IT314: Software Engineering

Lab Session VIII – Domain Analysis Modeling & Sequence Diagram

Group-30

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A) Use Case Diagram:

B) Textual description of "issueBook":

Actors: Librarian, Student

a) **The student** wants to issue the book.
   i)   Log in to the system
   ii) Search for the book
   iii) Visit the librarian
b) **The Librarian** will process the book Issue.
   i)   Mark the due date in the book
   ii) Issue the book
   iii) Check if the student is valid or not
   iv) Also, check if the student hasn't reached the maximum count of books allowed to issue.
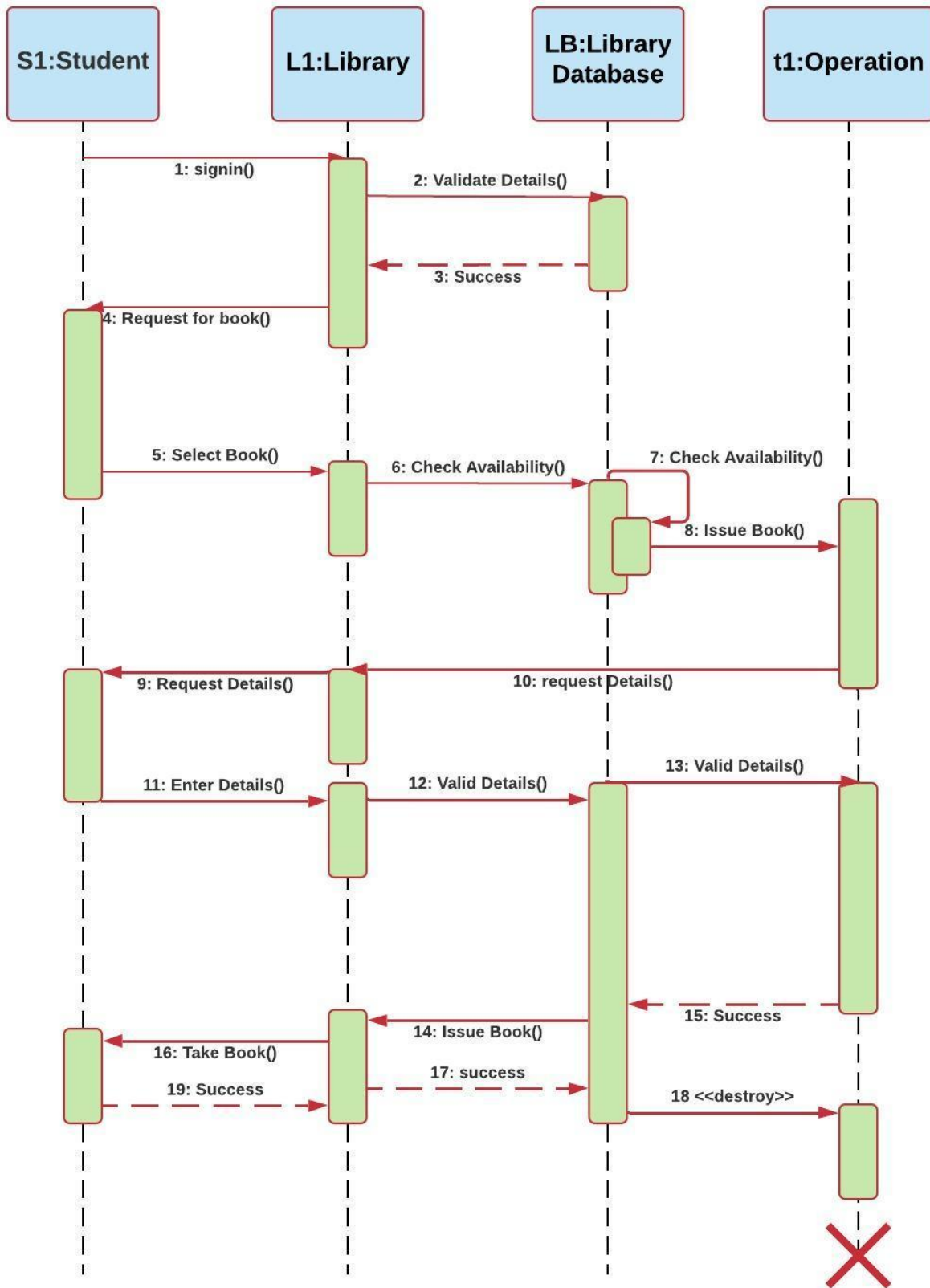
Q.1.2: The sequence diagram for the "issueBook" use case. (Hint: Here you need to identify various analysis objects (corresponding to entity, boundary, and control classes), and show their interaction to realize the "issueBook" use case.)

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Sequence diagram participants: S1:Student, L1:Library, LB:Library Database, t1:Operation

1: signin()
2: Validate Details()
3: Success
4: Request for book()
5: Select Book()
6: Check Availability()
7: Check Availability()
8: Issue Book()
9: Request Details()
10: request Details()
11: Enter Details()
12: Valid Details()
13: Valid Details()
14: Issue Book()
15: Success
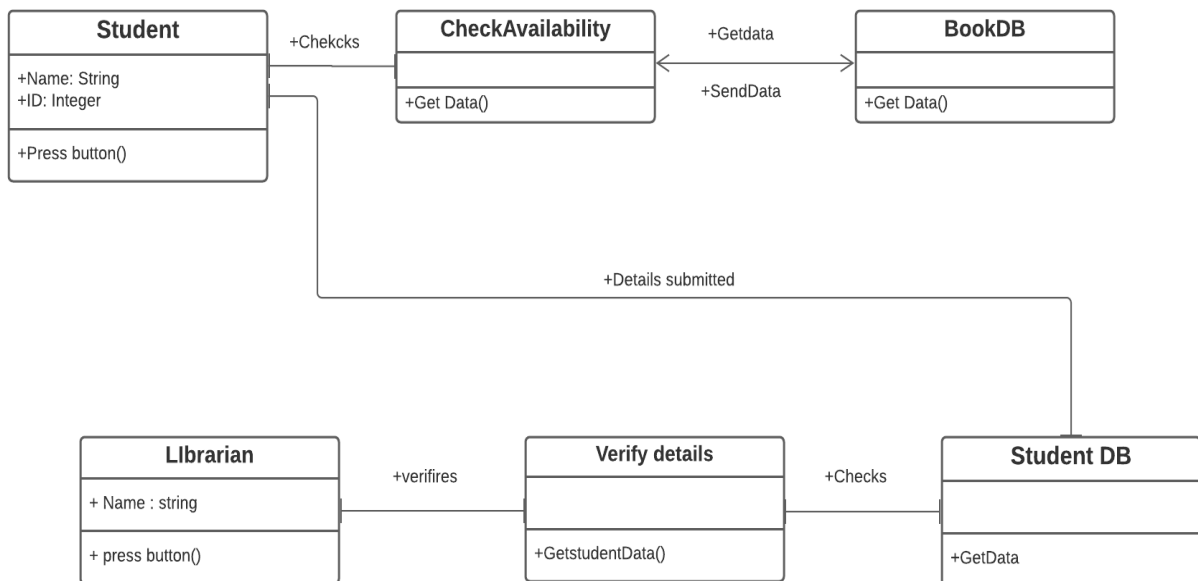16: Take Book()
17: success
18 <<destroy>>
19: Success

Q.1.3: Draw the analysis object diagram for the "issue book" use case analysis.

Contributors:

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Student
+Name: String +ID: Integer
+Press button()

+Chekcks

CheckAvailability
+Get Data()

+Getdata

+SendData

BookDB
+Get Data()

+Details submitted

LIbrarian
+ Name : string
+ press button()

+verifires

Verify details
+GetstudentData()

+Checks

Student DB
+GetData

Q.2: Draw a sequence diagram that represents this process. Make sure to show when each actor is participating in the process. Also, show the operation that is carried out during each interaction, and what its arguments are.

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Instructor	Student	TA	Peon

Set Date

Send Material

Prepare Exam

Send for making copies

return copies

start exam

write Answer

collect paper(time is over)

give for checking papers(solutions+papers)

return them

record marks

inform them