

به نام خدا

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تمامی فعالیت ها در بستر گوگل میت و همزمان توسط دو نفر انجام شده است .
نام پروژه: سیستم رزرواسیون بلیط هواپیما

*****سیستم رزرواسیون بلیط هواپیما*****

نیازسنجی ها :

امروزه که دنیا به سمت الکترونیکی شدن پیش می رود تمام شرکت ها و آژانس هایی که خدمتی ارائه می دهند یا کالایی می فروشند به این فکر افتاده اند که کار خود را الکترونیکی کنند و آژانس های هواپیمایی نیز از این قاعده مستثنی نیستند.

امروزه ما به سامانه هایی نیاز داریم که مردم بتوانند از طریق آن ، پرواز های موجود بین هر دو شهر در هر زمان را مشاهده کنند و برای خود و دیگران بلیط هواپیما تهیه کنند ، به علاوه کاربران نیاز داشتند که بتوانند لیستی از خرید های قبلی خود را نیز در دسترس داشته باشند.

توضیحات تفصیلی نیازسنجی ها :

(۱) مشاهده بلیط های هوایی با مشخصات داده شده :

بدین ترتیب که زمان، مبدأ و مقصد پرواز به سامانه داده می شود و سامانه ما اطلاعات را از سامانه سراسری پرواز ها گرفته و به کاربر نمایش می دهد

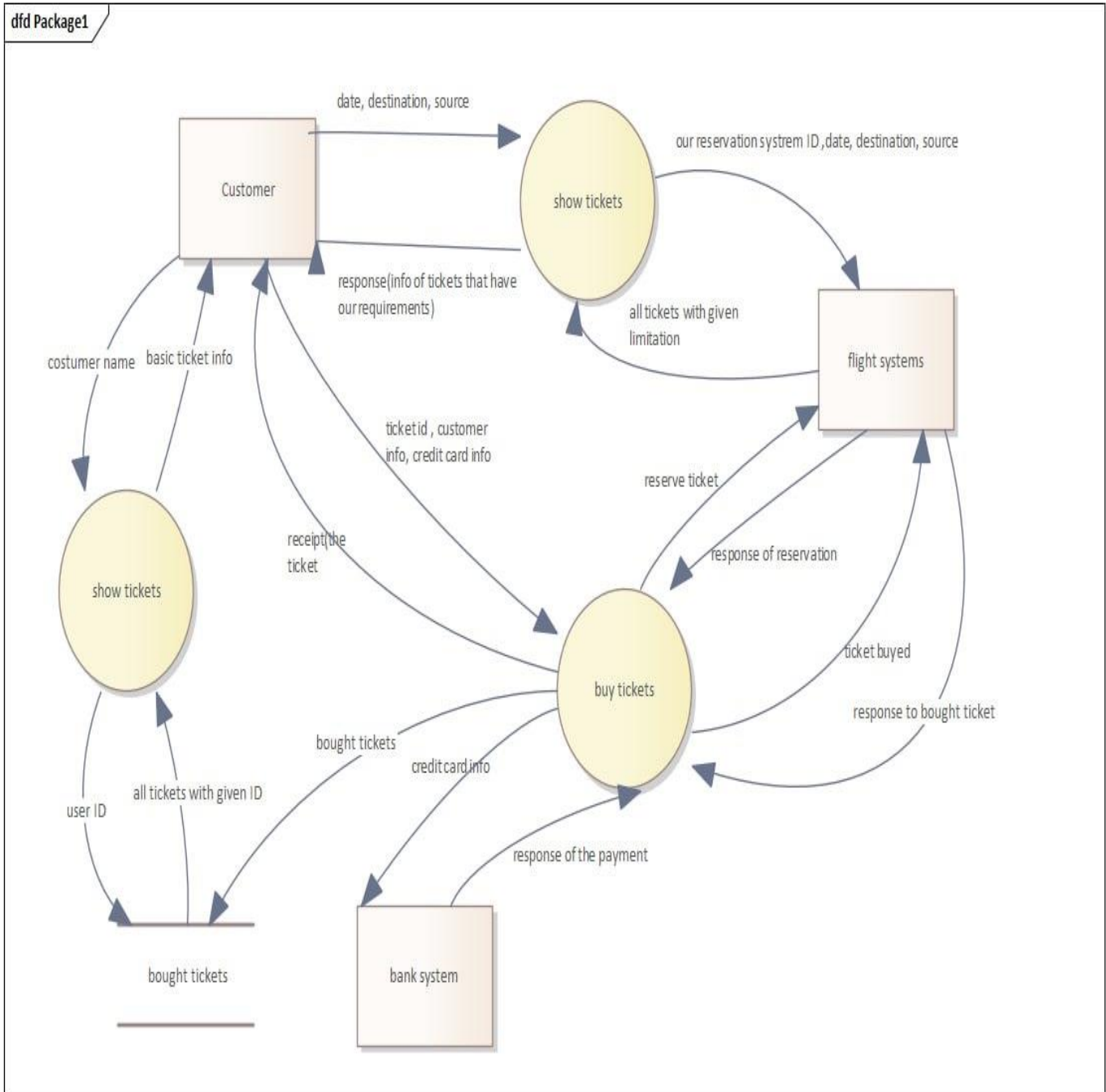
(۲) خرید بلیط :

بدین صورت که کاربر آیدی بلیط و اطلاعات مسافر خود و اطلاعات کارت بانکی را به سامانه ما ارسال نموده سپس سامانه ما بلیط را در سامانه سراسری پرواز ها رزرو می کند (تا شخص دیگری نتواند آن بلیط را خریداری نماید) سپس اطلاعات کارت کاربر به سامانه پرداخت وارد می شود و پرداخت آن توسط بانک تایید شده در نهایت خرید بلیط در سامانه سراسری پرواز ها نهایی می شود، اطلاعات بلیط خریداری شده در سامانه ذخیره شده و یک رسید از بلیط برای کاربر ارسال می گردد.

(۳) مشاهده خرید های قبلی :

به نیت در دسترس داشتن آنلاین اطلاعات بلیط های خریداری شده، کاربر می تواند پس از ورود به سامانه ، اطلاعات خرید های قبلی خود را مشاهده نماید

DFD level 1:



Vision:

Problem Statement: We saw that there is a lack of flight reservation that has all the features necessary for easy and fast reservation of flight tickets, so we are making one.

Stakeholder Description: Air lines, and we also own the project because it's a startup.

Key High-Level Goals: To have a complete system for reserving flights, that will also help to boost the sales of tickets for the airlines.

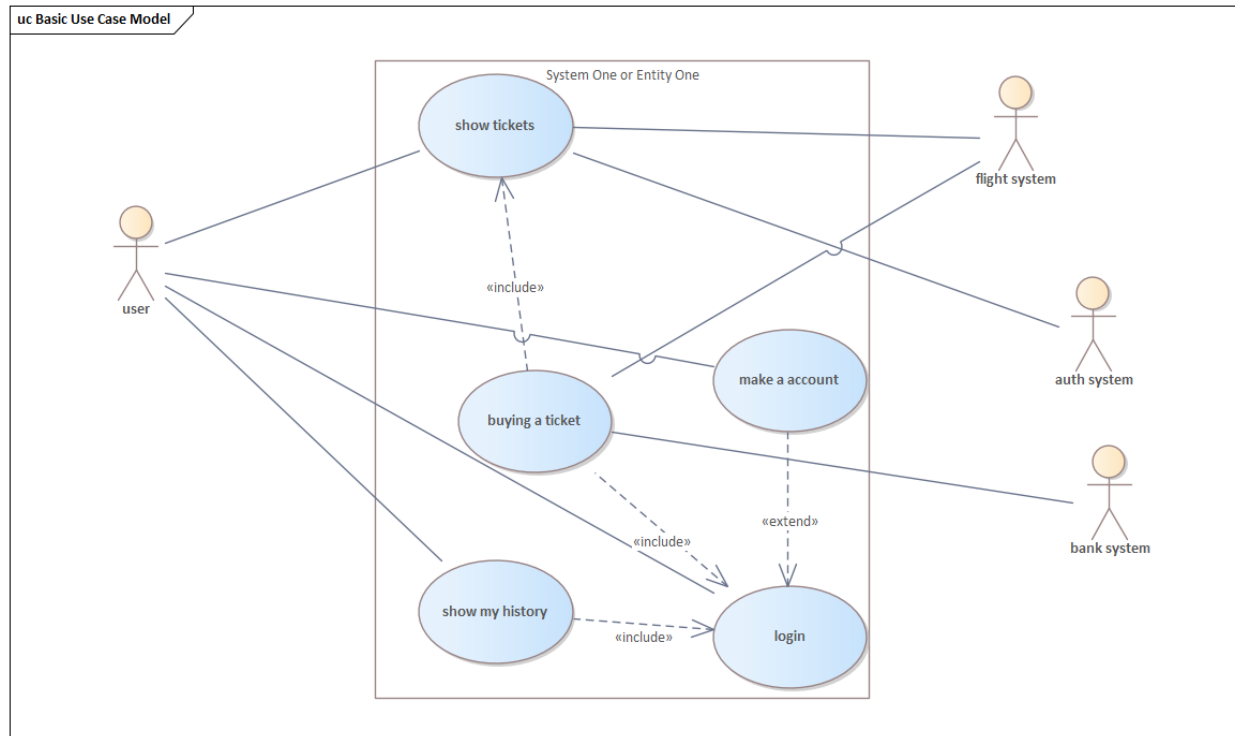
System Context Diagram: *in the zip file

Functional Features: in our system we have:

- A login and account making
- Seeing all the flights with users limitations
- Buying a ticket the ticket for the given flight
- Seeing the history of all tickets the user has bought

Non-functional Features: Our system has Reliability, Availability, Portability, Performance , Usability, Extendibility, Reusability.

Use case Model:



Show ticket scenario:

Step	Action	Uses
1	a person enter our system	
2	the system shows him a menu	
3	they choose source,destination , date of their choosing	
4	get the tickets that have the specific requirement from the <u>flight system</u>	
5	shows the tickets that have the specific requirement to the person	
	new step...	

Entry Points	Context References	Constraints	
Step	Path Name	Type	Join
0	Basic Path	Basic Path	-
5a	there is no flight for your requirement	Exception	4

Buy ticket scenario:

Step	Action	Uses	Join
1	the user completes the show tickets scenario		
2	user choose one of the flights that are shown to them		
3	user completes the login scenario		
4	show the passenger menu to the user		
5	user fills the menu(customers info,number of them and type of them)		
6	the system reserves the tickets for the user in the flight system		
7	the system shows the card info menu to the user		
8	the user fills the card info menu		
9	the system check and process the payment with the bank system		
10	the system change the status of the ticket in flight system to bought		
11	the system send the receipt(the ticket itself) of the flight to the user		
12	the system saves the ticket and its information in "bought tickets" database		






Step	Path Name	Type	Join
0	Basic Path	Basic Path	-
2a	user wants to change the source,destination , date	Exception	4
2b	the user is already logged in the system	Alternate	4
5a	the user ticket is international and we also need his passport info	Alternate	6
6a	the user have not completed all the info need for buying ticket	Exception	5
6b	there is not enough seats for the amount of passenger user has chosen	Exception	5
9a	the payment is unsuccessful(the time limit exceeded or not enough money in the card)	Exception	1
9b	wrong card info	Exception	8
11a	the user wants to download the ticket	Alternate	12

Make account scenario:

Step	Action	Uses	Join
1	show the account making menu		
2	user enters their username, password, retype password, phone number		
3	the system makes an account with the given information		
4	the system send a code number to authentication system so that the auth system send the code to the user phone number.		
5	show the code entering page		
6	user enters the number that is sent their phone		
7	we show the user that the account was successfully made.		
8	we save the user account in the ' user accounts' database		





Step	Path Name	Type	Join
0	Basic Path	Basic Path	-
3a	the username was taken(the system checks the 'user accounts' database)	Exception	2
3b	the password doesn't follow our required pattern	Exception	2
3c	the phone number is not valid	Exception	2
6a	after 1 min and less than 3 min the codes is not sent to the phone number	Exception	4
7a	the code is wrong	Exception	6
7b	the user didnot enter the code till 3 min	Exception	2
7c	user never verified the phone number	Exception	End

Login scenario:

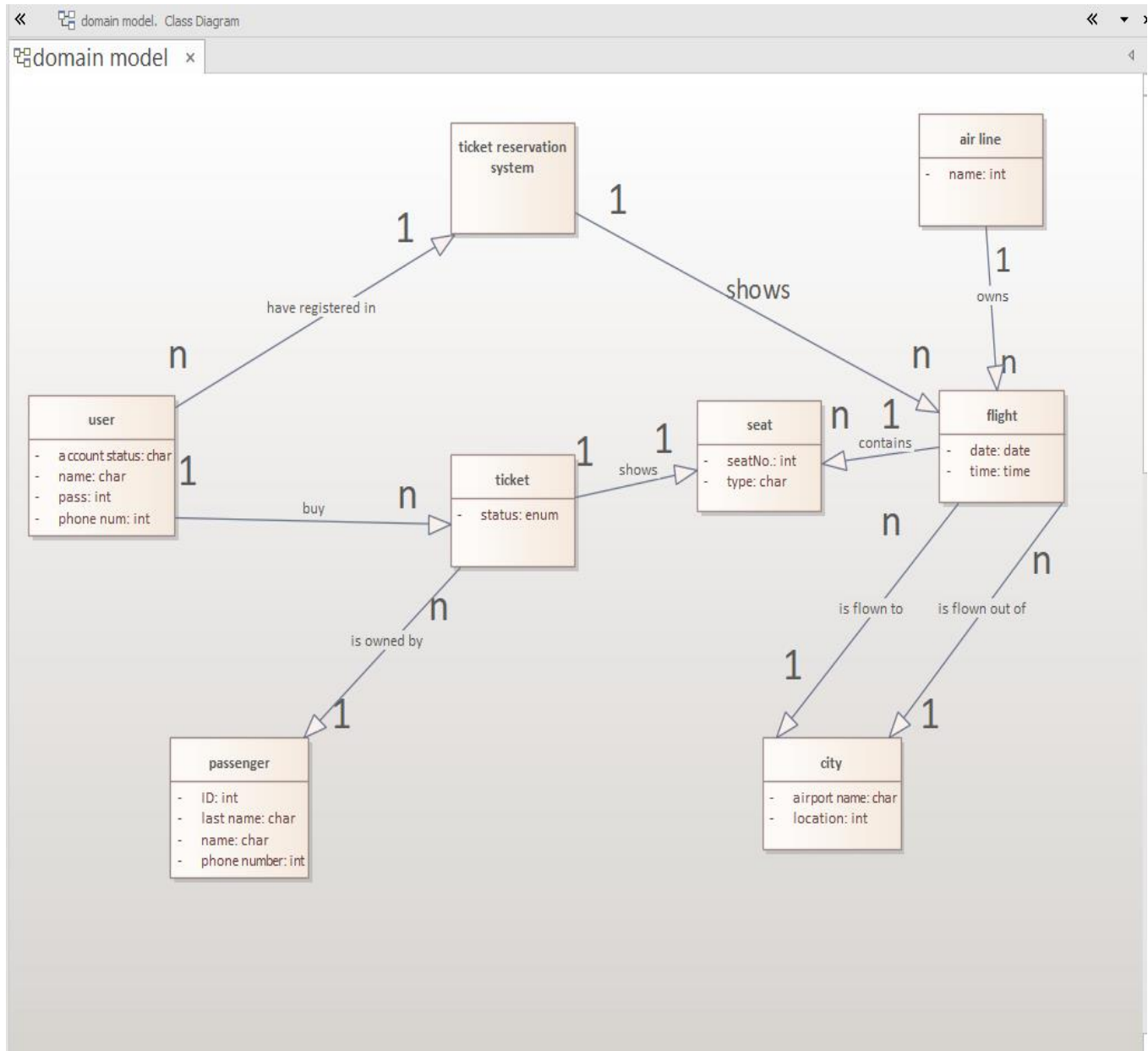
Step			Action	Uses
	1		the system show the login menu to the user	
	2		the user enters the username and password	
	3		the system checks the the above in the ' user accounts' database	
	4		the system logs the user in the system	
			<i>new step...</i>	

Entry Points				Context References	Constraints
Step	Path Name	Type	Join		
0	Basic Path	Basic Path	-		
1a	user doesnot have an account	Alternate	4		
3a	wrong info	Exception	2		

Show history scenario:

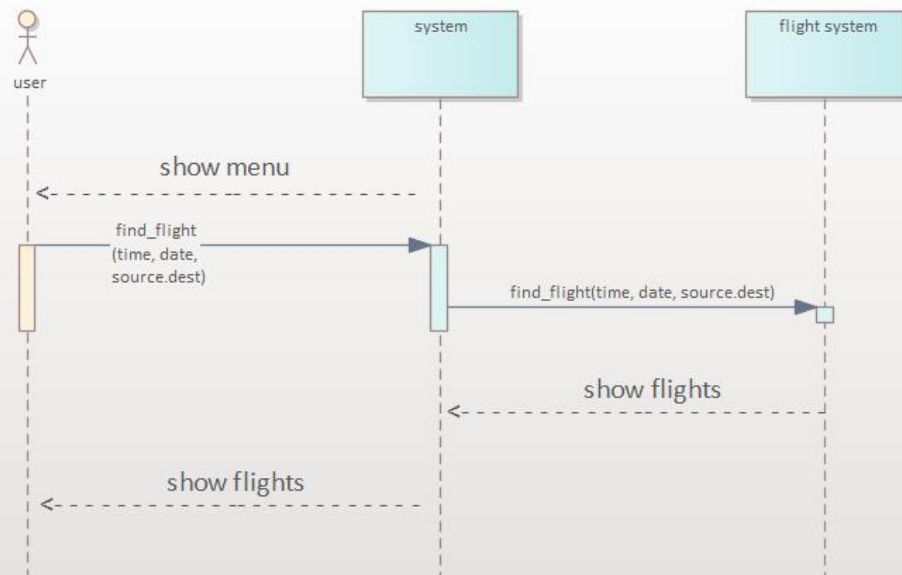
Step			Action	Uses
	1		user completes the login scenario	
	2		user choose the show my history button	
	3		the system show them all the info s of his tickets	
			<i>new step...</i>	

Domain model:

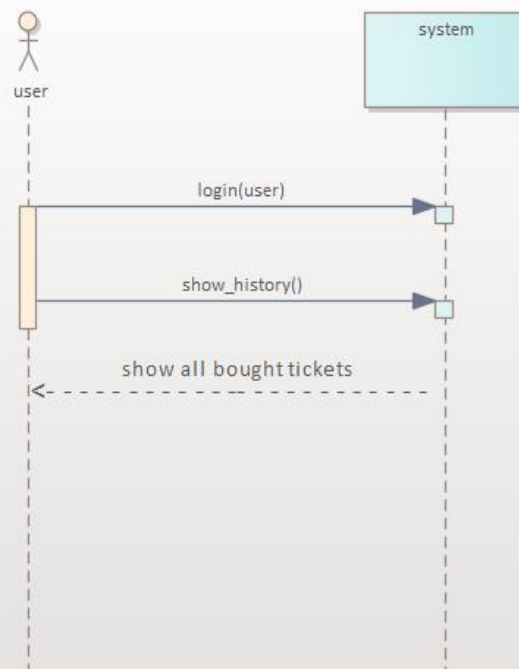


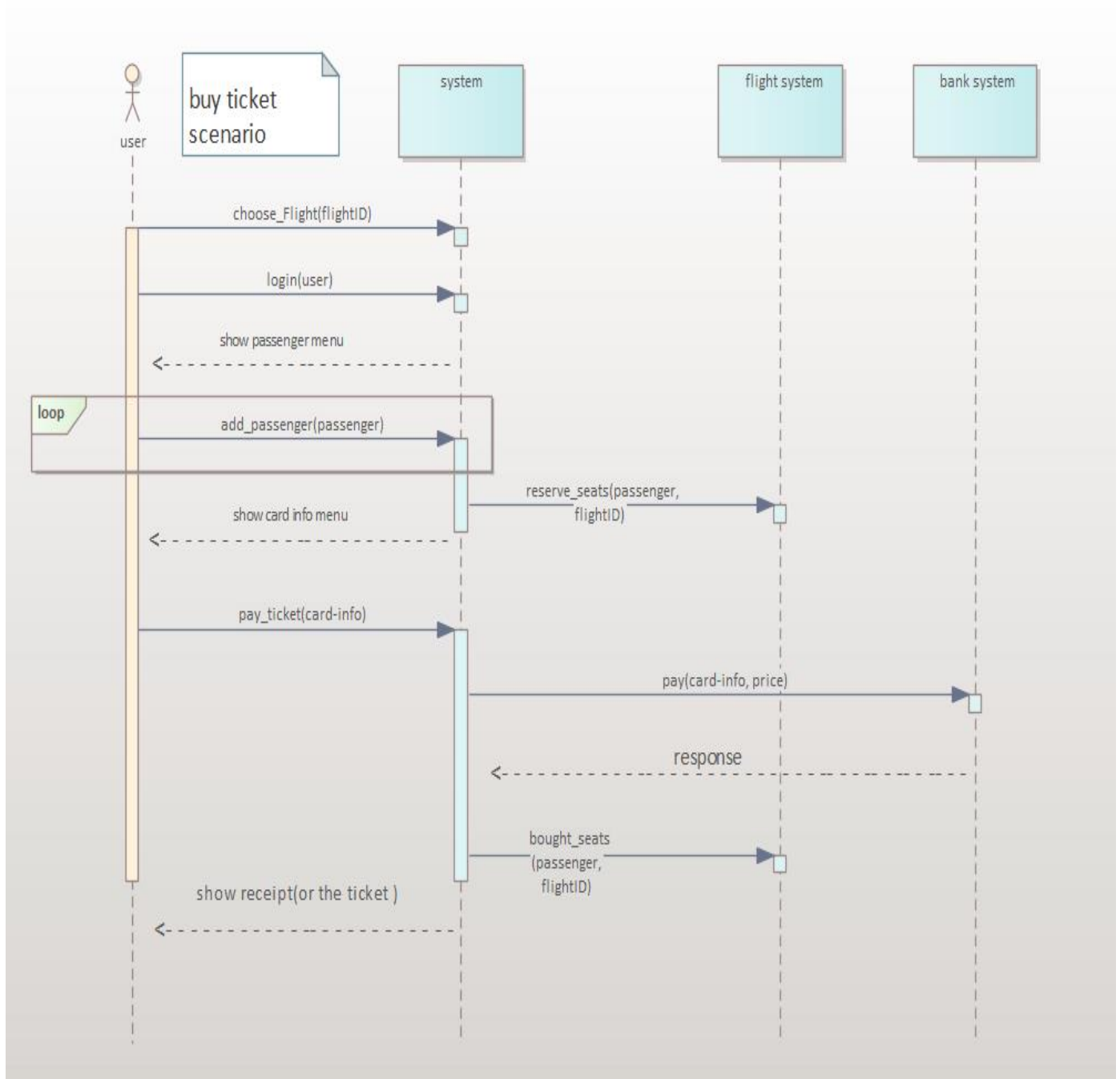
SSD's for scenarios:

show ticket
scenario

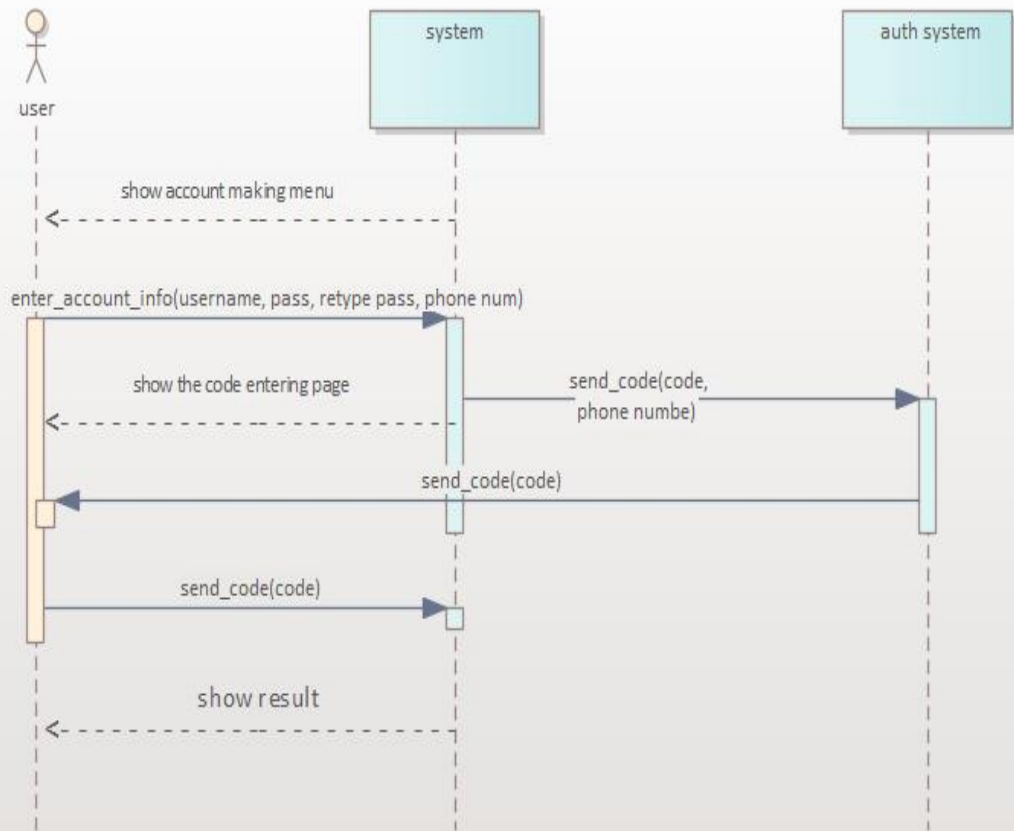


show history
scenario

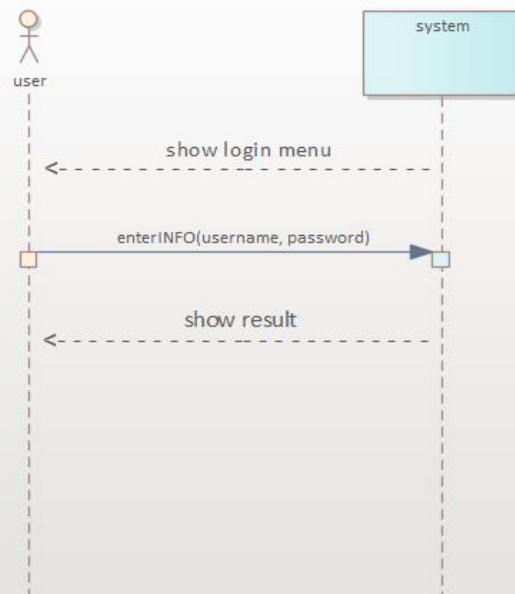




make account
scenario



login scenario



Operation contracts:

Show ticket scenario:

1. Find_flight(time , date, source , destination):

Post condition:

- Instance of F of 'flight' was created.
- F was associated with 'trs.

Pre condition:

- trs of 'ticket reservation system' exists.

Buy ticket scenario:

1. Add passenger(passenger):

Post condition:

- Instance of p of 'passenger' was created.
- p was associated with t.

Pre condition:

- t of 'ticket' exists.

2. Pay ticket(card _info)

Post condition:

- status of t was set 'bought'.

Pre condition:

- t of 'ticket' exists

Show history Scenario:

1. show history ():

Post condition :

- none

Pre condition:

- U of 'user' exists

Make account Scenario:

1. enter_acount_info(username, pass , retype pass, phone num)

Post condition:

- Instance of u of 'User' was created.
- U was associated with trs.

Pre condition:

- trs of 'ticket reservation system' exists.

2. send_code(code)

Post condition :

- status of u was set 'permanent'.

Pre condition :

- u of 'User' exists

Login scenario:

1. Login(username, password):

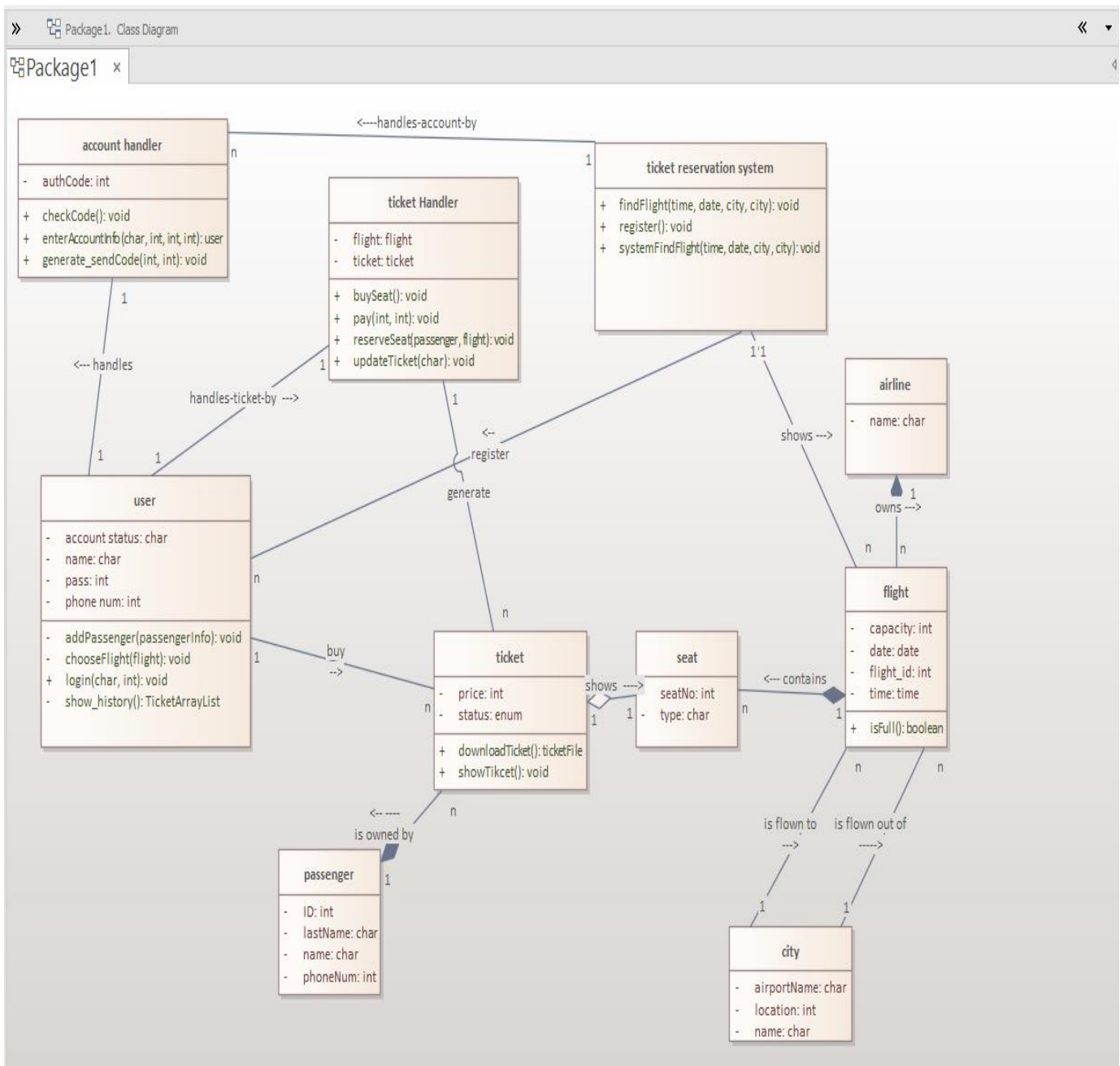
Post condition:

- none

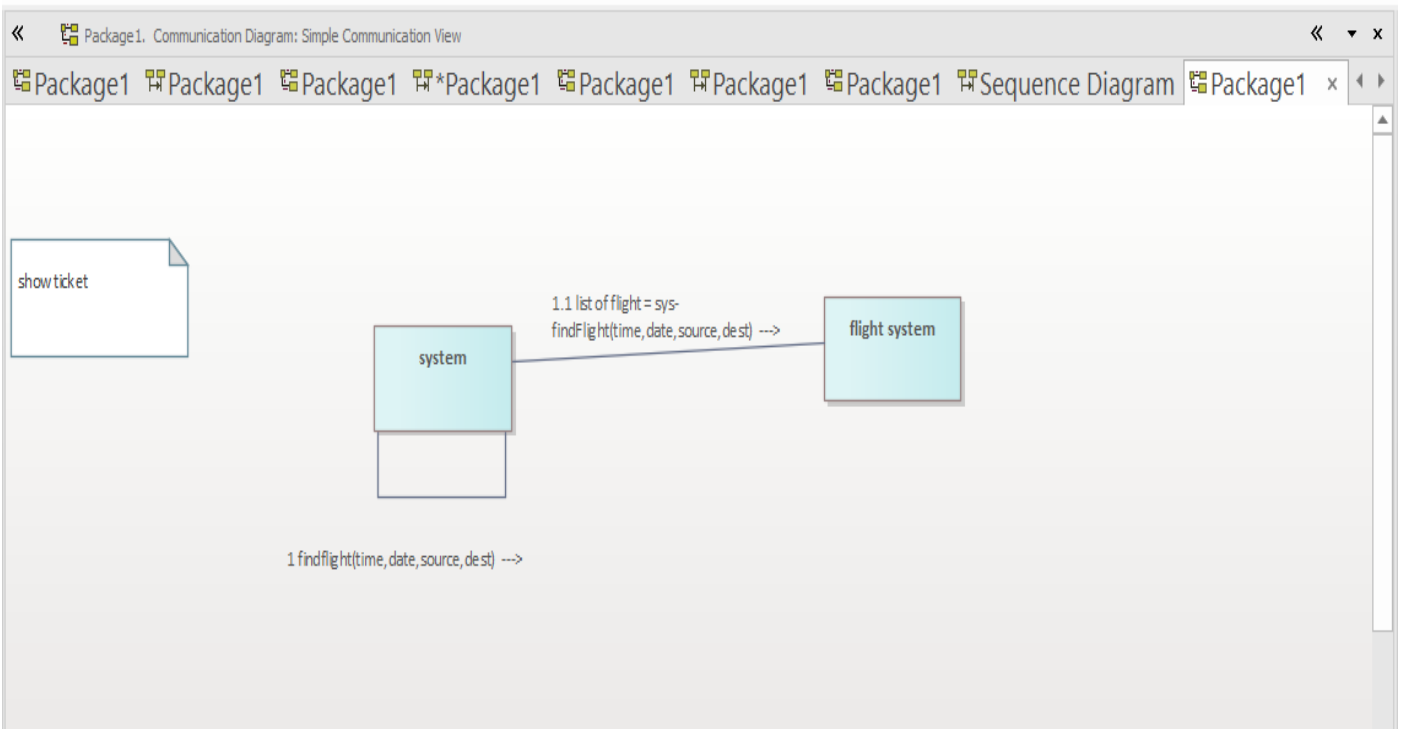
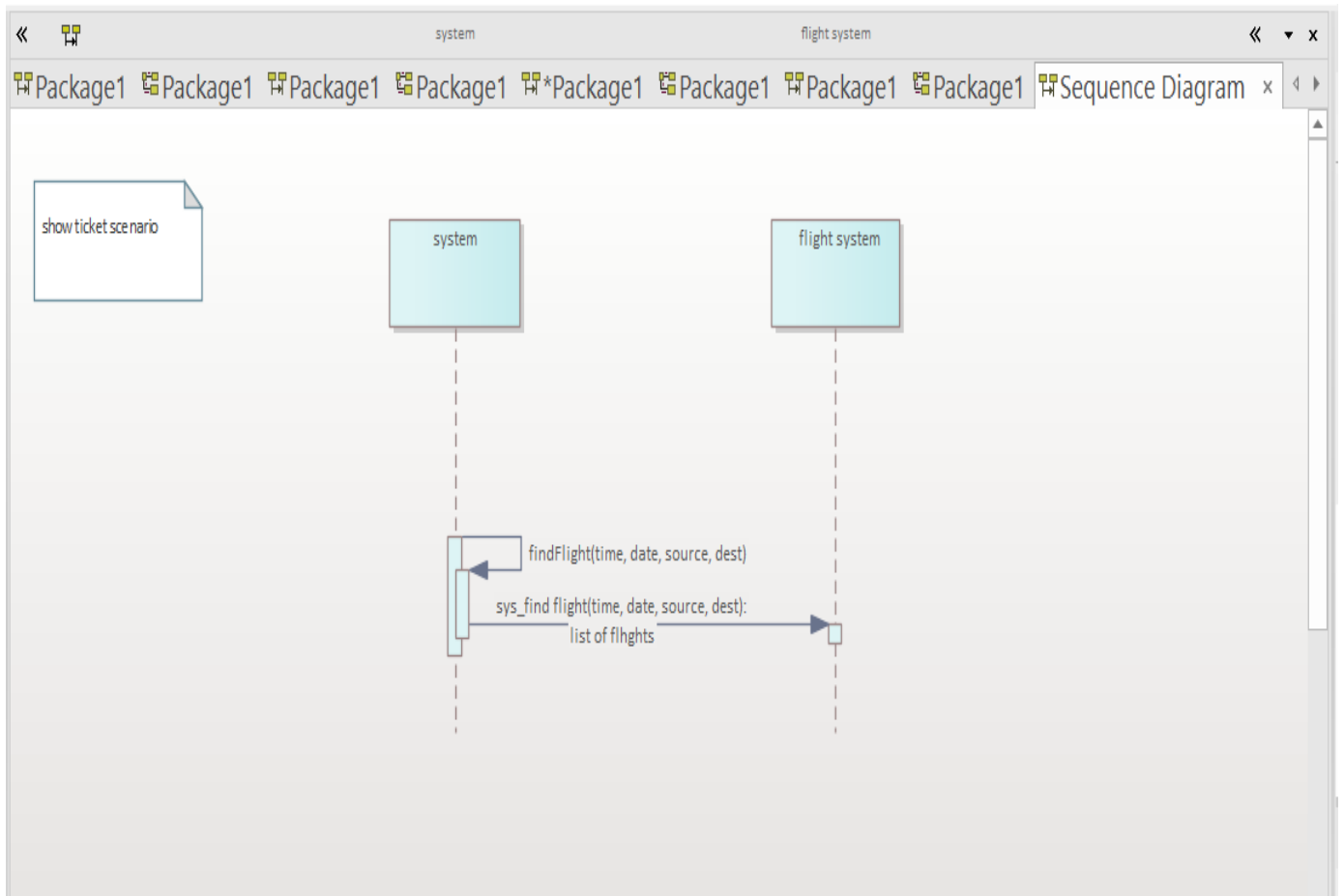
Pre condition:

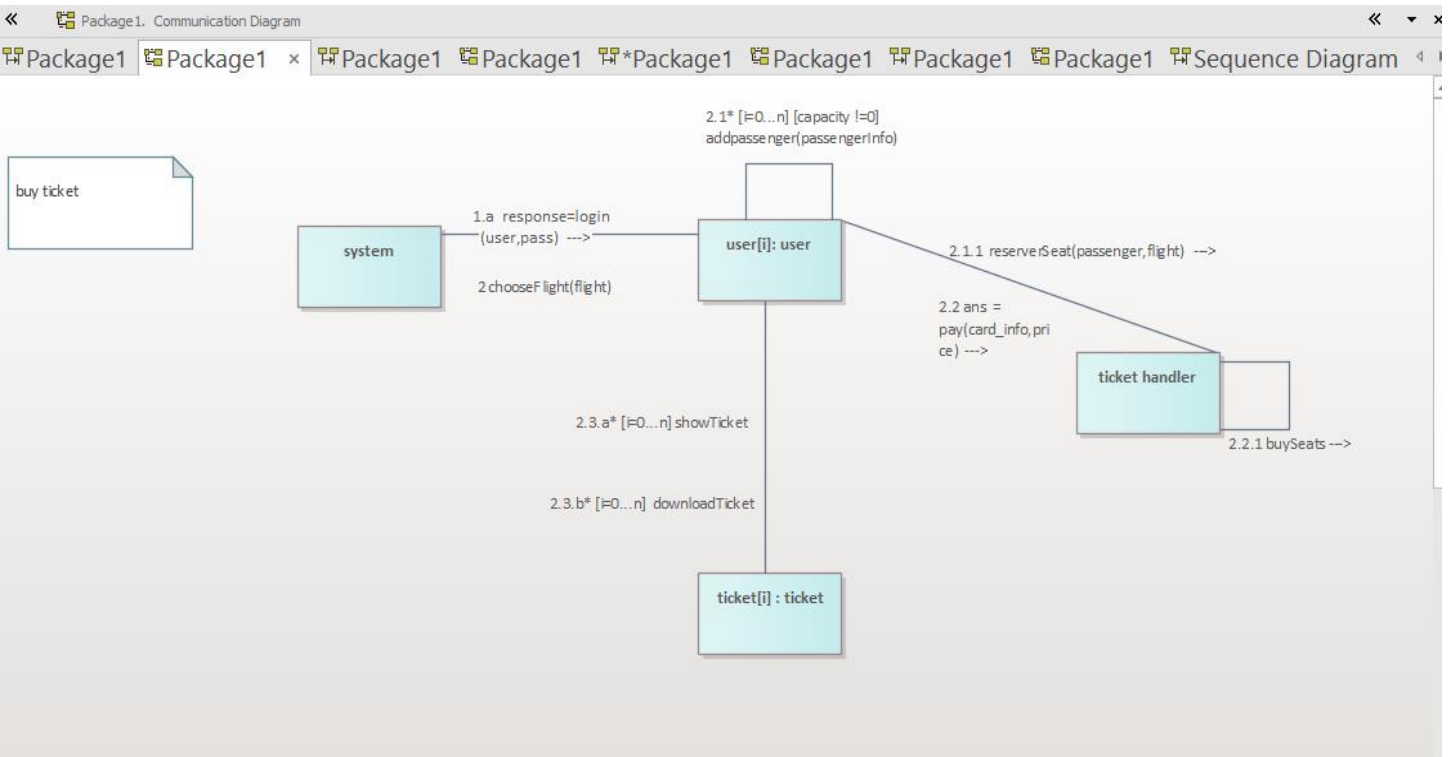
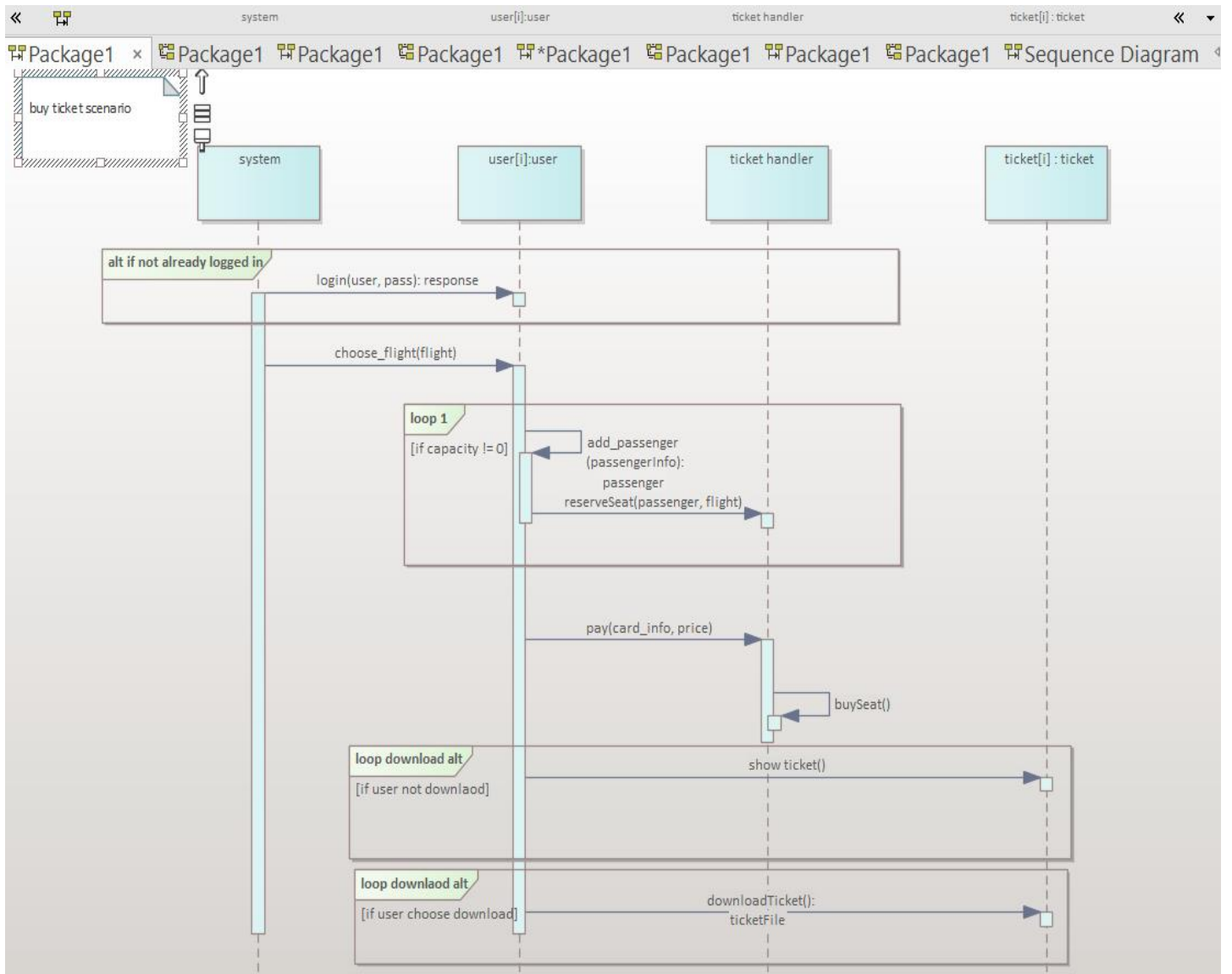
- U of 'user' exists

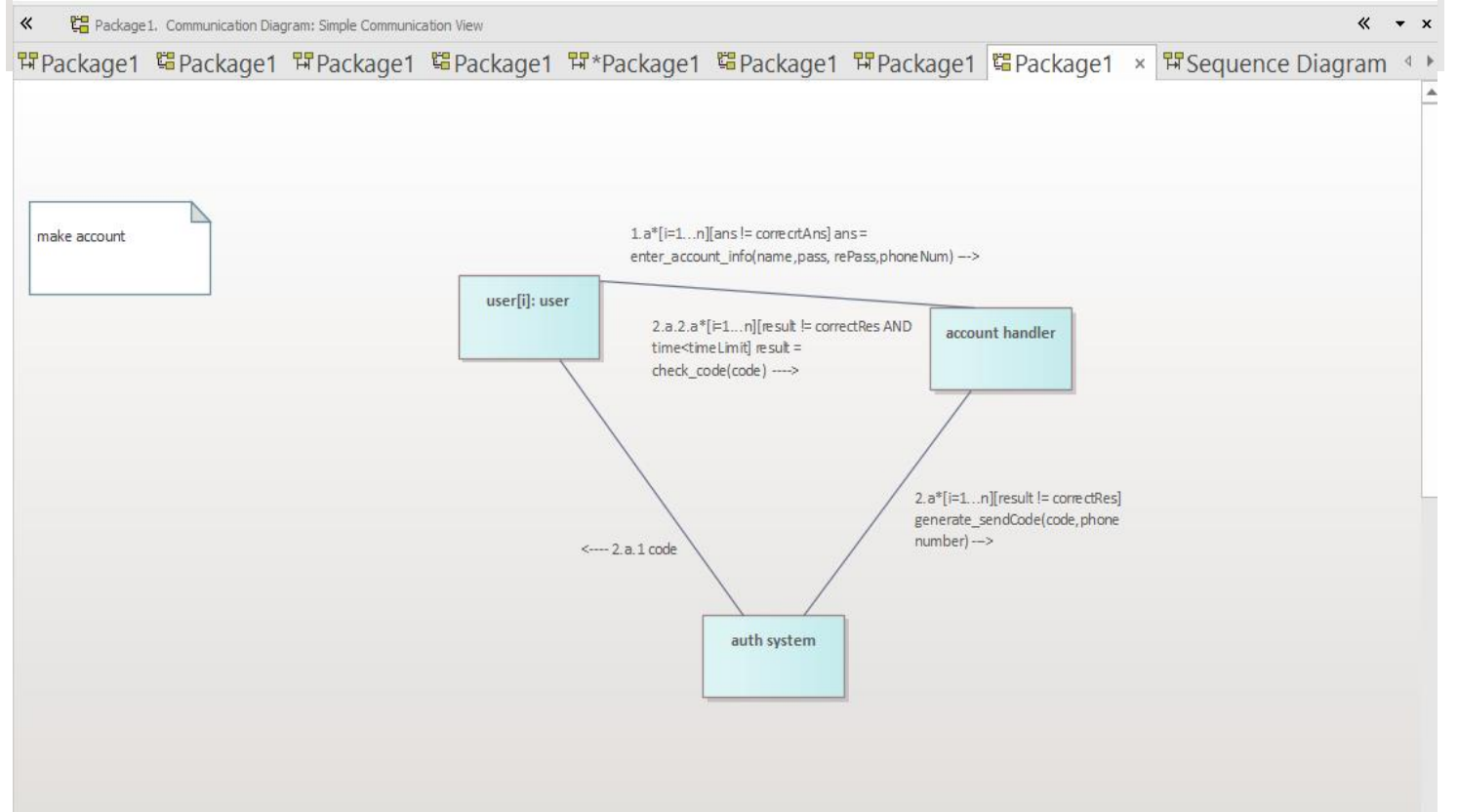
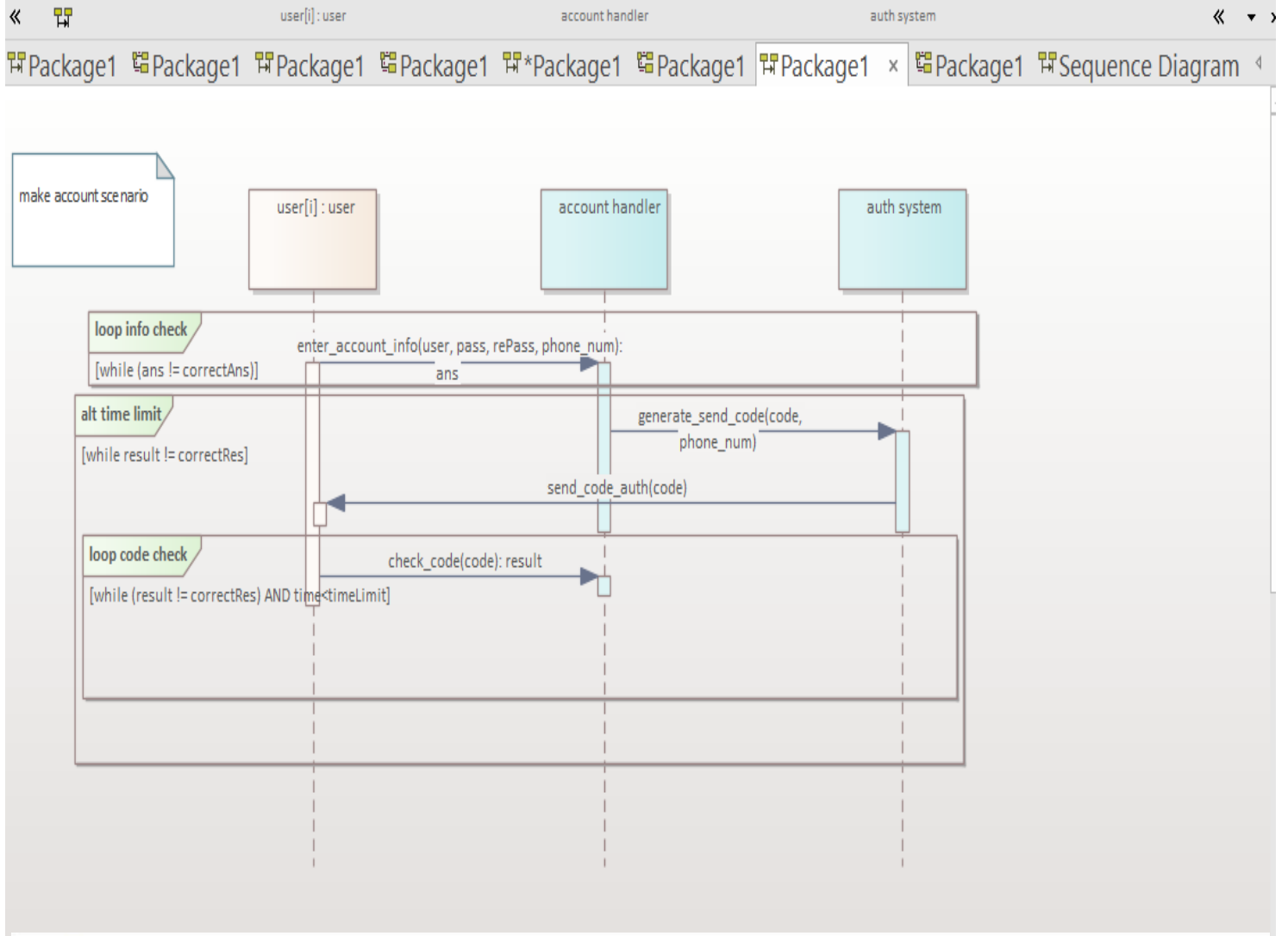
Class diagram:

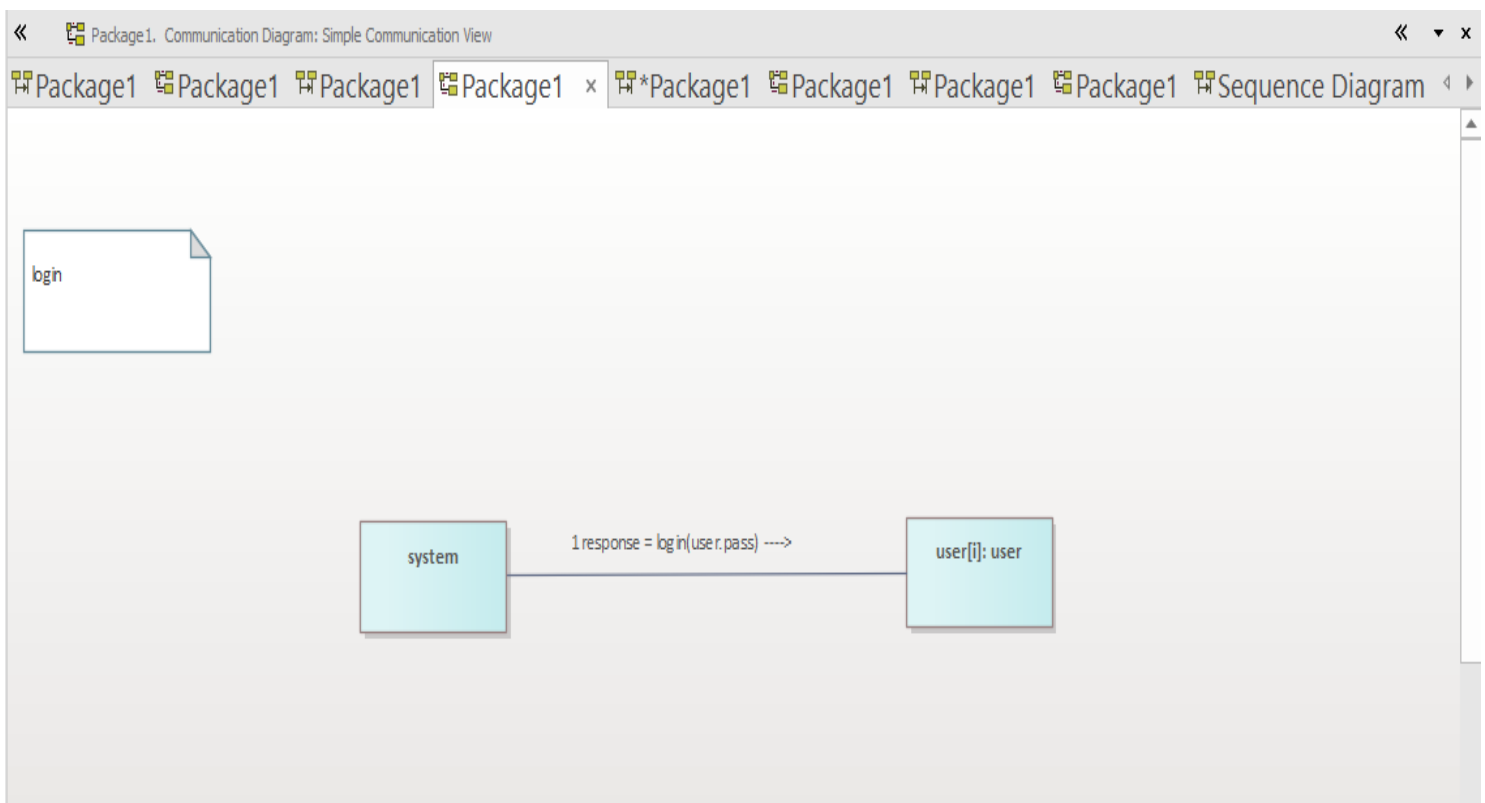
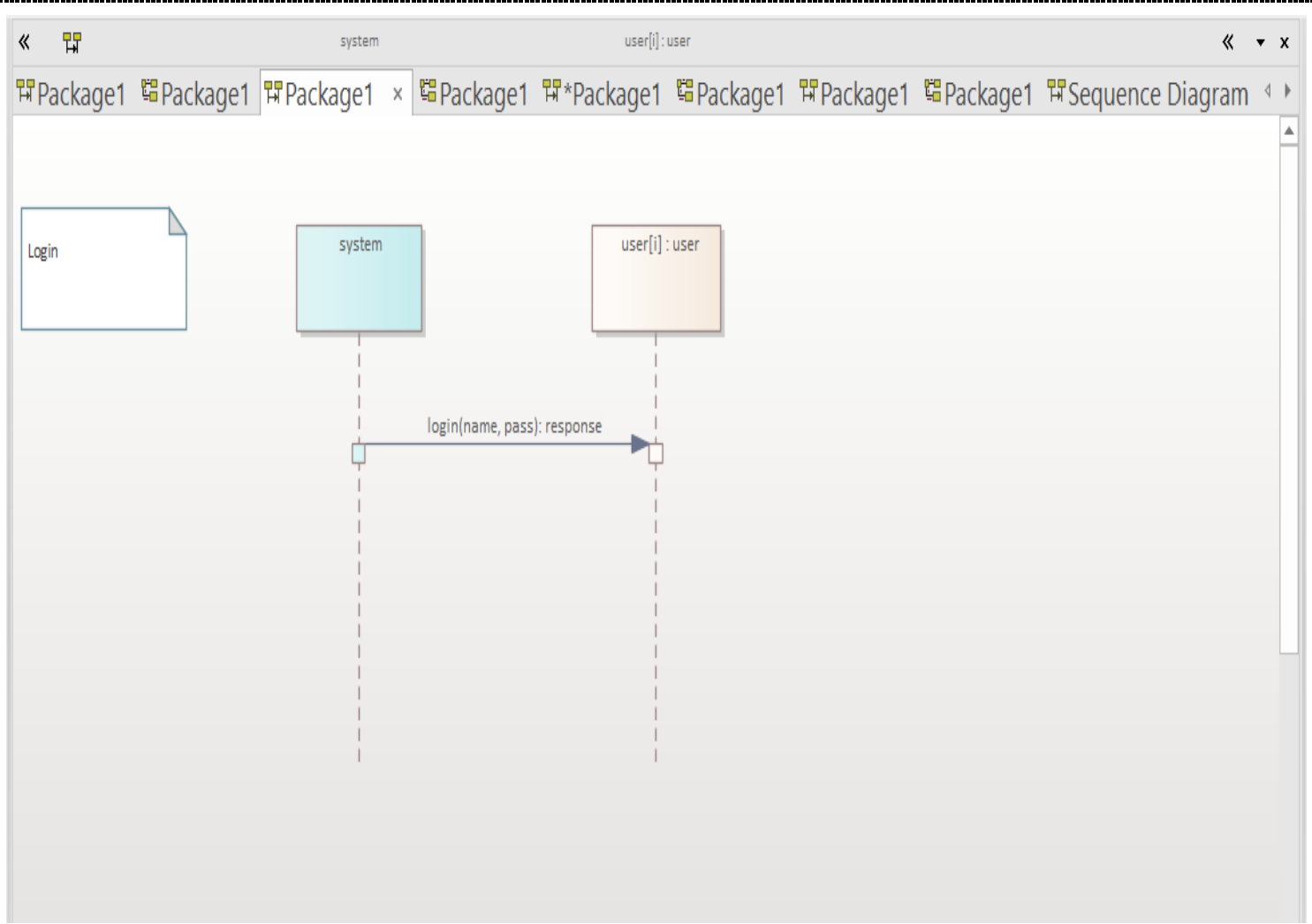


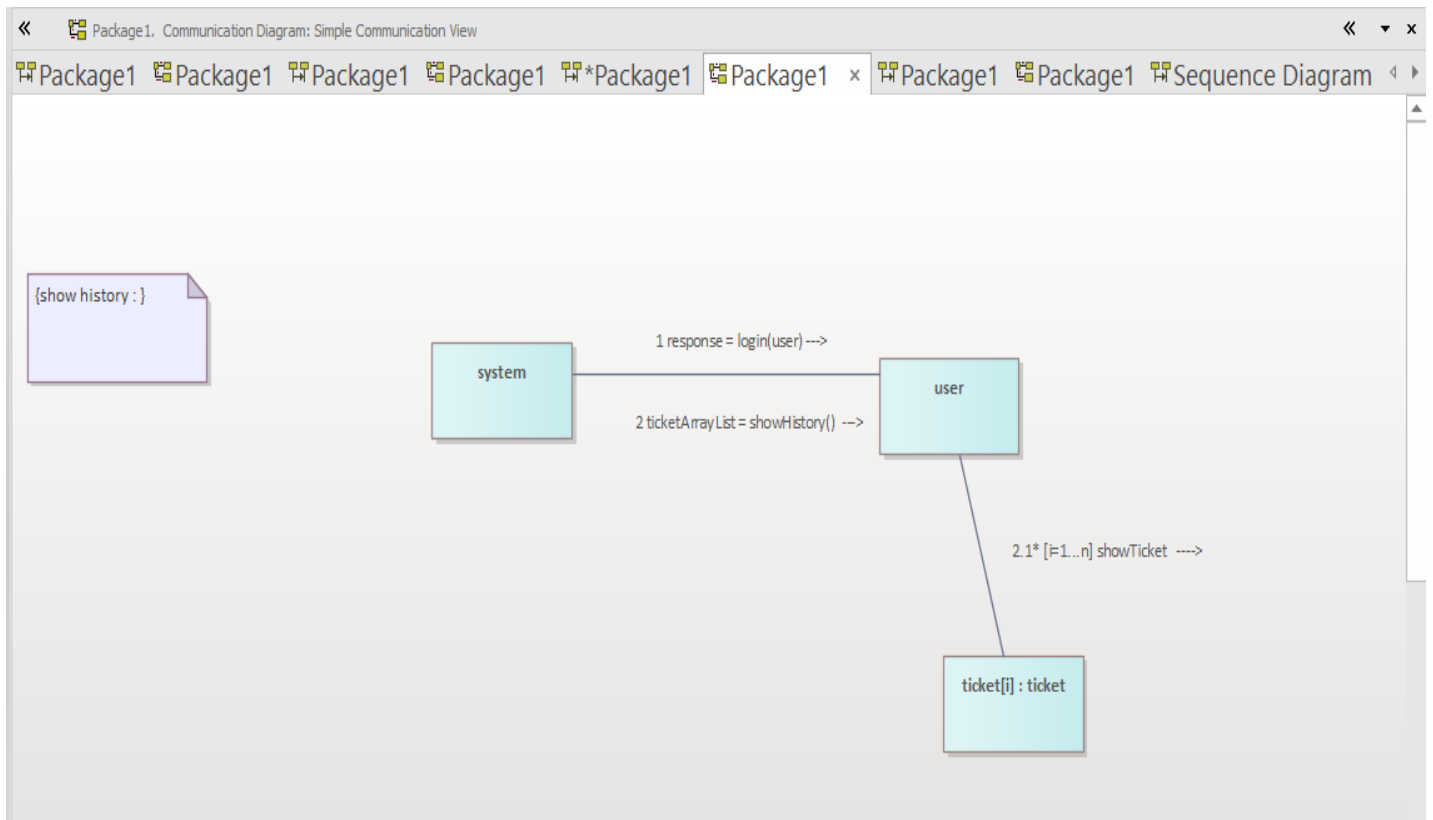
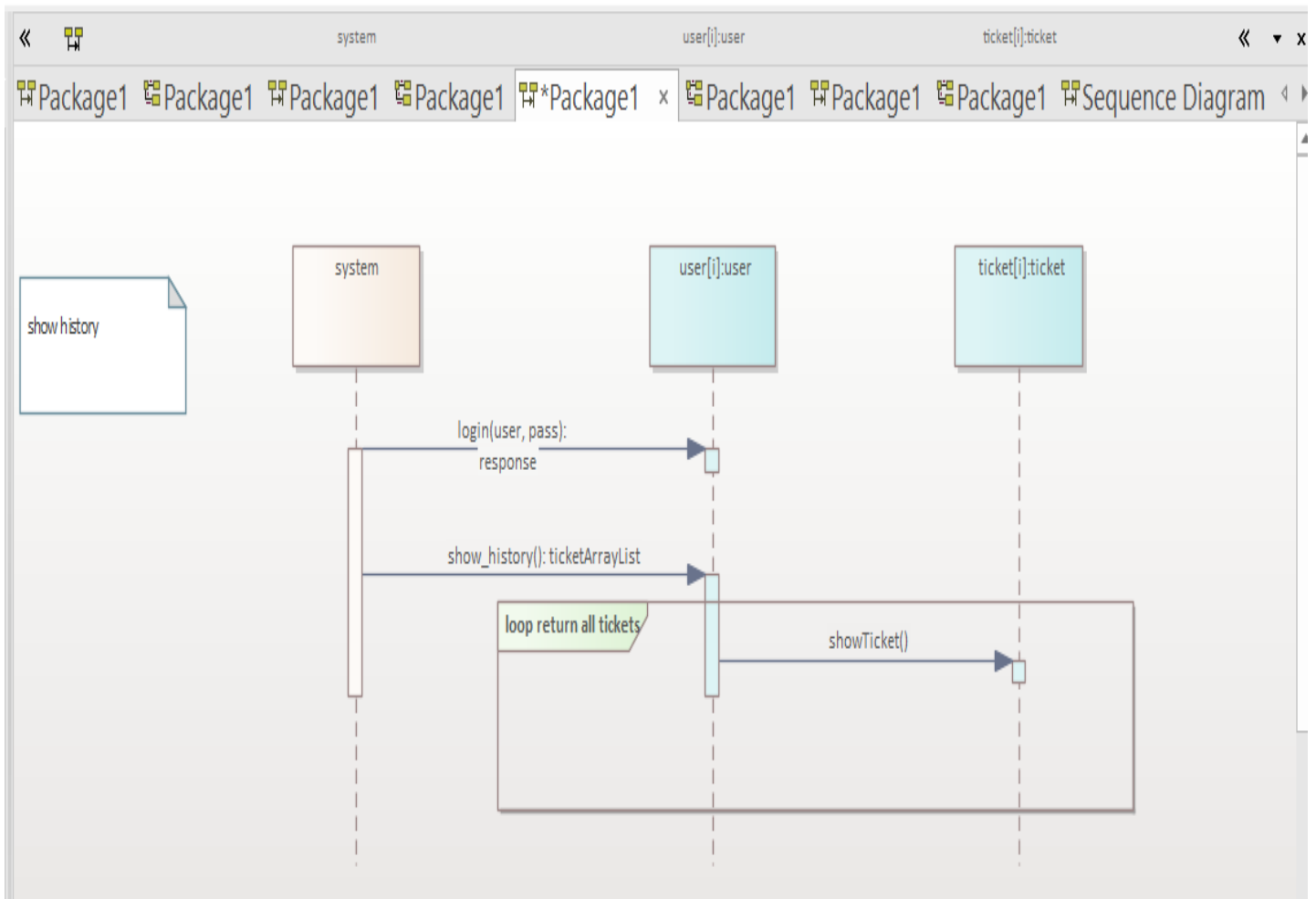
Communication diagram & sequence diagram:

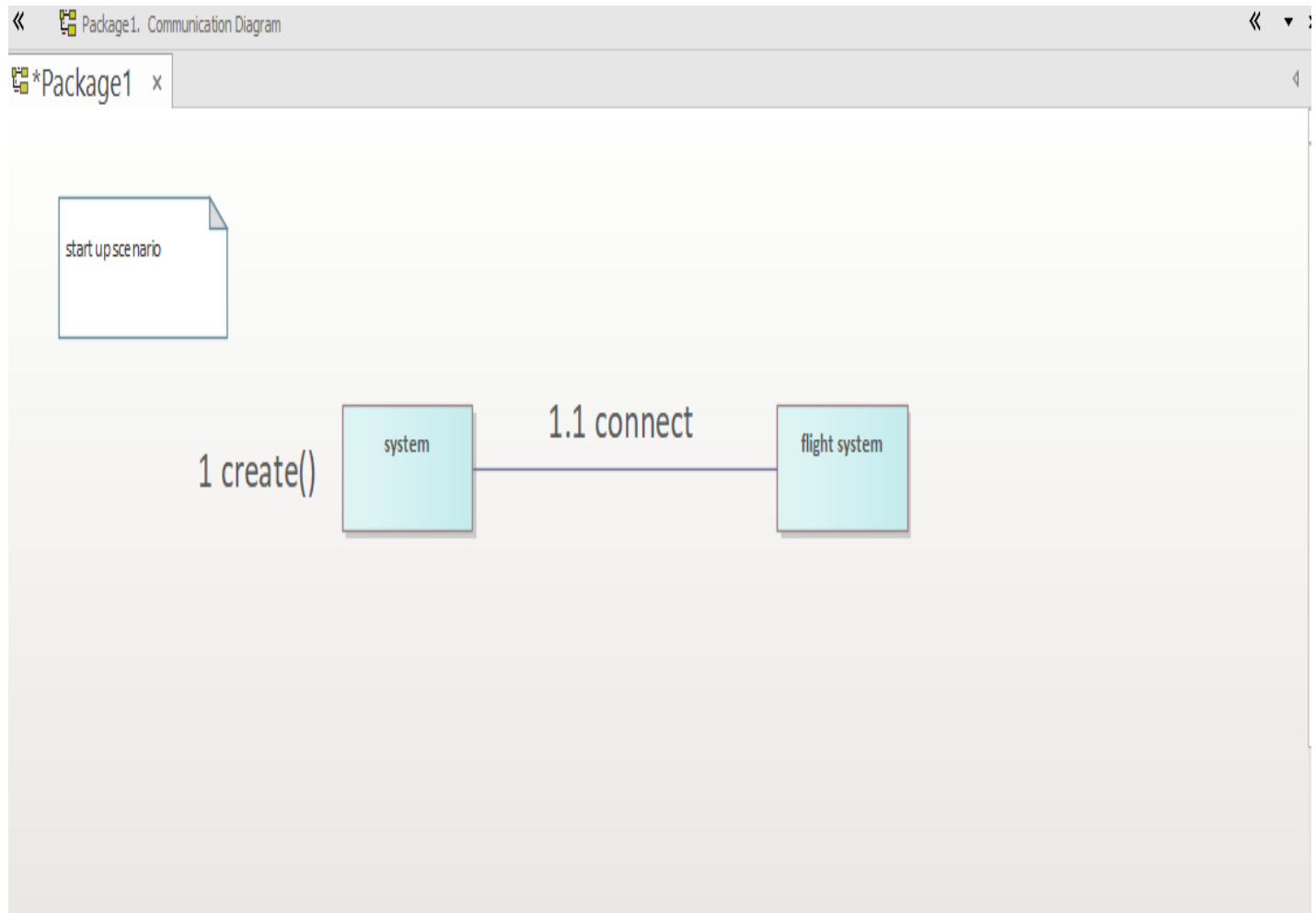












Glossary:

- Every time we have used the word 'system' alone , it means the system we are currently implementing , that is the 'flight reservation system'.
- Every we have used 'flight system' , it is the central system that our system(flight reservation system) is getting its flight information from.
- 'auth code' is the code that we use to verify the user's account by sending it to their phone number.
- The 'status' in the 'ticket' means that ,the ticket is 'reserved' or 'bought' or available.

- The 'status' in the 'user' means that , the account is 'guest' or is 'unverified' or 'verified' .