



Shark Tracking for UML

Class Project Assignment

SEN 986

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Under Guidance of Professor Donna Dulo

Submitted By:

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Table of Contents

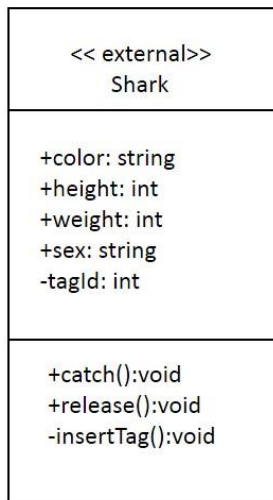
A. UML Class Diagram – 12 software Classes with Attributes and Methods	1
B. Conceptual Class Static Model Diagram	5
C. UML Communication and Sequence Diagrams based on Use Case Diagrams.....	6
C.1 Communication and Sequence Diagram for UC-1.1	6
C.2 Communication and Sequence Diagram for UC-1.2	8
C.3 Communication and Sequence Diagram for UC-1.3	10
C.4 Communication and Sequence Diagram for UC-1.4	12
C.5 Communication and Sequence Diagram for UC-1.5	14
C.6 Communication and Sequence Diagram for UC-2.1	15
C.7 Communication and Sequence Diagram for UC-2.2	17
C.8 Communication and Sequence Diagram for UC- 2.3	19
C.9 Communication and Sequence Diagram for UC-2.4	21
C.10 Communication and Sequence Diagram for UC-2.5	23

Table of Figures

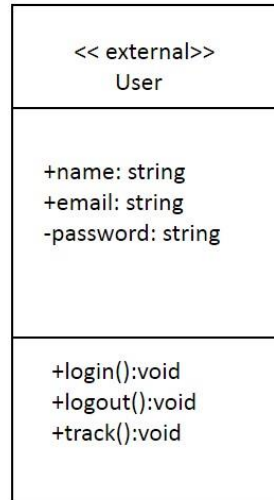
Figure 1 Software Classes in UML (1-3)	1
Figure 2 Software Classes in UML (4-6)	2
Figure 3 Software Classes in UML (7-9)	3
Figure 4 Software Classes in UML (10-12)	4
Figure 5 Conceptual Static Class Diagram.....	5
Figure 6 Communication Diagram UC-1.1	6
Figure 7 Sequence Diagram UC-1.1	7
Figure 8 Communication Diagram UC-1.2	8
Figure 9 Sequence Diagram UC-1.2	9
Figure 10 Communication Diagram UC-1.3	10
Figure 11 Sequence Diagram UC-1.3	11
Figure 12 Communication Diagram UC-1.4	12
Figure 13 Sequence Diagram UC-1.4	13
Figure 14 Communication Diagram UC-1.5	14
Figure 15 Sequence Diagram UC-1.5	14
Figure 16 Communication Diagram UC-2.1	15
Figure 17 Sequence Diagram UC-2.1	16
Figure 18 Communication Diagram UC-2.2	17
Figure 19 Sequence Diagram UC-2.2	18
Figure 20 Communication Diagram UC-2.3	19
Figure 21 Sequence Diagram UC-2.3	20
Figure 22 Communication Diagram UC-2.4	21
Figure 23 Sequence Diagram UC-2.4	22
Figure 24 Communication Diagram UC-2.5	23
Figure 25 Sequence Diagram UC-2.5	24

A. UML Class Diagram – 12 software Classes with Attributes and Methods

1. Shark Class



2. User Class



3. Researcher Class

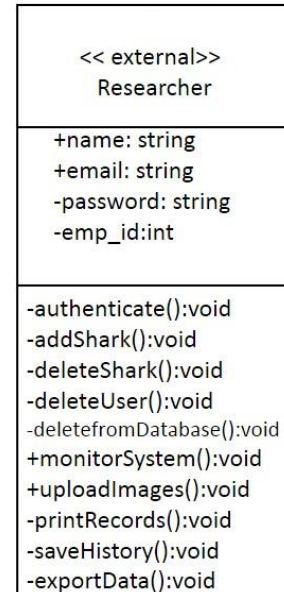
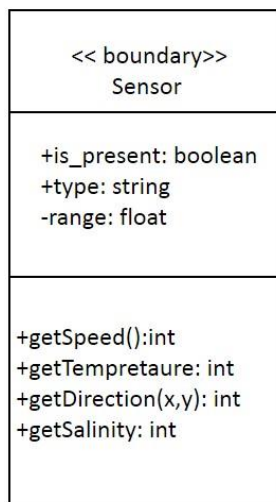
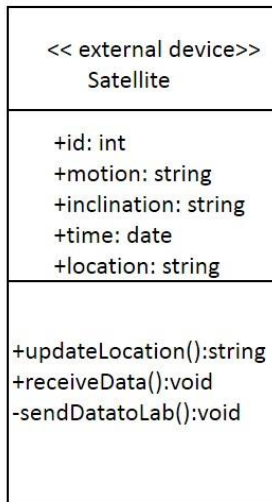


Figure 1 Software Classes in UML (1-3)

4. Sensor Class



5. Satellite Class



6. Database Manager Class

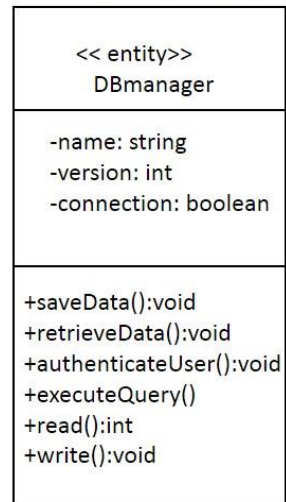
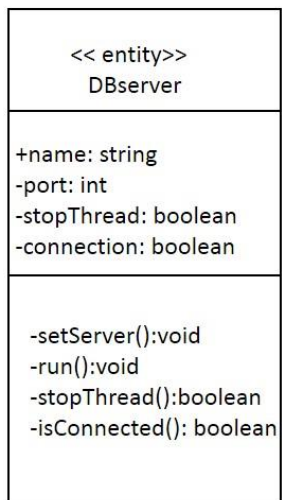
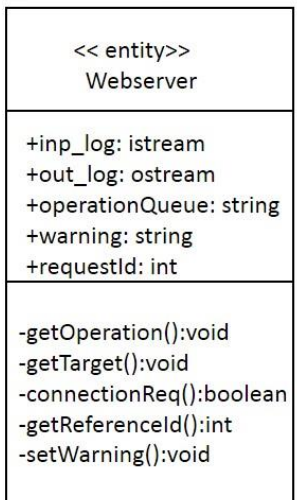


Figure 2 Software Classes in UML (4-6)

7. Database Server Class



8. Web Server Class



9. Graphical user Interface Class

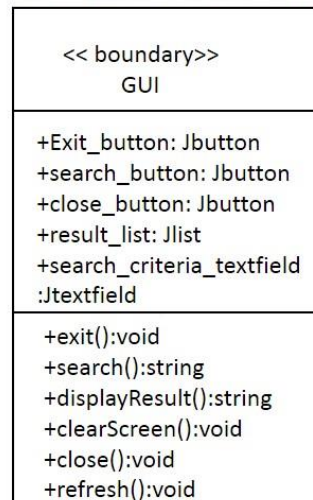
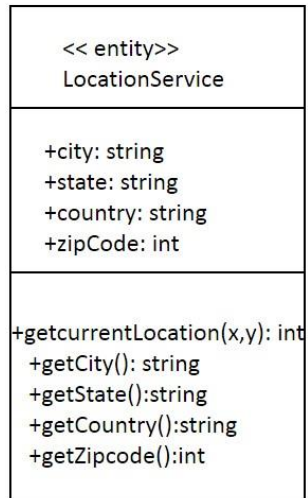
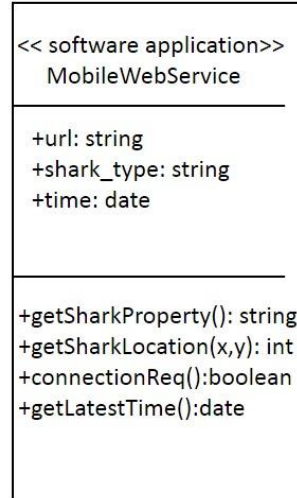


Figure 3 Software Classes in UML (7-9)

10. Location Service Class



11. Mobile Web Service Class



12. Monitor System Class

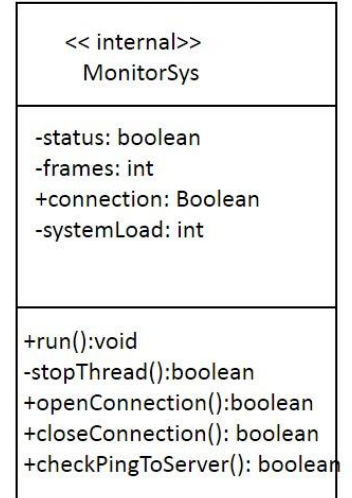


Figure 4 Software Classes in UML (10-12)

B. Conceptual Class Static Model Diagram

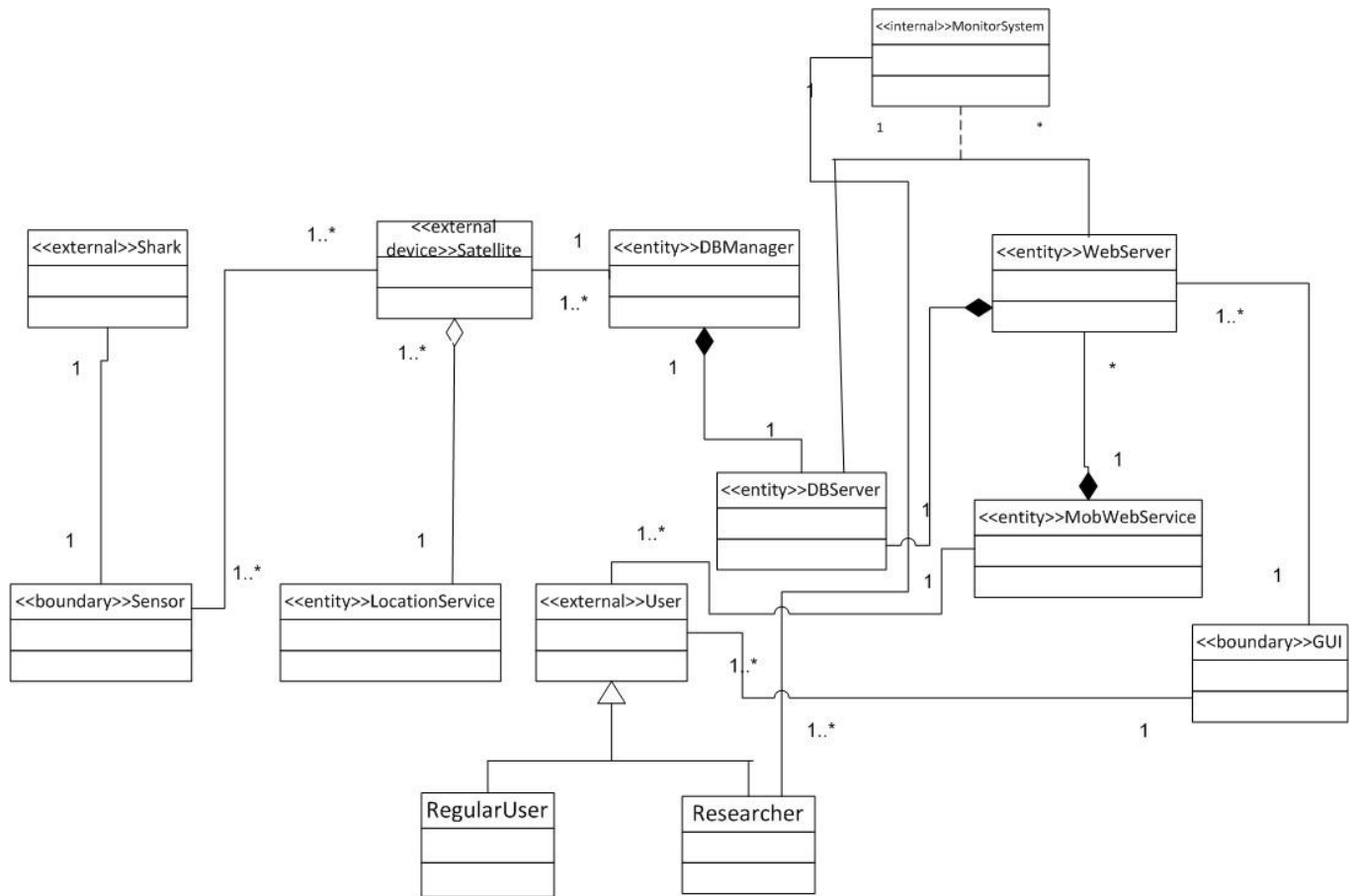
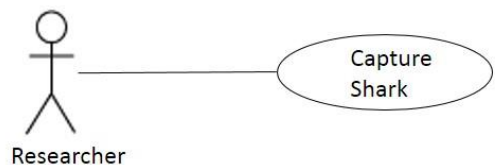


Figure 5 Conceptual Static Class Diagram

C. UML Communication and Sequence Diagrams based on Use Case Diagrams

Refer use case diagram in case study assignments

C.1 Communication and Sequence Diagram for UC-1.1



Communication Diagram for Above Use Case UC-1.1:

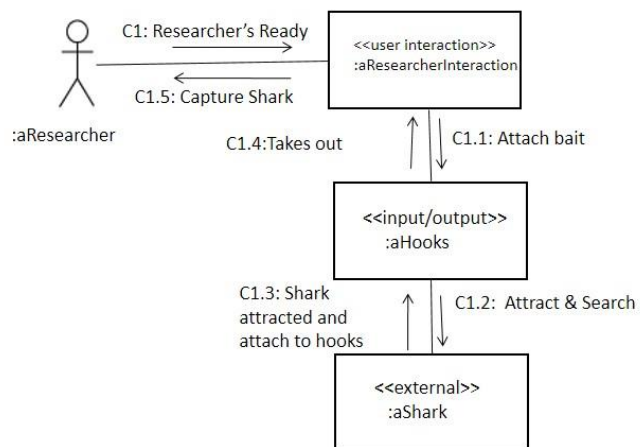


Figure 6 Communication Diagram UC-1.1

Sequence Diagram for Above Use Case UC-1.1:

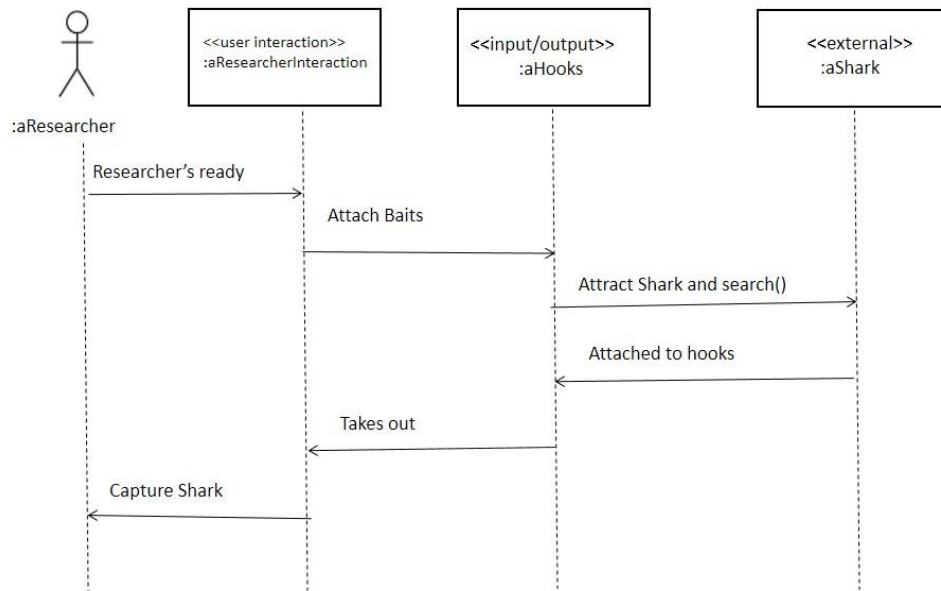
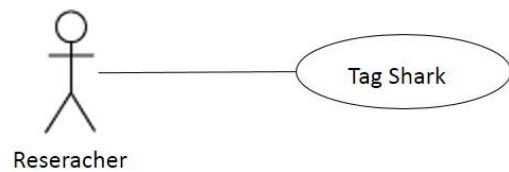


Figure 7 Sequence Diagram UC-1.1

C.2 Communication and Sequence Diagram for UC-1.2



Communication Diagram for Above Use Case UC-1.2:

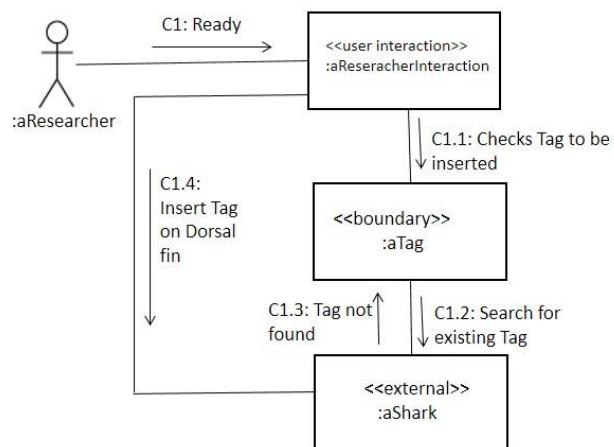


Figure 8 Communication Diagram UC-1.2

Sequence Diagram for Above Use Case UC-1.2:

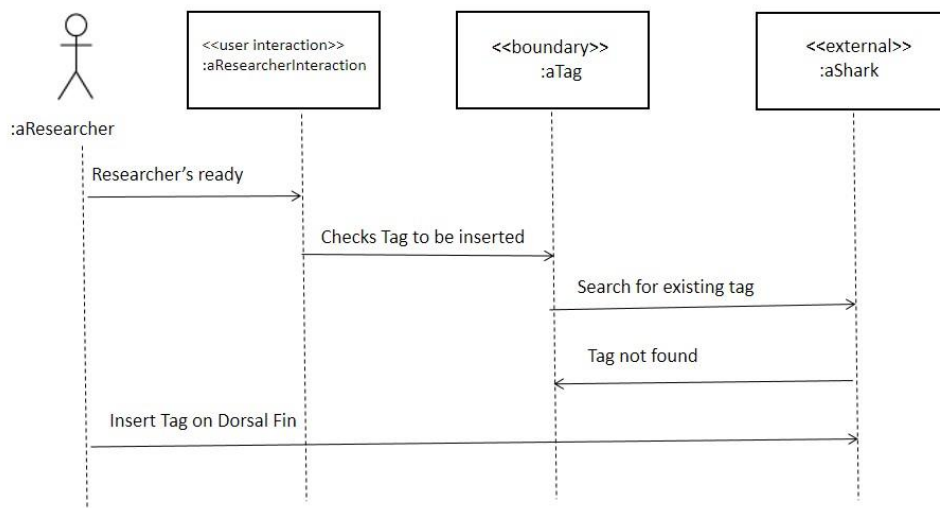
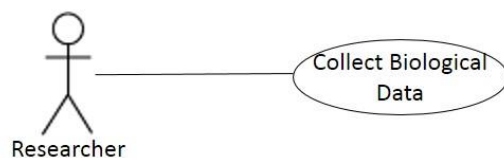


Figure 9 Sequence Diagram UC-1.2

C.3 Communication and Sequence Diagram for UC-1.3



Communication Diagram for Above Use Case UC-1.3:

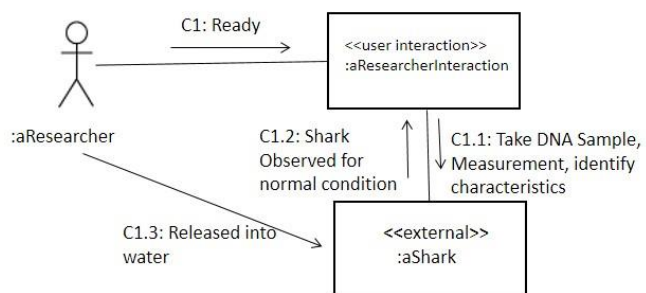


Figure 10 Communication Diagram UC-1.3

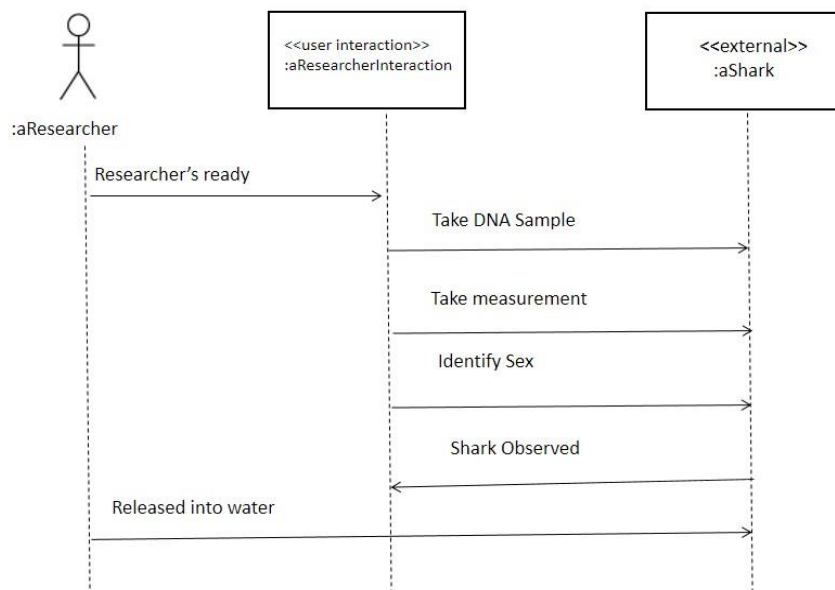
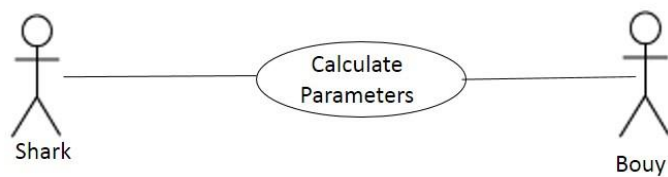
Sequence Diagram for Above Use Case UC-1.3:

Figure 11 Sequence Diagram UC-1.3

C.4 Communication and Sequence Diagram for UC-1.4



Communication Diagram for Above Use Case UC-1.4:

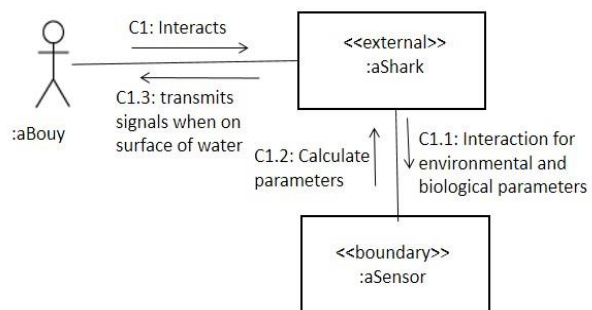


Figure 12 Communication Diagram UC-1.4

Sequence Diagram for Above Use Case UC-1.4:

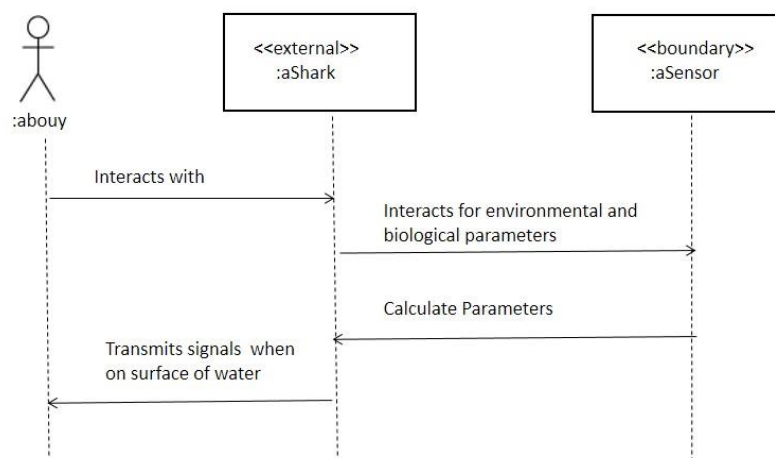
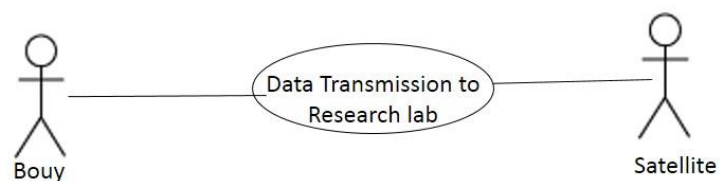


Figure 13 Sequence Diagram UC-1.4

C.5 Communication and Sequence Diagram for UC-1.5



Communication Diagram for Above Use Case UC-1.5:

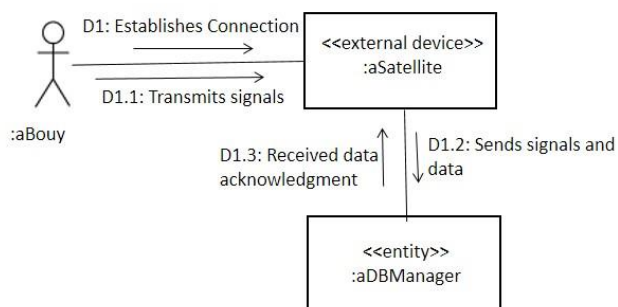


Figure 14 Communication Diagram UC-1.5

Sequence Diagram for Above Use Case UC-1.5:

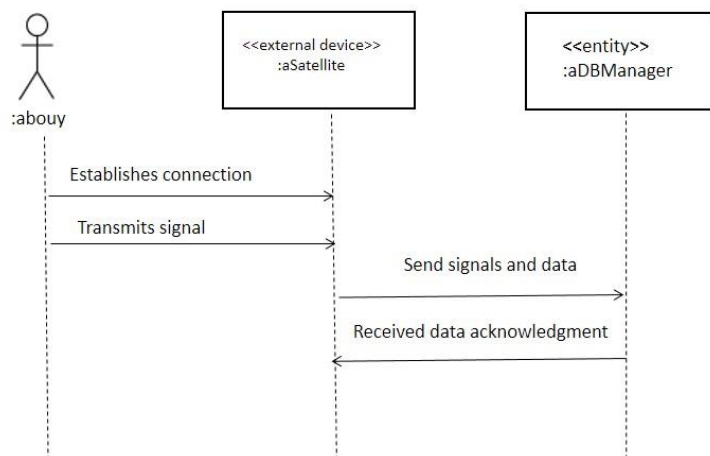
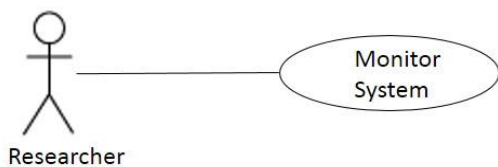


Figure 15 Sequence Diagram UC-1.5

C.6 Communication and Sequence Diagram for UC-2.1



Communication Diagram for Above Use Case UC-2.1:

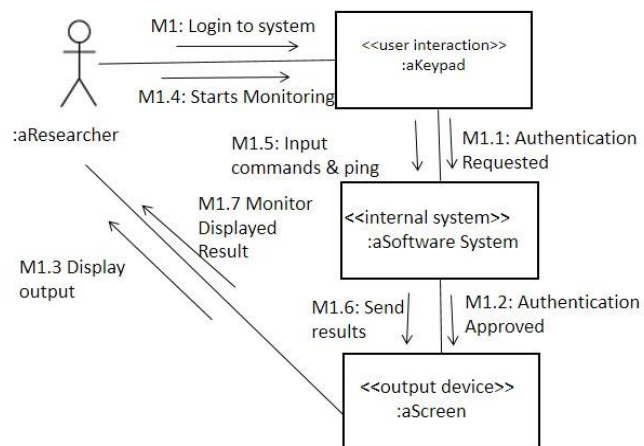


Figure 16 Communication Diagram UC-2.1

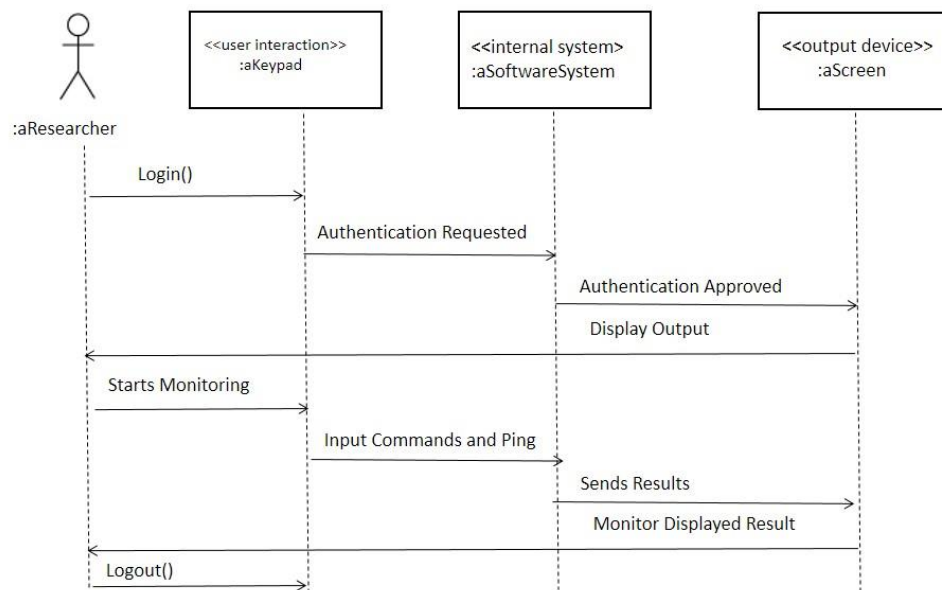
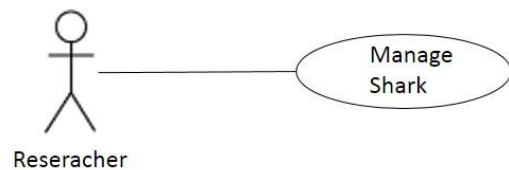
Sequence Diagram for Above Use Case UC-2.1:

Figure 17 Sequence Diagram UC-2.1

C.7 Communication and Sequence Diagram for UC-2.2



Communication Diagram for Above Use Case UC-2.2:

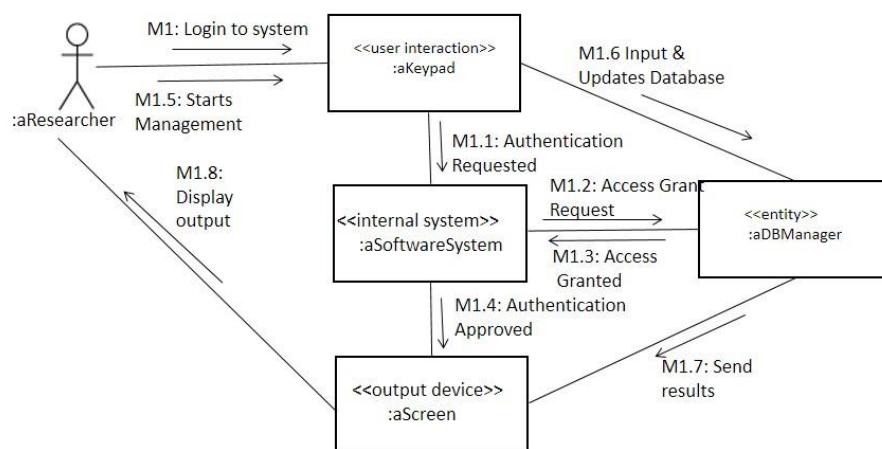


Figure 18 Communication Diagram UC-2.2

Sequence Diagram for Above Use Case UC-2.2:

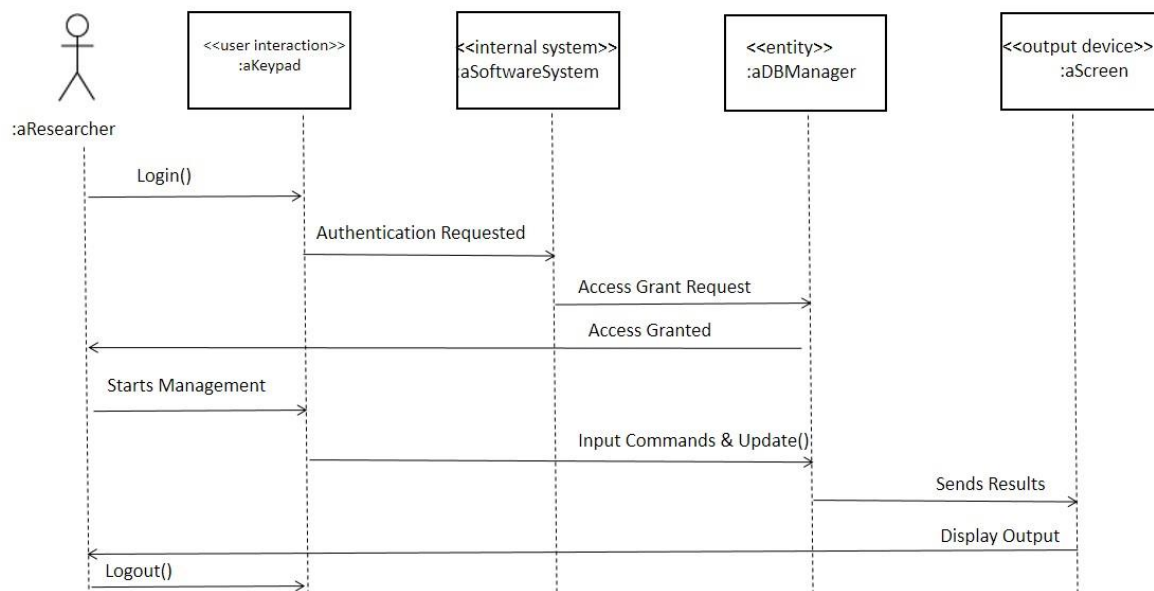
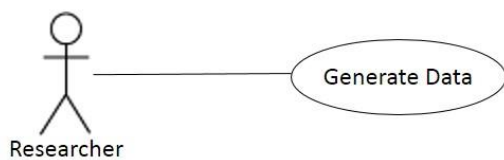


Figure 19 Sequence Diagram UC-2.2

C.8 Communication and Sequence Diagram for UC- 2.3



Communication Diagram for Above Use Case UC-2.3:

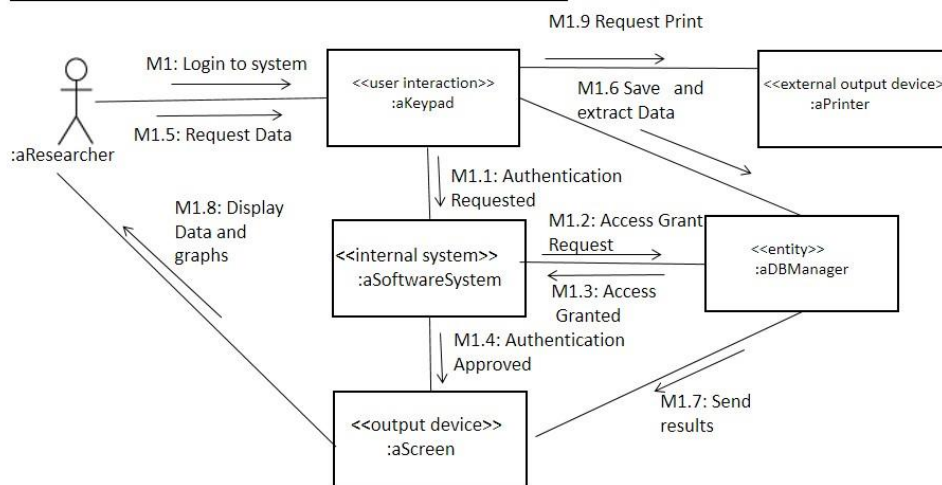


Figure 20 Communication Diagram UC-2.3

Sequence Diagram for Above Use Case UC-2.3:

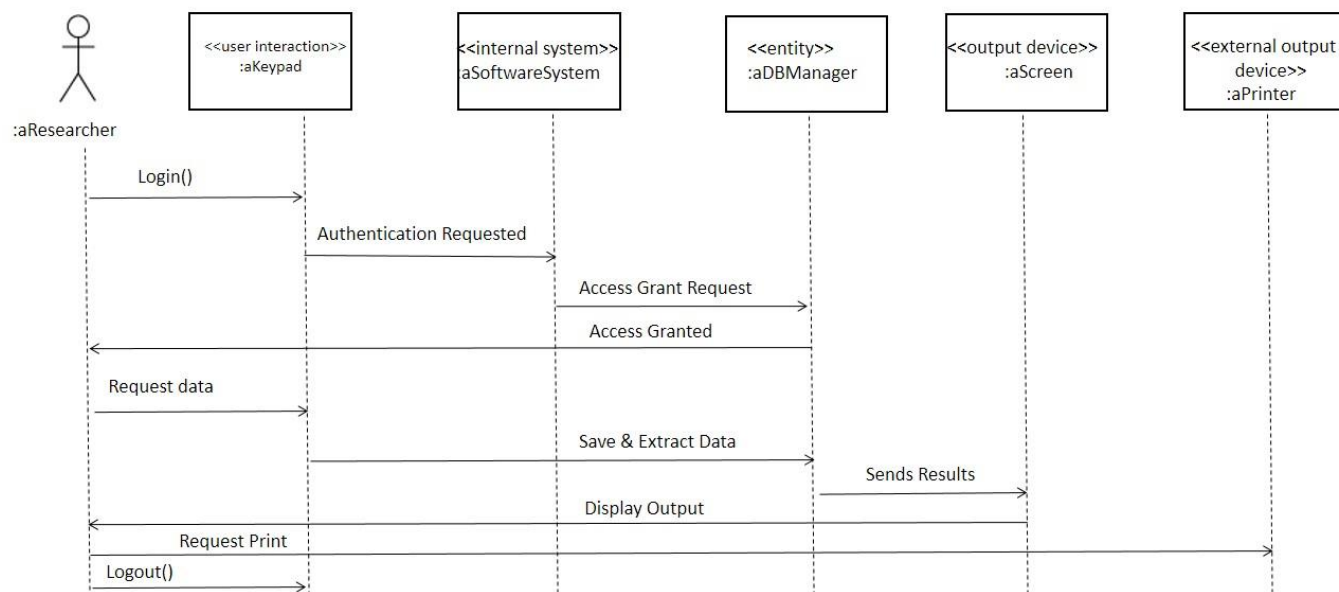
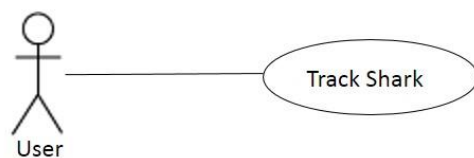


Figure 21 Sequence Diagram UC-2.3

C.9 Communication and Sequence Diagram for UC-2.4



Communication Diagram for Above Use Case UC-2.4:

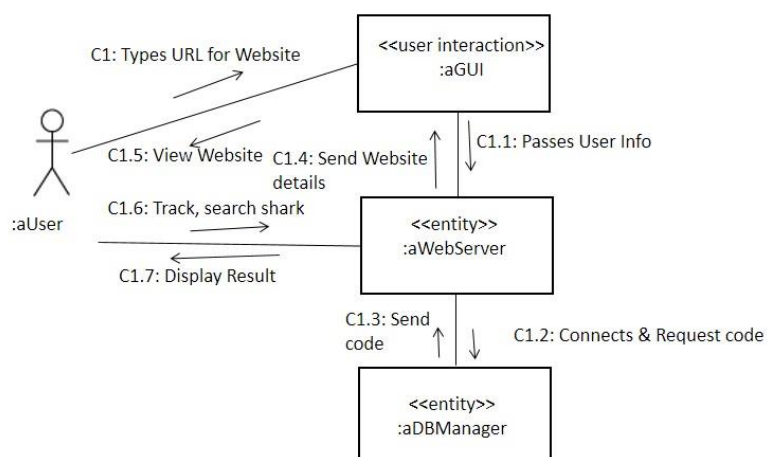


Figure 22 Communication Diagram UC-2.4

Sequence Diagram for Above Use Case UC-2.4:

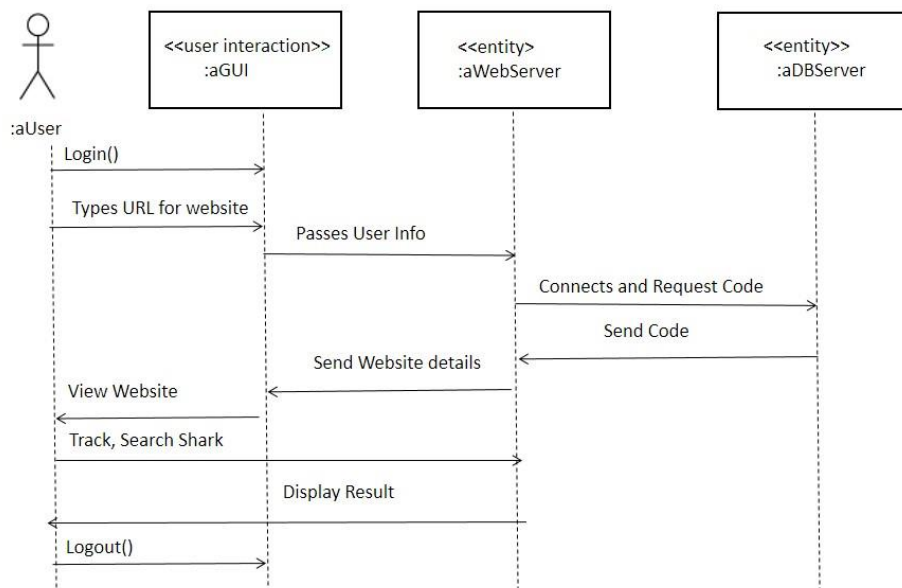
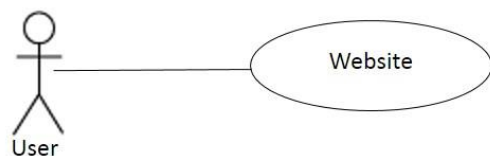


Figure 23 Sequence Diagram UC-2.4

C.10 Communication and Sequence Diagram for UC-2.5



Communication Diagram for Above Use Case UC-2.5:

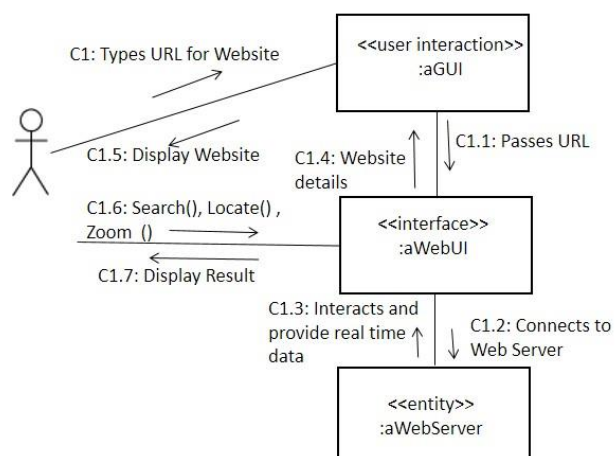


Figure 24 Communication Diagram UC-2.5

Sequence Diagram for Above Use Case UC-2.5:

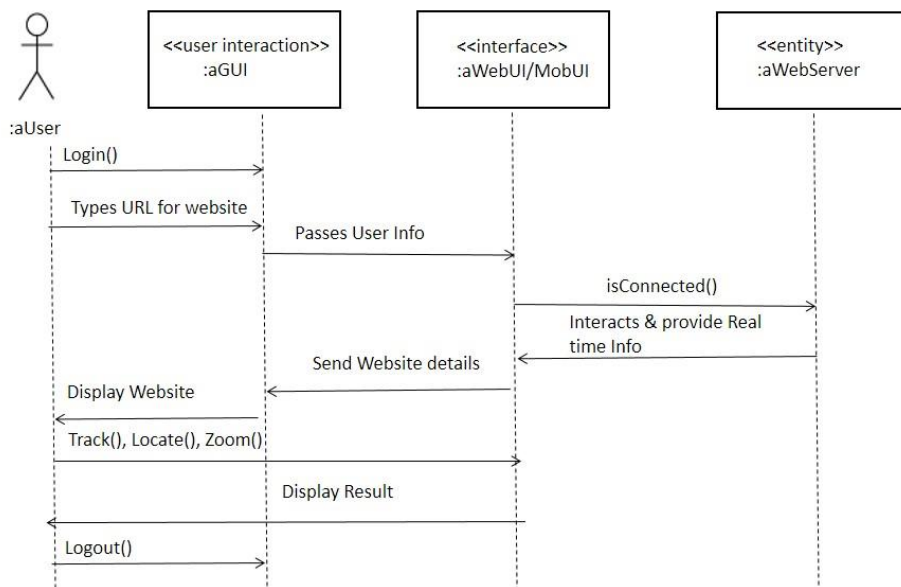


Figure 25 Sequence Diagram UC-2.5