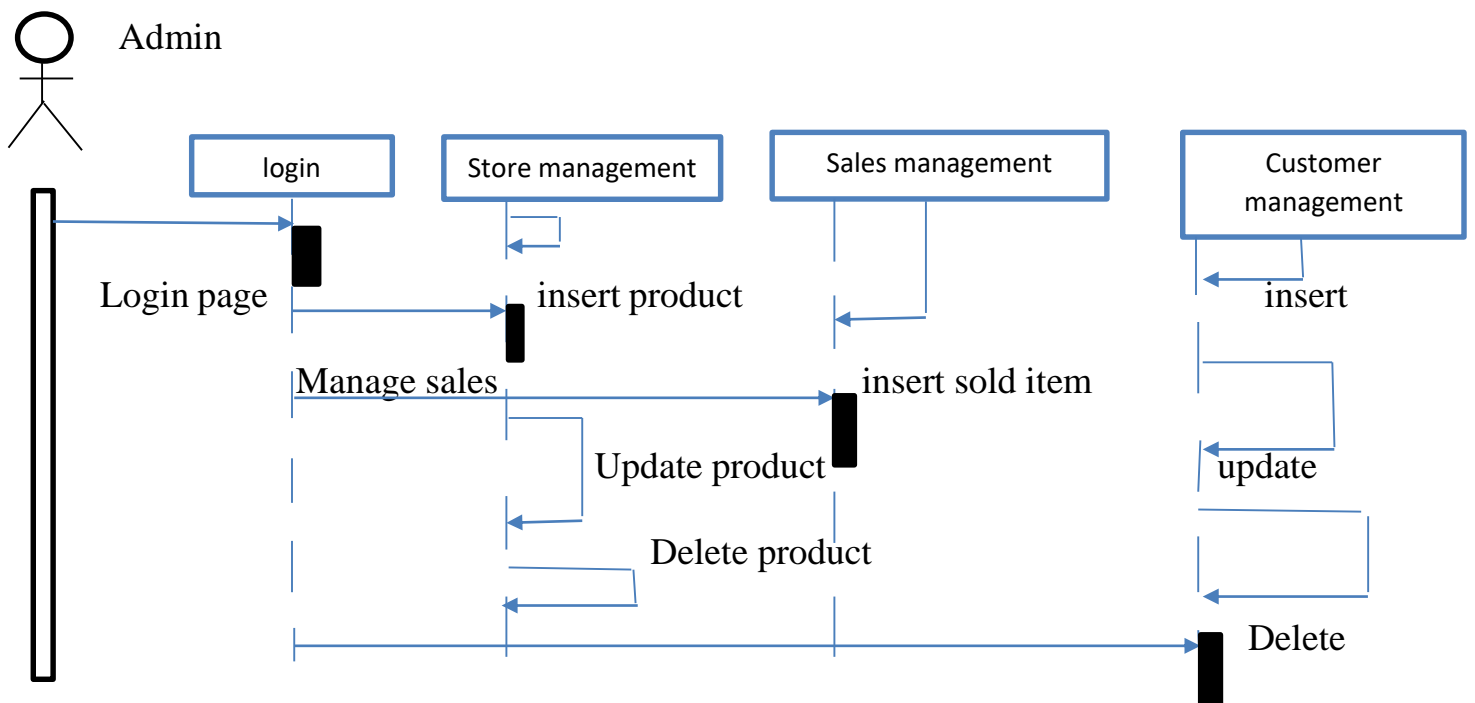
3.2.3 Admin's Activities Activity Diagram
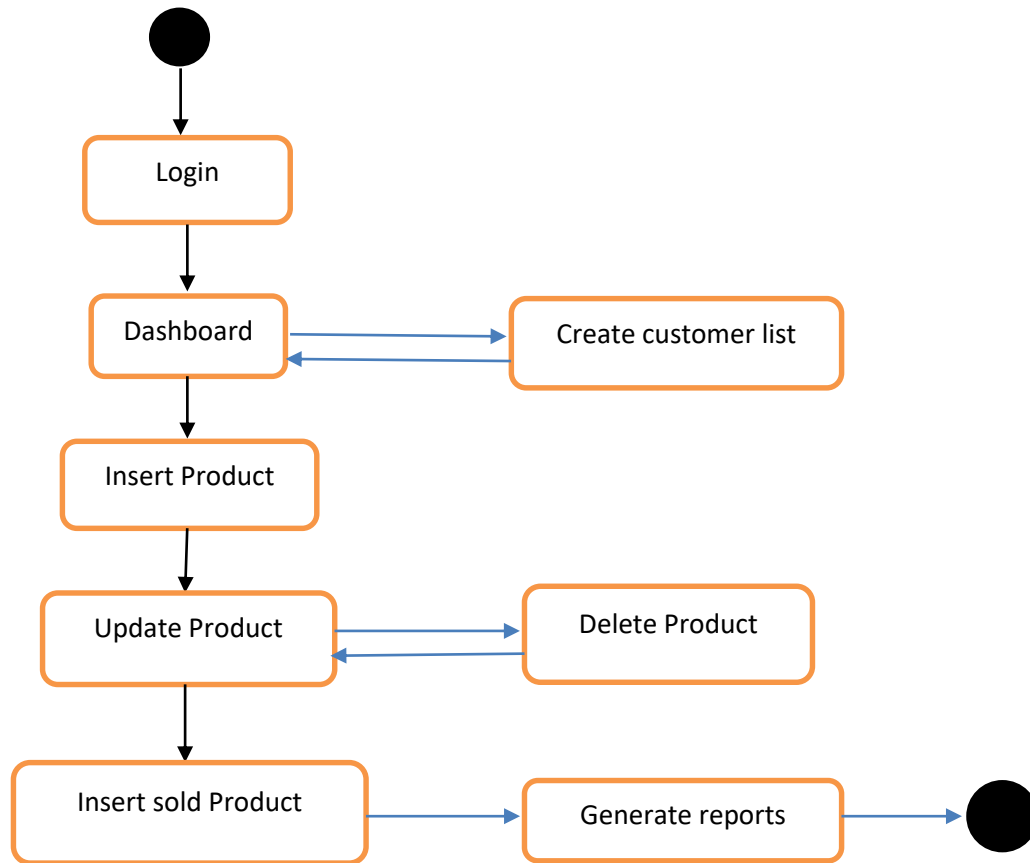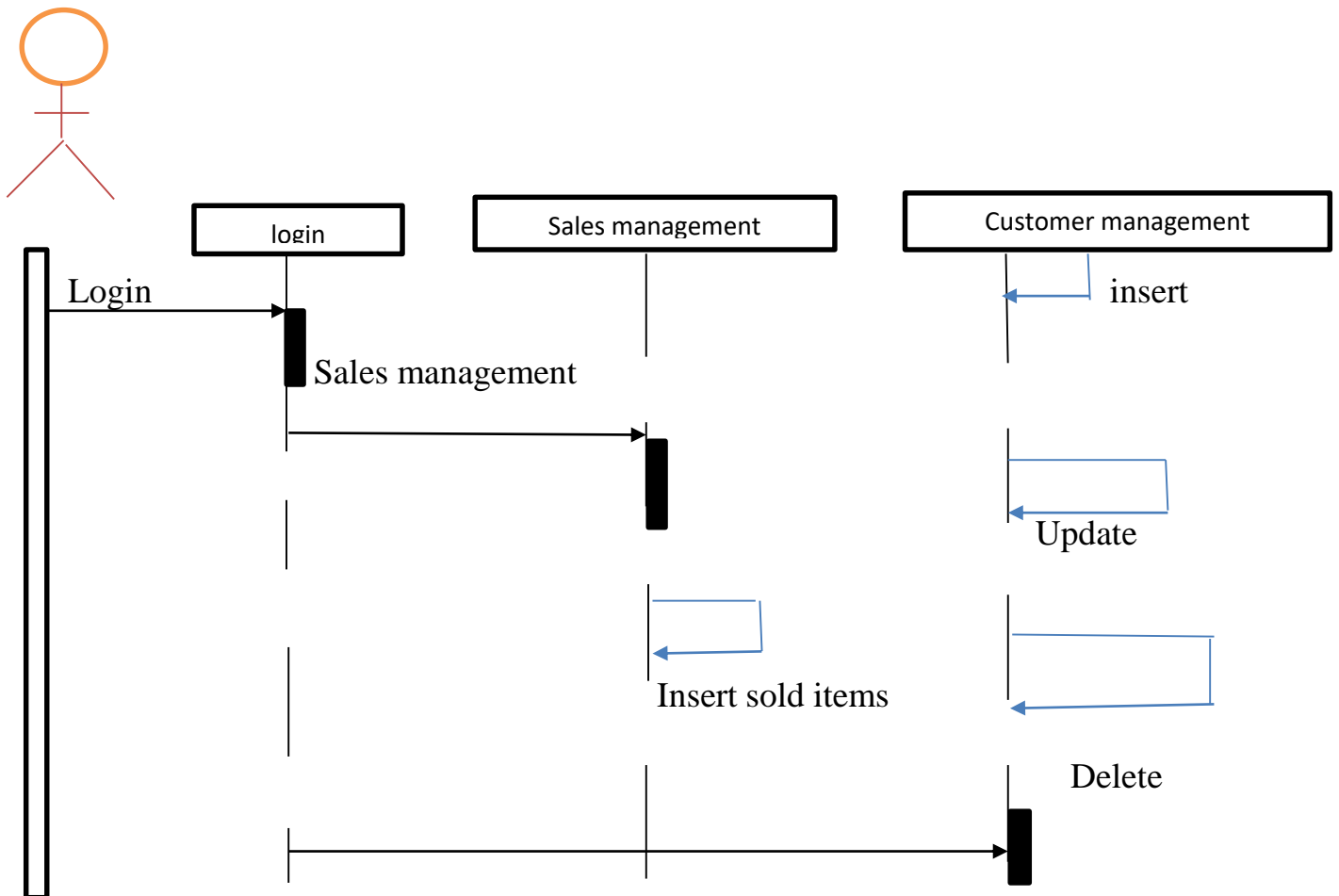

3.2.4   MEMBER'S ACTIVITIES DIAGRAM

3.3 SEQUENCE DIAGRAMS

3.3.1 Admin Sequence diagram

3.3.2 Member's Sequence Diagram

login	Sales management	Customer management

Login

Sales management

insert

Update

Insert sold items

Delete

3.4 CLASS DIAGRAM

```
+------------------------+
|         ADMIN          |
+------------------------+
|  Username: string      |
|  Password: string      |
+------------------------+
|  Login()               |
|  Inventory()           |
+------------------------+
```

```
+------------------------+
|        CUSTOMER        |
+------------------------+
|  Customer Id:  int     |
|  Customer name:  string|
|  Customer address:     |
|  string                |
|  Customer email:  string|
+------------------------+
|  Notification()        |
|  Edit customer()       |
|  Delete customer()     |
+------------------------+
```

```
+------------------------+
|        MEMBER          |
+------------------------+
|  Username: string      |
|  Password: string      |
+------------------------+
|  Login()               |
|  Inventory()           |
+------------------------+
```

```
+------------------------+
|        REPORT          |
+------------------------+
|  Report id: int        |
|  Report name : string  |
|  Report date: string   |
+------------------------+
|  Generate ()           |
|  Status()              |
+------------------------+
```

```
+------------------------+
|        PRODUCT         |
+------------------------+
|  Product id: string    |
|  Product name: string  |
|  Product quantity:  int |
|  Product price : string |
+------------------------+
|  Update()              |
|  Delete()              |
|  Insert()              |
+------------------------+
```