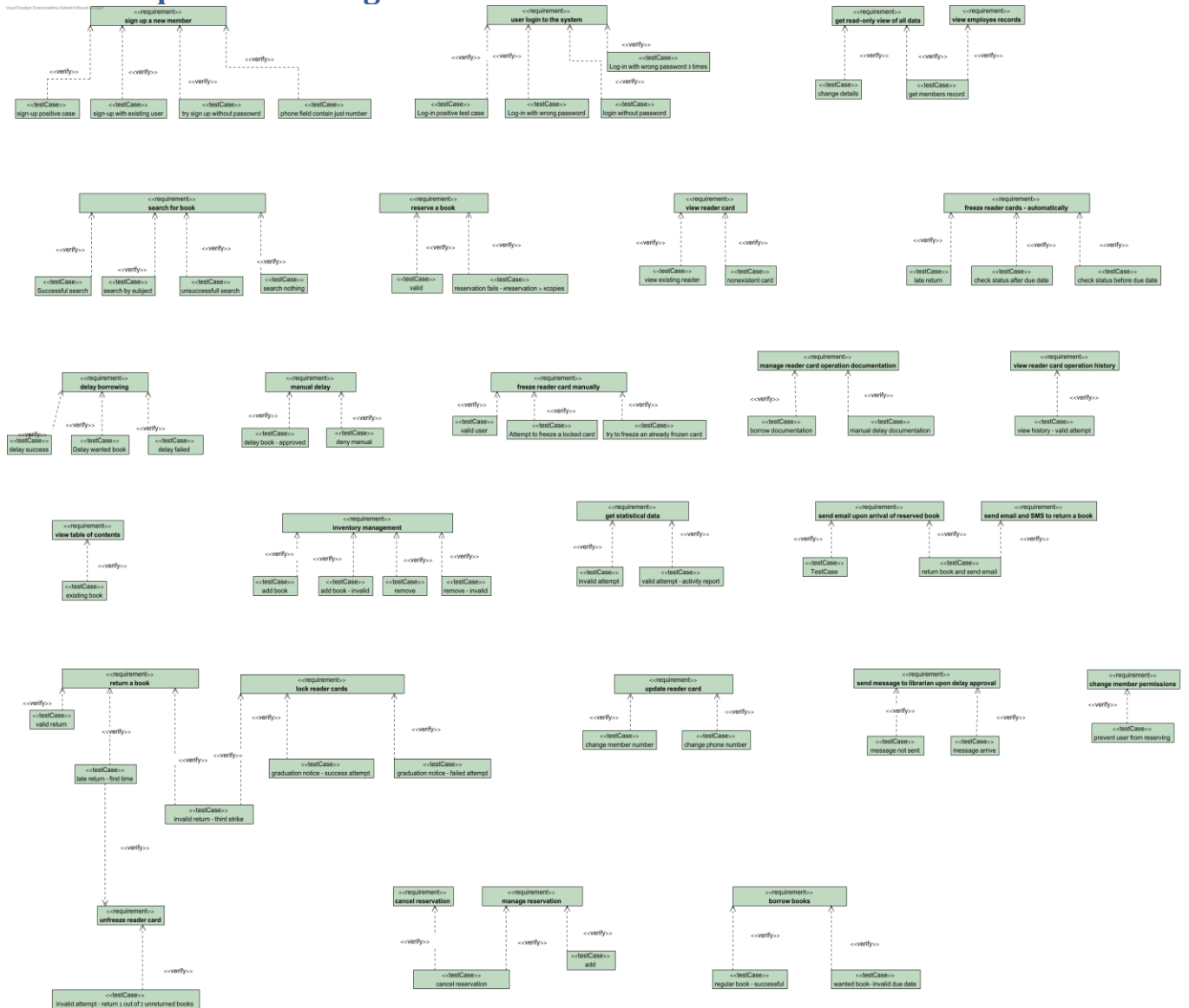


Group number 26

Name	ID	Email
Taimor fares	308137355	Fares.taimor@gmail.com
Miras Safadi	315891549	safadimiras@gmail.com
Rani Hassan	315060103	ranihassan8@gmail.com
Fares Jaraisy	208451682	jaraisy.fares@gmail.com
Date Of Submission	10/12/2018	

1. OBL Requirement Diagram



2. borrow books

ID: REQ10

librarians do the borrowing process must save the following data:

1. borrower ID
2. borrow date
3. due date

3. cancel reservation

ID: REQ18

automatically cancel after 2 days, or manually

4. change member permissions

ID: REQ15

5. delay borrowing

ID: REQ012

for "regular books", one week or less before due date
for "wanted books", cannot delay

send automatic response. in case of acceptance, send message to librarian.

6. freeze reader card manually

ID: REQ007

7. freeze reader cards - automatically

ID: REQ003

Library manager can do that.

It is done automatically when student graduates and still has books.

8. get read-only view of all data

ID: REQ027

data include: reader cards and employee list.

9. get statistical data

ID: REQ024

10. inventory management

ID: REQ022

each item in inventory is identified by:

title

author

publication

subject

brief summary

catalog number

number of copies

date of purchase

location on shelf

table on contents (in PDF format)

11. lock reader cards

ID: REQ005

done automatically when student graduates.

12. manage reader card operation documentation

ID: REQ021

13. manage reservation

ID: REQ014

limited to number of copies

14. manual delay

ID: REQ026

15. reserve a book

ID: REQ013

a member with an active reader card can do this granted all copies are borrowed.

16. return a book

ID: REQ019

17. search for book

ID: REQ008

search by:

1. book title
2. author(s)
3. subject
4. free text

getting search results

18. send email and SMS to return a book

ID: REQ011

one day before due date

19. send email upon arrival of reserved book

ID: REQ016

20. send message to librarian upon delay approval

ID: REQ006

21. sign up a new member

ID: REQ001

22. unfreeze reader card

ID: REQ020

23. update reader card

ID: REQ004

24. user login to the system

ID: REQ017

25. view employee records

ID: REQ002

26. view reader card

ID: REQ025

27. view reader card operation history

ID: REQ023

28. view table of contents




ID: REQ009

29. change details - memberships

29.1. Test Plans

Steps	Procedures	Expected Results
1. manager log in	type: username: 384763523 password:8374h3	system log in into library account and show options "view employee records", "view membership records"
2. view record	click on: "view membership records"	system shows membership records and enable just read-only
3. manager tries to change details	click on details	system doesn't allows to change details.

29.2. Relationships

Relationship	From	To
 unnamed	 change details - memberships	 get read-only view of all data




30. add book - invalid

30.1. Test Plans

Steps	Procedures	Expected Results
1. open manage inventory window	click home option "manage inventory"	system opens inventory management window
2. add book	click "add book"	system opens input prompt
3. fill details	input: - title: "Calculus 101" - author name: "Aviv Tsinzor" - publication: "Technion 156 1205" - subject: "Mathematics, Calculus, logic" - purchase date: 12/3/2020	system searches DB and finds out book doesn't exist. system validates all information are valid and validation fails. system displays "one or more of the information are invalid (date invalid)".

Steps	Procedures	Expected Results
	- location on shelf: I45.56 - upload table of contents file. click "save"	

30.2. Relationships

Relationship	From	To
 unnamed	 add book - invalid	 inventory management




31. check status after due date

reader has borrowed a book and didn't return it on time

31.1. Test Plans

Steps	Procedures	Expected Results
1. log in	wait until due date passes. input: username:315891549 password: 123456432	system displays reader card
2. check status	view reader card	system displays "frozen" status

31.2. Relationships

Relationship	From	To
 unnamed	 check status after due date	 freeze reader cards - automatically

32. cancel reservation

32.1. Test Plans

Steps	Procedures	Expected Results
1. user logs in after he receives a message upon arrival and views reservations	input credentials: user ID: 316798543 password: 12462458 click "view reservations"	system logs in, displays reader card and opens reservation list
2. cancel reservation	click "cancel reservation"	system removes user ID from reservation queue and sends message to next user in queue system displays "canceled successfully"
3. next user in queue receives message	system sends email message informing of book arrival	user ID 313798673 receives message

32.2. Relationships

Relationship	From	To
--------------	------	----




Relationship	From	To
 unnamed	 cancel reservation	 manage reservation
 unnamed	 cancel reservation	 cancel reservation

33. add book

33.1. Test Plans

Steps	Procedures	Expected Results
1. open manage inventory window	click home option "manage inventory"	system opens inventory management window
2. add book	click "add book"	system opens input prompt
3. fill details	input: - title: "Calculus 101" - author name: "Aviv Tsinzor" - publication: "Technion 156 2005" - subject: "Mathematics, Calculus, logic" - purchase date: 12/3/2006 - location on shelf: I45.56 - upload table of contents file. click "save"	system searches DB and finds out book doesn't exist. system validates all information are valid. system updates DB.

33.2. Relationships




Relationship	From	To
 unnamed	 add book	 inventory management

34. Attempt to freeze a locked card

34.1. Test Plans

Steps	Procedures	Expected Results
1. librarian manager view user name details	search and click in user ID : 847435797	system shows his details on the screen and show that card is locked. (no button to freeze)

34.2. Relationships

Relationship	From	To
 unnamed	 Attempt to freeze a locked card	 freeze reader card manually



35. delay book - approved

35.1. Test Plans

Steps	Procedures	Expected Results
1. show reader card	search and click on reader user	system open reader details

Steps	Procedures	Expected Results
	name : 384732890	
2. librarian change return date details	change the date from 12/5 to 15/5	system sees book is marked "regular", approves delay and updates the return date

35.2. Relationships




Relationship	From	To
 unnamed	 delay book - approved	 manual delay

36. change member number

36.1. Test Plans

Steps	Procedures	Expected Results
1. log in	User inputs: -user ID: 314567876 -password: 13465gt67	system logs into user with specified credentials
2. edit info	click "edit" option	system changes view to editable but keeps member number,status and history fields static

36.2. Relationships

Relationship	From	To
 unnamed	 change member number	 update reader card

37. add reservation




this test checks the order of reservations in the queue.

37.1. Test Plans

Steps	Procedures	Expected Results
1. search for a book	search for a book and open book details. (user ID: 316798543)	system displays search results and opens book details.
2. reserve it	click "reserve"	system adds reservation to head of queue
3. another user searches for the same book	search for a book and open book details. (user ID: 313798673)	system adds reservation to tail of queue
4. a copy arrived	librarian updates arrival	system sends email message to user ID 316798543 informing of book arrival.

37.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 add reservation	 manage reservation

38. change phone number

38.1. Test Plans

Steps	Procedures	Expected Results
1. log in	User inputs: -user ID: 314562354 -password: 13465434	system logs into user with specified credentials
2. edit info	click "edit" option	system changes view to editable but keeps member number,status and history fields static
3. change phone number	click on : phone label and update it from : 0522443361 to :0548770128	the new phone number is set into the lable
4. save	click:save	system update the DB with new phone number and changes view back to uneditable
5. verify	close reader card open it again validate changes have taken effect	system closes reader card and displays home page system opens reader card again and displays it with the new changes.

38.2. Relationships

Relationship	From	To
 unnamed	 change phone number	 update reader card




39. borrow documentation

39.1. Test Plans

Steps	Procedures	Expected Results
1. user borrow book	borrow book: get "Harry Potter and the philosophers' stone " book from the library and borrow it	system outputs to internal file: -user ID: 314556843 -borrow date: 23/12/18 -due date: 1/1/19 system updates DB.
2. get report	Library manger requests report	system fetches internal file from DB and uses information in file to generate report. system shows in report that user ID 314556843 borrowed a book on 23/12/18 and must return it

Steps	Procedures	Expected Results
		on 1/1/19.

39.2. Relationships

Relationship	From	To
 unnamed	 borrow documentation	 manage reader card operation documentation




40. check status before due date

reader has borrowed a book and didn't return it on time

40.1. Test Plans

Steps	Procedures	Expected Results
1. log in	input: username:315891549 password: 123456432	system displays reader card
2. check status	view reader card	system displays "active (unfrozen)" status

40.2. Relationships




Relationship	From	To
 unnamed	 check status before due date	 freeze reader cards - automatically

41. delay failed

41.1. Test Plans

Steps	Procedures	Expected Results
1. show borrowing book list in reader card	user click in the button: "show borrowed book"	system show borrowed books in window
2. choose wanted book that the return date is more than one week.	click on the book that he want to delay borrowing	system show details about the book without delay option it show "cant delay until the return date is less than one week"

41.2. Relationships

Relationship	From	To
 unnamed	 delay failed	 delay borrowing




42. delay success

42.1. Test Plans

Steps	Procedures	Expected Results
1. show borrowing book list in reader card	user click in the button: "show borrowed book"	system show borrowed books in window

Steps	Procedures	Expected Results
2. choose wanted book that the return date is less than one week.	click on the book that he want to delay borrowing	system show details about the book include delay option
3. applied delay	click on "delay" button	system show delay success and send message to the librarian . and show the new due date to return.

42.2. Relationships

Relationship	From	To
 unnamed	 delay success	 delay borrowing

43. Delay wanted book

43.1. Test Plans

Steps	Procedures	Expected Results
1. show borrowing book list in reader card	user click in the button: "show borrowed book"	system show borrowed books in window
2. choose a book marked as "wanted"	click "C PL for beginners" book	system shows details about the book without delay option and display "book marked 'wanted' cannot delay".

43.2. Relationships

Relationship	From	To
 unnamed	 Delay wanted book	 delay borrowing




44. deny manual delay

44.1. Test Plans

Steps	Procedures	Expected Results
1. show reader card	search and click on reader user name : 384732890	system open reader details
2. librarian change return date details	change the date from 12/5 to 15/5	system sees book is marked as wanted, denies delay and displays error message.

44.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 deny manual delay	 manual delay

45. existing book

45.1. Test Plans

Steps	Procedures	Expected Results
1. open search form and search for the wanted book	choose search via book name and enter book name : Fifty shades of gray	system show details about wanted book, and show "show table of content" button
2. view table of content	click on the button: "show table of content"	system open PDF file containing the table of content for Fifty shades of gray

45.2. Relationships







Relationship	From	To
 unnamed	 existing book	 view table of contents

46. get members record

46.1. Test Plans

Steps	Procedures	Expected Results
1. manager log in	type: username: 384763523 password: 8374h3	system log in into library account and show options "view employee records", "view membership records"
2. view record	click on : "view employee record"	system shows employee records and enables just read-only

46.2. Relationships

Relationship	From	To
 unnamed	 get members record	 view employee records
 unnamed	 get members record	 get read-only view of all data




47. graduation notice - failed attempt

47.1. Test Plans

Steps	Procedures	Expected Results
1. receive notice.	receive graduation notice from student management system.	system fetches reader card information from DB.
2. lock reader card.	lock reader card should it have any unreturned books.	system checks if reader card still has borrowed books and finds

Steps	Procedures	Expected Results
		<p>out that there are some unreturned books.</p> <p>system changes card status to 'frozen'.</p> <p>system updates DB.</p>

47.2. Relationships




Relationship	From	To
 unnamed	 graduation notice - failed attempt	 lock reader cards

48. graduation notice - success attempt

48.1. Test Plans

Steps	Procedures	Expected Results
1. receive notice.	receive graduation notice from student management system.	system fetches reader card information from DB.
2. lock reader card.	lock reader card should it have any unreturned books.	<p>system checks if reader card still has borrowed books and finds out that there is none.</p> <p>system changes card status to 'locked'.</p> <p>system updates DB.</p>

48.2. Relationships

Relationship	From	To
 unnamed	 graduation notice - success attempt	 lock reader cards

49. invalid attempt

only the library manager can do that.

49.1. Test Plans

Steps	Procedures	Expected Results
1. generate report	click home option "generate report"	<p>system checks if logged in user is defined as manager and finds out it's not.</p> <p>system displays error message.</p>

49.2. Relationships

Relationship	From	To
--------------	------	----




Relationship	From	To
 unnamed	 invalid attempt	 get statistical data

50. invalid attempt - return 1 out of 2 unreturned books

50.1. Test Plans

Steps	Procedures	Expected Results
1. return book	librarian goes through return process	system commits return process procedures.
2. unfreeze	unfreeze reader card	system checks unreturned books. system finds out there are still unreturned books
3. fail	fail to unfreeze	system doesn't change reader card status

50.2. Relationships

Relationship	From	To
 unnamed	 invalid attempt - return 1 out of 2 unreturned books	 unfreeze reader card

51. invalid return - third strike

51.1. Test Plans

Steps	Procedures	Expected Results
1. Librarian opens return interface	click home option "return book"	system opens "return book" window
2. Librarian searches for member using ID	Input 315891549 in search field	system opens members' reader card window
3. Librarian searches for borrowed book in members' list of borrowed books	Input: - book id: 72345-12 enter: search	System displays a table view containing search results
4. Librarian returns book	click "return" button	system validates due date hasn't passed and finds out due date has passed. system checks number of strikes and finds out it's the 3rd strike. system removes book from reader card and displays "reader card locked, please see Management" system updates DB.

51.2. Relationships

Relationship	From	To
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
Relationship	From	To
←V→ unnamed	 invalid return - third strike	 return a book
←V→ unnamed	 invalid return - third strike	 lock reader cards

52. late return

52.1. Test Plans

Steps	Procedures	Expected Results
1. late return	wait until the return date pass	system validates due date has passed and freezes his card and disable borrowing and reserving.
2. borrow book	get a book from library and ask for borrowing	reader card state is freeze and system disallowed him to borrow
3. search for a book	input "Linear Algebra 2" in search bar	system allows search and displays search results
4. reserve book	input "Calculus 103" in search bar open book details click reserve	system allows search and displays search results reader card is frozen system disallows reservation.

52.2. Relationships



Relationship	From	To
←V→ unnamed	 late return	 freeze reader cards - automatically

53. late return - first time

53.1. Test Plans

Steps	Procedures	Expected Results
1. Librarian opens return interface	click home option "return book"	system opens "return book" window
2. Librarian searches for member using ID	Input 315891549 in search field	system opens members' reader card window
3. Librarian searches for borrowed book in members' list of borrowed books	Input: - book id: 72345-12 enter: search	System displays a table view containing search results
4. Librarian returns book	click "return" button	system validates due date hasn't passed and finds out due date has passed. system removes book from reader card. system updates DB.
5. unfreeze	unfreeze card	system changes reader card to "active"

53.2. Relationships

Relationship	From	To
 unnamed	 late return - first time	 unfreeze reader card
 unnamed	 late return - first time	 return a book

54. Log-in positive test case

54.1. Test Plans

Steps	Procedures	Expected Results
1. open Log in form	Enter: home option Log-in	system open Log in form
2. enter data of member existing in DB	Enter: - user name: 315060103 - password: 123456789 Enter: save	system check that's there is existing member with the supplied user name in the DB, and prompts for logging in
3. logging in to the system	enter: Log in	system check the password is valid, and then open application home page

54.2. Relationships

Relationship	From	To
 unnamed	 Log-in positive test case	 user login to the system




55. Log-in with wrong password

55.1. Test Plans

Steps	Procedures	Expected Results
1. open Log in form	Enter: home option Log-in	system open Log in form
2. enter data of member existing in DB	Enter: - user name: 315060103 - password: 1234567890 Enter: save	system check that's there is existing member with the supplied user name in the DB, and prompts for logging in
3. logging in to the system	enter: Log in	system check the password is invalid, then show error message "wrong password", and show "forgot your password" and "reset password" buttons

55.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 Log-in with wrong password	 user login to the system

56. Log-in with wrong password 3 times

56.1. Test Plans

Steps	Procedures	Expected Results
1. open Log in form	Enter: home option Log-in	system open Log in form
2. enter data of member existing in DB	Enter: - user name: 315060103 - password: 1234567890 Enter: save	system checks that's there is existing member with the supplied user name in the DB, and prompts for logging in
3. logging in to the system	enter: Log in	system checks the password is invalid, then show error message "wrong password", and show "forgot tour password" and "reset password" buttons and delete the password from the password label
4. re-enter password	enter: - password: 12345678	system checks the password is invalid and show error message "wrong password" and show "forgot tour password" and "reset password"
5. re-enter password	enter: - password: 1234567	system checks the password is invalid and show message "your account blocked, to reset your password enter: reset password", and show just "reset password" button

56.2. Relationships

Relationship	From	To
 unnamed	 Log-in with wrong password 3 times	 user login to the system




57. login without password

57.1. Test Plans

Steps	Procedures	Expected Results
1. open Log in form	Enter: home option Log-in	system open Log in form
2. enter data of member existing in DB	Enter: - user name: 308674563 - password: Enter: save	system show "you must fill the password field"

Steps	Procedures	Expected Results
3. user fill the password fiels	- password:987654321 Enter: save	system check that's there is existing member with the supplied user name in the DB, and prompts for logging in
4. logging in to the system	enter: Log in	system check the password is valid, and then open application home page

57.2. Relationships




Relationship	From	To
 unnamed	 login without password	 user login to the system

58. manual delay documentation

58.1. Test Plans

Steps	Procedures	Expected Results
1. manually delay a due date	librarian opens reader card of user ID 314567875 updates due date of book "Pinocchio" from 1/1/19 to 8/1/19 click "save"	system displays success message. system outputs to internal file: Librarian name: Joey Tribbiani Date: 28/12/18
2. get report	Library manger requests report	system fetches internal file from DB and uses information in file to generate report. system shows in report that librarian Joey Tribbiani manually delayed a book on 28/12/18

58.2. Relationships




Relationship	From	To
 unnamed	 manual delay documentation	 manage reader card operation documentation

59. message arrive

59.1. Test Plans

Steps	Procedures	Expected Results
1. member 293874652 open borrowed list	click : "borrowed list"	system open book list that user:293874652 has borrowed
2. delay book	user click on "Harry Potter" book (regular book and there are no request on it) and ask for delay	system show "delay success" and send message to the librarian.

59.2. Relationships




Relationship	From	To
 unnamed	 message arrive	 send message to librarian upon delay approval

60. message not sent

60.1. Test Plans

Steps	Procedures	Expected Results
1. member 293874652 open borrowed list	click : "borrowed list"	system open book list that user:293874652 has borrowed
2. delay book	user click on "story of my life" book(not regular book) and ask for delay	system show "delay fail" and no message sent to the librarian.

60.2. Relationships




Relationship	From	To
 unnamed	 message not sent	 send message to librarian upon delay approval

61. nonexistent card

61.1. Test Plans

Steps	Procedures	Expected Results
1. librarian search for member card	type user ID in search box: 338373689	system show "user not found"

61.2. Relationships

Relationship	From	To
 unnamed	 nonexistent card	 view reader card



62. phone field contain just number

62.1. Test Plans

Steps	Procedures	Expected Results
1. open sign up form	Enter: home option "sign-up"	system open registration form
2. enter data of user existing in DB	Enter: - mID: 308476352 - mName: leonardo dicaprio - phone number: 073nf3432i3 - email: alves.dani@gmail.com - password: Enter: save	system show "phone number must contain just numbers please re-enter phone number"
3. user change phone number field	from: 073nf3432i3 to:0588336672	system check that's there is no existing member with the

Steps	Procedures	Expected Results
	Enter: save	supplied user name in the DB, and prompts for confirmations
4. confirm creation of new member	enter: confirm	system generate random number for membership number, and initialize the user name to be member ID [membership number: "random number"] [user name: 308476352] and system create new reader card and updates its DB accordingly

62.2. Relationships



Relationship	From	To
unnamed	 phone field contain just number	 sign up a new member

63. prevent user from reserving

63.1. Test Plans

Steps	Procedures	Expected Results
1. open reader card	library manager views reader card for user ID 308137355	system opens corresponding reader card
2. change permission	library manager prevents user from reserving books	system updates DB
3. attempt to reserve	user logs in to system. user searches for a book and clicks "reserve"	system opens reader card. system displays error message.

63.2. Relationships

Relationship	From	To
unnamed	 prevent user from reserving	 change member permissions




64. regular book - successful

64.1. Test Plans

Steps	Procedures	Expected Results
1. open borrow window	enter: home borrow book	system open borrow book form
2. enter user name of existing member in DB	enter: - user name: 315891549 enter: save	system search for this existing member in the DB and show his reader card.
3. borrow a regular book	enter: borrow button	system search for this existing

Steps	Procedures	Expected Results
	fill a form: - book name: act like a lady think like a man - book id: 73819-10 enter: save	book in the DB and check the user status is valid to borrow
4. update borrowing period	enter: - borrowing date: 05/12/2018 - due date: 19/12/2018 enter: save	system checks that the book is regular book, and updates the DB and the reader card accordingly (save the name of the Librarian and the date of borrowing and the due date), and show message "borrowed successfully" (status of this specific copy updated to 'borrowed').

64.2. Relationships

Relationship	From	To
 unnamed	 regular book - successful	 borrow books

65. remove

65.1. Test Plans

Steps	Procedures	Expected Results
1. open manage inventory window	click home option "manage inventory"	system opens inventory management window
2. remove book	click "remove book"	system opens input prompt.
3. fill details	input: - title: "Calculus 101" - author name: "Aviv Tsinzor" - publication: "Technion 156 2005" - subject: "Mathematics, Calculus, logic" - purchase date: 12/3/2006 - location on shelf: I45.56 click "search"	system searches DB and fetches book. system opens book details.
4. remove	click "remove"	system removes book and updates DB.

65.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 remove	 inventory management

66. remove - invalid

66.1. Test Plans

Steps	Procedures	Expected Results
1. open manage inventory window	click home option "manage inventory"	system opens inventory management window
2. remove book	click "remove book"	system opens input prompt.
3. fill details	input: - title: "Calculus 101" - author name: "Aviv Tsinzor" - publication: "Technion 156 2005" - subject: "Mathematics, Calculus, logic" - purchase date: 12/3/2006 - location on shelf: I45.56 click "search"	system searches DB and doesn't find book. system displays error message.

66.2. Relationships

Relationship	From	To
 unnamed	 remove - invalid	 inventory management

67. reservation fails - #reservation > #copies

67.1. Test Plans

Steps	Procedures	Expected Results
1. open reservation window	enter: reserve book	system open reserve book form
2. enter user name of existing member in DB	enter: - user name: 315891432 enter: save	system search for this existing member in the DB and show his reader card.
3. ask for reserve a book for which number of reservations is greater than number of copies	enter: reserve button fill a form: - book name: Pinocchio - book id: 73349-16 enter: save	system search for this existing book in the DB and show the user status mode is "active" to reserve a book but system show that number of copies is less than number of reservation and there is no "reserve" button

67.2. Relationships

Relationship	From	To
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





Relationship	From	To
 unnamed	 reservation fails - #reservation > #copies	 reserve a book

68. return book and send email

68.1. Test Plans

Steps	Procedures	Expected Results
1. due date approaches	user ID 302479020 receives notice to return book	system sends user email and SMS reminder to return book on time
2. book returned	user returns book. librarian updates system	system checks who's next in reservation queue. system sends email to first in queue to inform him of book arrival.

68.2. Relationships

Relationship	From	To
 unnamed	 return book and send email	 send email upon arrival of reserved book
 unnamed	 return book and send email	 send email and SMS to return a book




69. search by subject

69.1. Test Plans

Steps	Procedures	Expected Results
1. open search form	click "search for a book" home option	system opens search window
2. select search by subject	click filter option "subject"	check box is selected
3. type required subject	input "mathematics" in search bar	String "mathematics" appears in search bar
4. search	click "search"	system fetches search results from DB and displays them. search results would include: "Linear Algebra 101", "Calculus 101", "Calculus 102", "Calculus 103", "Linear Algebra 102" and other mathematics related books.

69.2. Relationships

Relationship	From	To
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Relationship	From	To
 unnamed	 search by subject	 search for book




70. search nothing

If you entered nothing and just clicked search, nothing should occur.

70.1. Test Plans

Steps	Procedures	Expected Results
1. open search form	choose search via book name	system sets to search according generally
2. enter nothing	Enter:	system show nothing in the searching label
3. search for a book	click search	nothing should occur

70.2. Relationships

Relationship	From	To
 unnamed	 search nothing	 search for book

71. sign-up positive case

71.1. Test Plans

Steps	Procedures	Expected Results
1. open sign up form	Enter: home option "sign-up"	system open registration form
2. enter data of member not existing in DB	Enter: - mID: 308137355 - mName: Taimor Fares - phone number: 0507841742 - email: fares.taimor@gmail.com - password: 654321 Enter: save	system check that's there is no existing member with the supplied user name in the DB, and prompts for confirmations
3. confirm creation of new member	enter: confirm	system generate random number for membership number, and initialize the user name to be member ID [membership number: "random number"] [user name: 308137355] and system create new reader card and updates its DB accordingly

71.2. Relationships

Relationship	From	To
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Relationship	From	To
 unnamed	 sign-up positive case	 sign up a new member

72. sign-up with existing user

72.1. Test Plans

Steps	Procedures	Expected Results
1. open sign up form	Enter: home option "sign-up"	system open registration form
2. enter data of user existing in DB	Enter: - mID: 208451682 - mName: Fares Jaraisy - phone number: 0522443361 - email: jaraisy.fares@gmail.com - password: 123456 Enter: save	system check that's there is existing member with the supplied user name (user name= mID) in the DB.
3. submit the form	click the submit button	system return error message "member already exist"

72.2. Relationships




Relationship	From	To
 unnamed	 sign-up with existing user	 sign up a new member

73. Successful search

73.1. Test Plans

Steps	Procedures	Expected Results
1. open search form	choose search via book name	system sets to search according to book name, and show appropriate search book label
2. enter book name existing in DB	Enter: - book name: fifty shades of gray	system show the book name in the searching label
3. search for a book	click search	system search for the book in the DB, and return appropriate message contain his book place in the library



73.2. Relationships

Relationship	From	To
 unnamed	 Successful search	 search for book

74. TestCase

74.1. Relationships

Relationship	From	To
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Relationship	From	To
unnamed	 TestCase	 send email upon arrival of reserved book

75. try sign up without passowrd

75.1. Test Plans

Steps	Procedures	Expected Results
1. open sign up form	Enter: home option "sign-up"	system open registration form
2. enter data of user existing in DB	Enter: - mID: 837483948 - mName: dani alves - phone number: 0566885594 - email: alves.dani@gmail.com - password: Enter: save	system show "you must add a password"
3. user fill password field	password: 93849384 Enter: save	system check that's there is no existing member with the supplied user name in the DB, and prompts for confirmations
4. confirm creation of new member	enter: confirm	system generate random number for membership number, and initialize the user name to be member ID [membership number: "random number"] [user name: 837483948] and system create new reader card and updates its DB accordingly

75.2. Relationships

Relationship	From	To
unnamed	 try sign up without passowrd	 sign up a new member




76. try to freeze an already frozen card

76.1. Test Plans

Steps	Procedures	Expected Results
1. librarian manager view user name details	search and click in user ID : 847435797	system shows his details on the screen and show that card already frozen. (no button to freeze again)

76.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 try to freeze an already frozen card	 freeze reader card manually

77. unsuccessfull search

77.1. Test Plans

Steps	Procedures	Expected Results
1. open search form	choose search via book name	system sets to search according to book name, and show appropriate search book label
2. enter book name not existing in DB	Enter: - book name: fifty grays of shades	system show the book name in the searching label
3. search for a book	click search	system search for the book in the DB, and return appropriate message contain "this book doesn't exists"

77.2. Relationships

Relationship	From	To
 unnamed	 unsuccessfull search	 search for book

78. valid attempt - activity report

78.1. Test Plans

Steps	Procedures	Expected Results
1. generate report	click home option "generate report"	system checks if logged in user is defined as management and finds out it is. system opens report generator window
2. select template	click "activity report"	system displays prompt
3. fill input fields	input - from date: 1/11/18 - to date: 30/11/18 click "generate"	system fetches relevant data from DB. system calculates required data and outputs in a new file. system displays file.
4. view file and close	click "close"	system saves file in DB and exits.

78.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 valid attempt - activity report	 get statistical data

79. valid reservation

79.1. Test Plans

Steps	Procedures	Expected Results
1. open reservation window	enter: reserve book	system open reserve book form
2. enter user name of existing member in DB	enter: - user name: 315891549 enter: save	system search for this existing member in the DB and show his reader card.
3. ask for reservation	enter: reserve button fill a form: - book name: batman - book id: 73349-10 enter: save	system search for this existing book in the DB and show the user status mode is "active" and show that the number of readers that reserve the book is less than number of copies.
4. applied reservation	click submit	system show that the reservation succeeded. and set the member in the tail of reservation queue.

79.2. Relationships

Relationship	From	To
 unnamed	 valid reservation	 reserve a book




80. valid return

80.1. Test Plans

Steps	Procedures	Expected Results
1. Librarian opens return interface	click home option "return book"	system opens "return book" window
2. Librarian searches for member using ID	Input 315891549 in search field	system opens members' reader card window
3. Librarian searches for borrowed book in members' list of borrowed books	Input: - book id: 72345-12 enter: search	System displays a table view containing search results
4. Librarian returns book	click "return" button	system validates due date hasn't passed. system updates DB. system displays success message.

80.2. Relationships

Relationship	From	To
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


Relationship	From	To
 unnamed	 valid return	 return a book

81. valid user

81.1. Test Plans

Steps	Procedures	Expected Results
1. library manager view user name details	search and click in user ID: 847432354	system shows his details on the screen
2. freeze card	click on freeze button	system freeze his card and change his status card to "frozen" and show "card frozen successfully"

81.2. Relationships




Relationship	From	To
 unnamed	 valid user	 freeze reader card manually

82. view existing reader card

82.1. Test Plans

Steps	Procedures	Expected Results
1. librarian search for member card	type user ID in search box: 205337483	system shows user ID and an option to click the name to show his details
2. show view	click the name	system opens a window to show his details

82.2. Relationships




Relationship	From	To
 unnamed	 view existing reader card	 view reader card

83. view history - valid attempt

83.1. Test Plans

Steps	Procedures	Expected Results
1. login	User inputs: -user ID: 314567876 -password: 13465gt67	system logs into user with specified credentials
2. view history	click "view history"	system displays table view with operation history

83.2. Relationships




Relationship	From	To
 unnamed	 view history - valid attempt	 view reader card operation history

84. wanted book- invalid due date

84.1. Test Plans

Steps	Procedures	Expected Results
1. open borrow window	enter: home borrow book	system open borrow book form
2. enter user name of existing member in DB	enter: - user name: 315891549 enter: save	system search for this existing member in the DB and show his reader card.
3. borrow a wanted book	enter: borrow button fill a form: - book name: Harry potter - book id: 73999-18	system search for this existing book in the DB and check the user status is valid to borrow
4. update borrowing period	enter: - borrowing date: 05/12/2018 - due date: 10/12/2018 enter: save	system checks that the book is wanted book, and show message "this is a wanted book, you can borrow it for just three days", and set the due date automatic for three days

84.2. Relationships

Relationship	From	To
 unnamed	 wanted book- invalid due date	 borrow books