

SDD(Project detailed documentation)

for

News24

Functional requirements for The Digital Newsstand

- 1)**User registration:** The application should allow users to create an account to access its features.
- 2)**User login:** The application should allow users to login to access its features.
- 3)**Browse and Search:** Users should be able to browse and search for newspapers and magazines by language, journalist/writer, topic, category, keywords, etc. The search should also provide recommendations based on the user's search history and reading preferences.
- 4)**View Content:** Users should be able to view the content of newspapers and magazines in a web-optimized text view or original print view. The content should be presented in a readable format with intuitive navigation, and users should be able to zoom in/out as needed.
- 5)**Offline download:** Users should be able to download complete issues of newspapers and magazines to read offline when the user has Premium subscription.
- 6)**Listening Mode:** The app should have a feature that allows users to listen to articles or stories.
- 7)**Translation:** The app should have a one-touch translation feature that can translate content into up to 16 different languages.
- 8)**Commenting:** The app should have a dynamic commenting system that allows users to leave comments on articles and engage in discussions.
- 9)**Subscription Plans:** The app should offer various subscription plans to users, including single-issue purchases, single-title subscriptions, and unlimited access to every newspaper and magazine in the catalog through a Premium subscription.

- 10) **Subscription Management:** Users should be able to manage their subscriptions, including turning on/off autorenewal
- 11) **payment method :** The user can pay in different ways, for example, by visa or different payment cards
- 12) **Morning Briefing:** The app should have a feature that provides users with a morning briefing that summarizes the day's top news stories.
- 13) **For You:** The app should have a section that provides users with articles, games, and guides based on their interests.
- 14) **Save Favorites:** The app should allow users to save their favorite articles and read them later on any device.
- 15) **Widget:** The app should have a widget that displays the latest headlines on the user's screen.
- 16) **Magazine and news rating:** The user puts a 5-star rating based on credibility and exclusive news.
- 17) **Publication of news and magazines :** The publishing house and journalists can publish exclusive news on the site continuously.
- 18) **Update and modify news :** The publisher modifies and updates the news when any change occurs.

Non-functional requirements for The Digital Newsstand

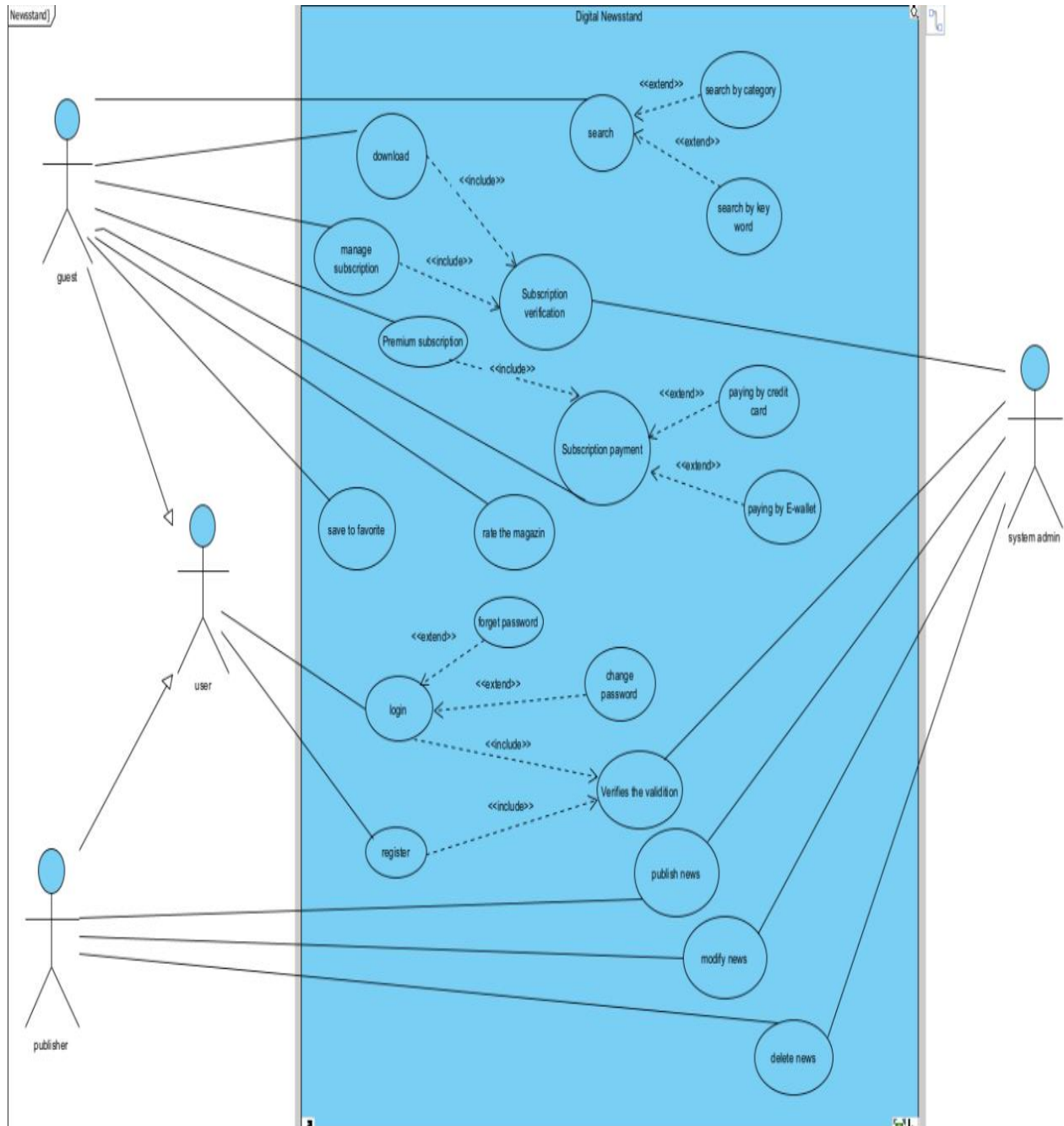
1. **Performance:** The web application should respond quickly to user actions, load pages and articles fast, and handle a large number of concurrent users without any slowdowns.
2. **Availability:** The web application should be available 24/7, with minimal downtime for maintenance or upgrades.
3. **Reliability:** The web application should be reliable, with no data loss or corruption, and the ability to recover quickly from any failures or errors.
4. **Security:** The web application should be secure, protecting user data and preventing unauthorized access, hacking, or other malicious attacks.
5. **Scalability:** The web application should be able to handle an increasing number of users, traffic, and data volume as the application grows over time.
6. **Usability:** The web application should be userfriendly, with an intuitive interface and easy navigation, allowing users to quickly find and access the content they want.
7. **Accessibility:** The web application should be accessible to users with disabilities, complying with accessibility guidelines and standards.
8. **Compatibility:** The web application should be compatible with different browsers, devices, and operating systems, ensuring a consistent user experience across different platforms.
9. **Maintainability:** The web application should be easy to maintain and update, with clear and welldocumented code, and the ability to quickly fix bugs or add new features.
10. **Interoperability:** The web application should be able to interact with other systems and services, such as social media platforms, content management systems, and advertising networks.
11. **Multilingualism and cultures:** The web application should support multiple languages and cultural norms, allowing users to access content in their preferred language and format.

12. **Performance under load:** The web application should maintain its functionality and usability even during high traffic or peak usage times.
13. **Disaster recovery:** The web application should have a backup and recovery plan in case of data loss or system failure, ensuring minimal downtime and data loss.
14. **Error handling:** The web application should handle errors gracefully, providing helpful error messages and options for users to recover from errors.

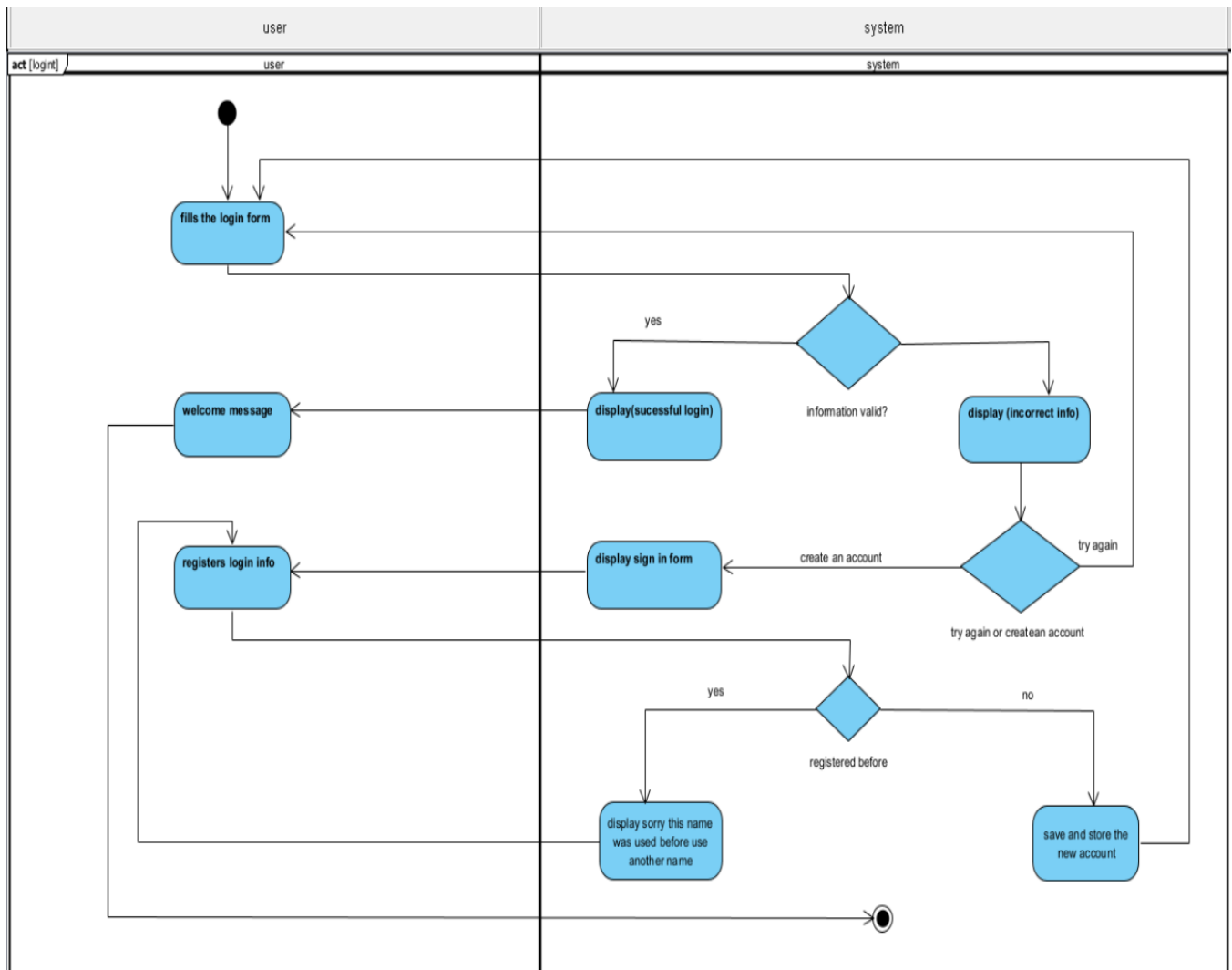
Explain the function of each use case

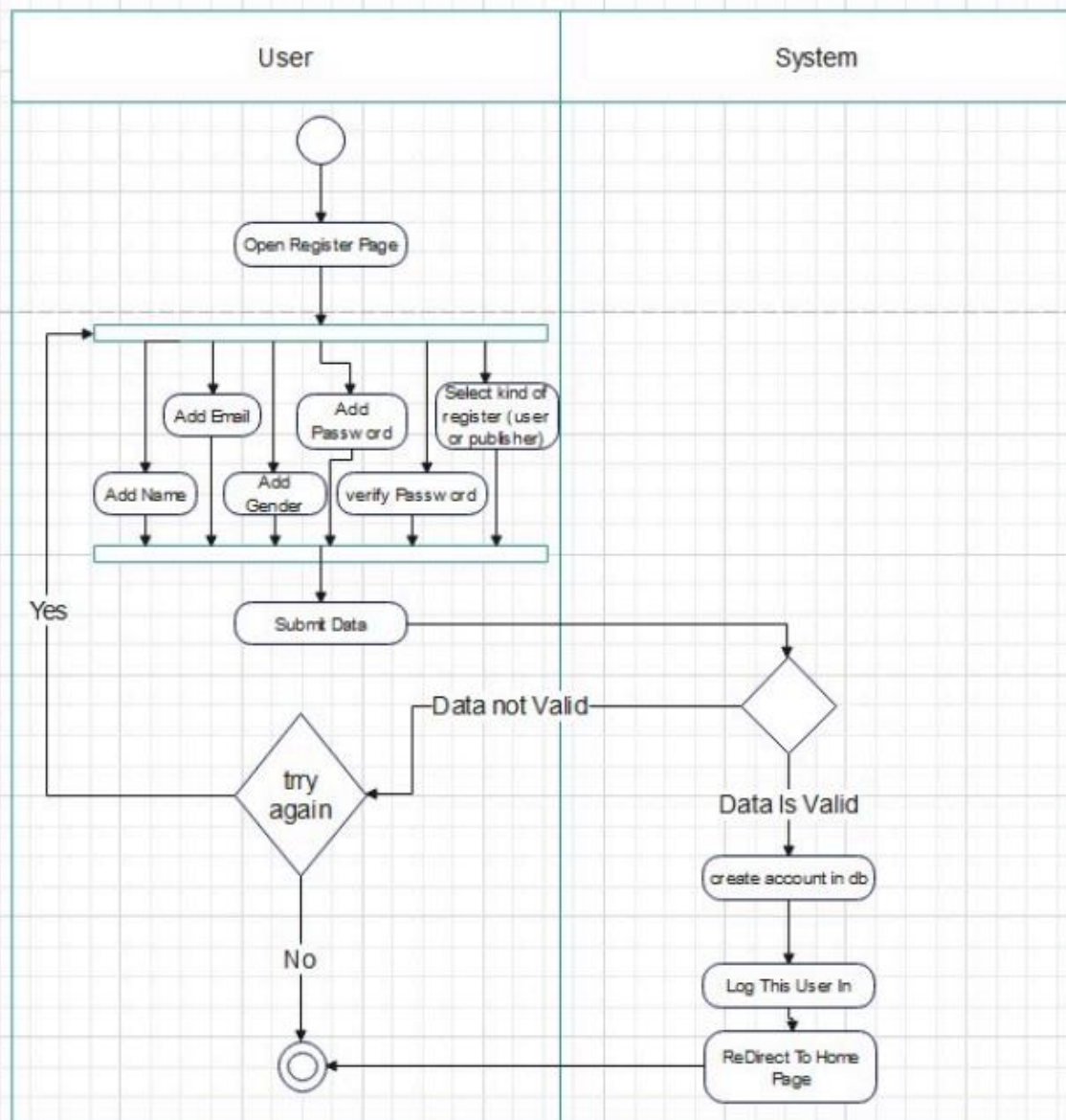
Login	The user logs in after the system confirms the data.
register	The user registers his data to create a new account. After making sure that the data is allowed to be used by the system.
Verifies the validation	It is an include relation between it use case , The system verifies the validity of Verifies the the data entered by the user.
Download	In it, the user will have the authority to download the article and the magazine if Download he is a Premium subscr
Manage renewal If a subscriber. subscription.	Users should be able to manage their subscriptions, including turning on/off auto- Manage renewal If a subscriber.
Subscription verification	The system will verify whether the user is subscribed to the Premium or not, in order to allow him to carry out the operations related to the Premium features.
Subscription payment	The user chooses the payment method for the subscription. Among several methods, including credit card, e-wallet
Save to favorite	.In it, the user chooses the articles he likes and puts them in the favorite list
Rate the magazine	The visitor evaluates the magazine and the news in .terms of credibility and exclusive news
Publish news	There is an authority for the publisher, whether it is a person or a newspaper, to Publish news publish the news on the site
Modify news	The publisher allows me to amend the news If there are updates And change in Modify news it.
search	In it, the user searches for the news he wants based on the type of news or the name of the news.

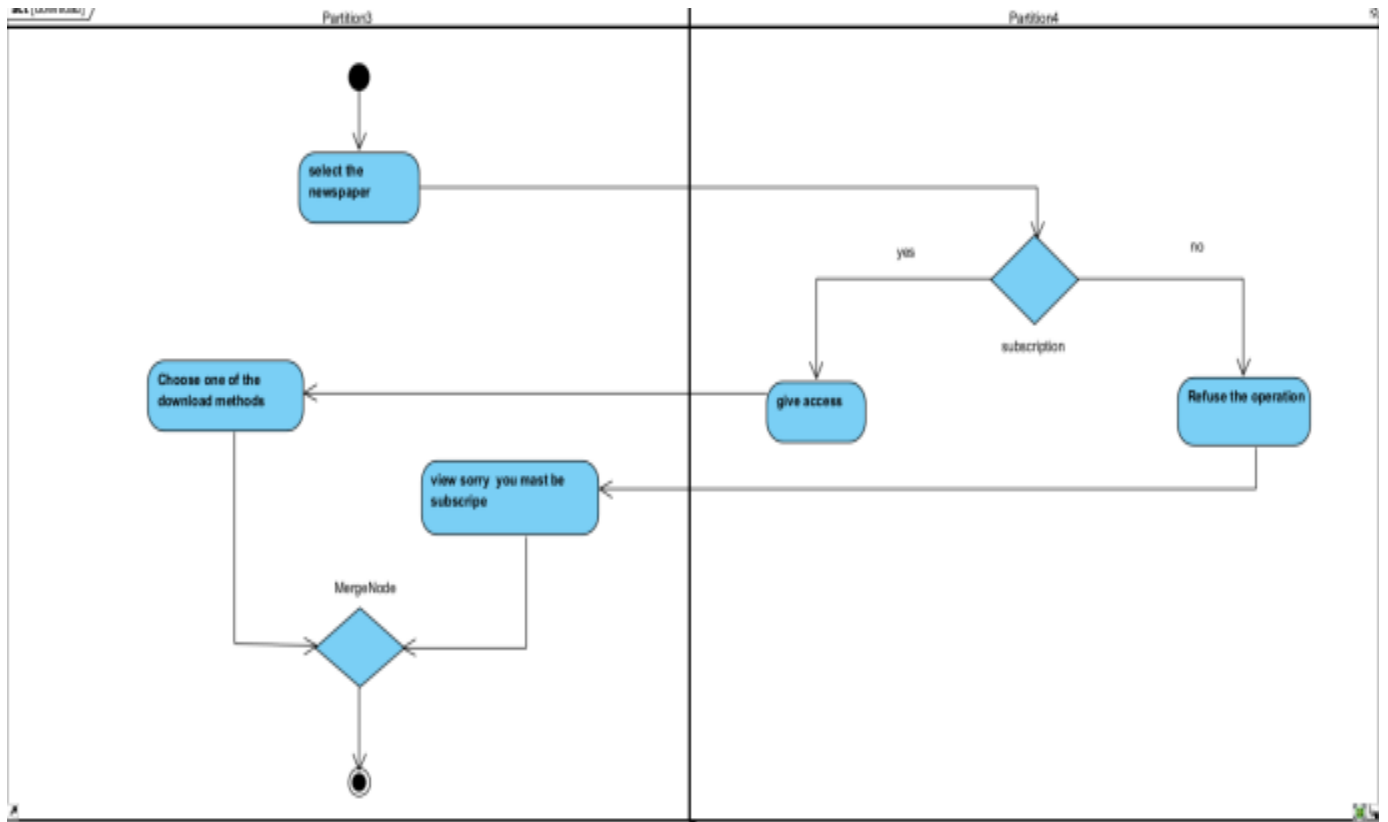
Use Case Diagram

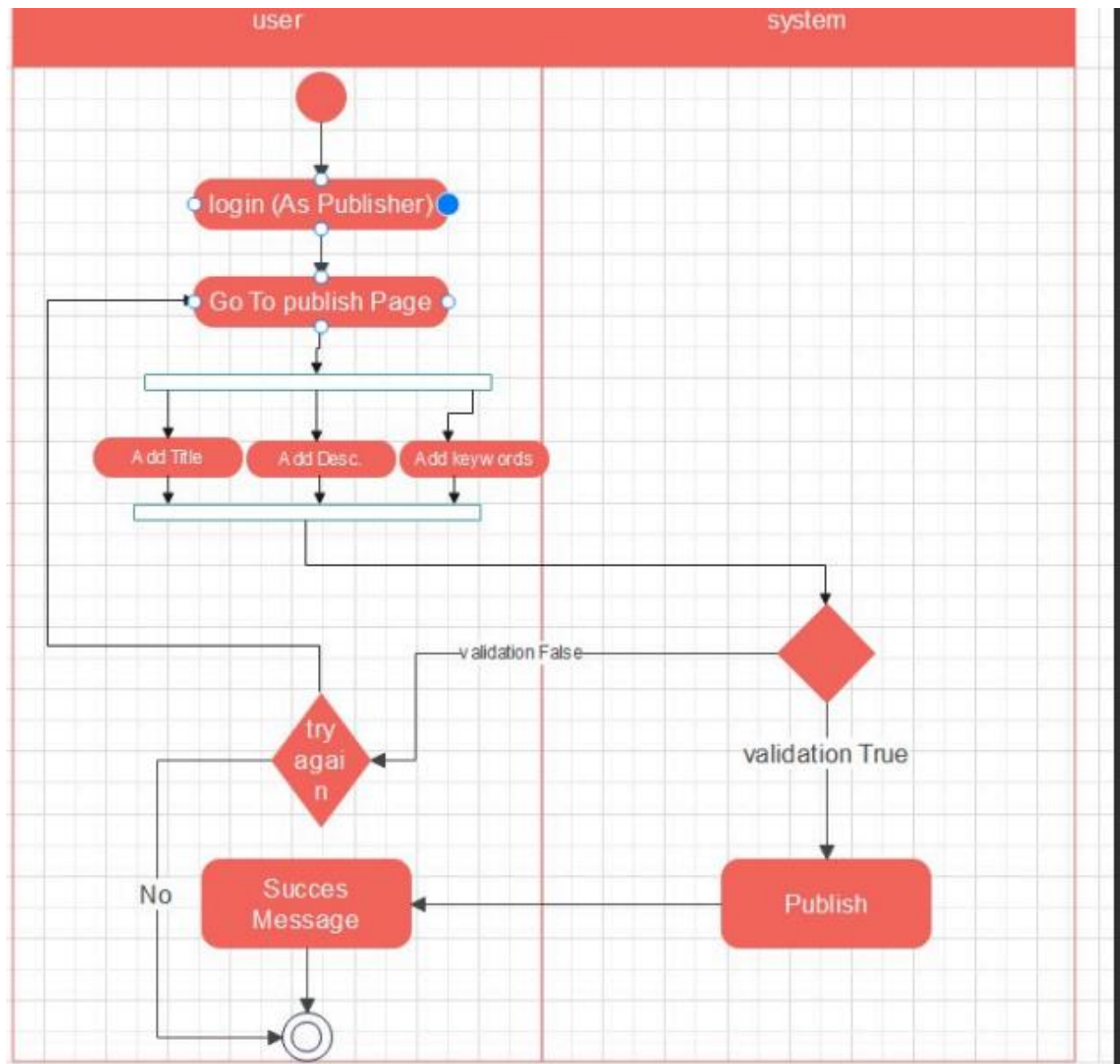


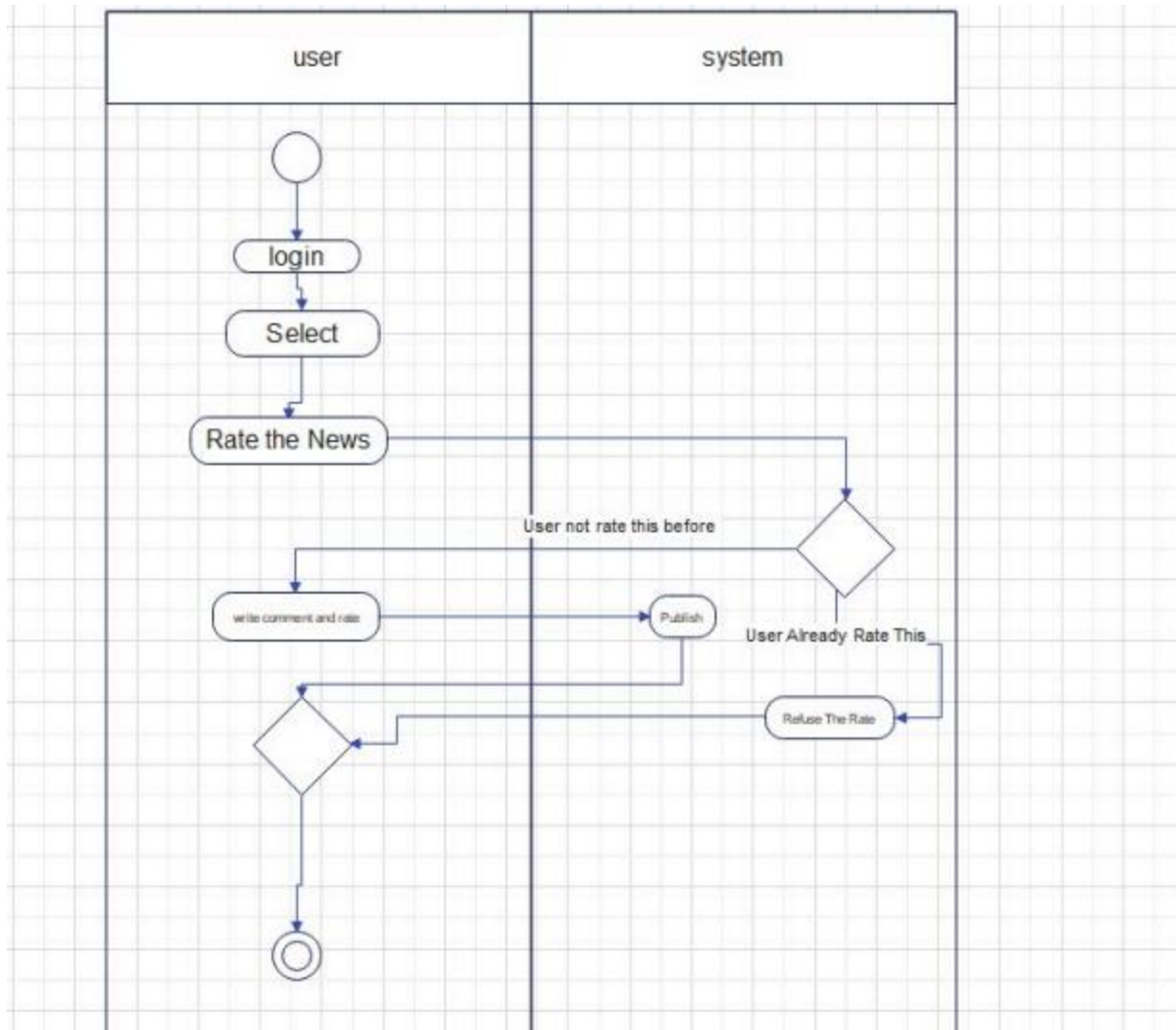
Activity Diagram

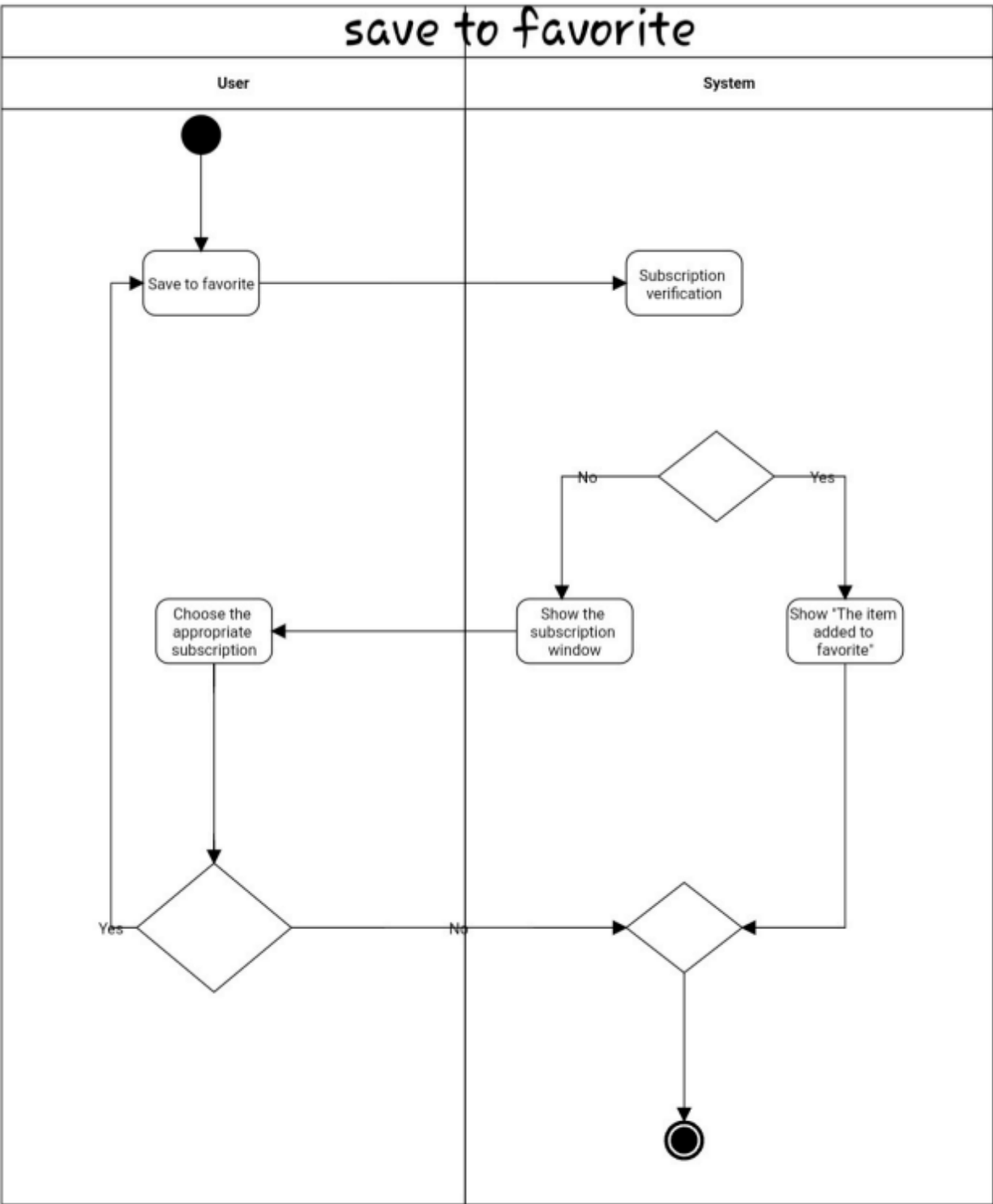


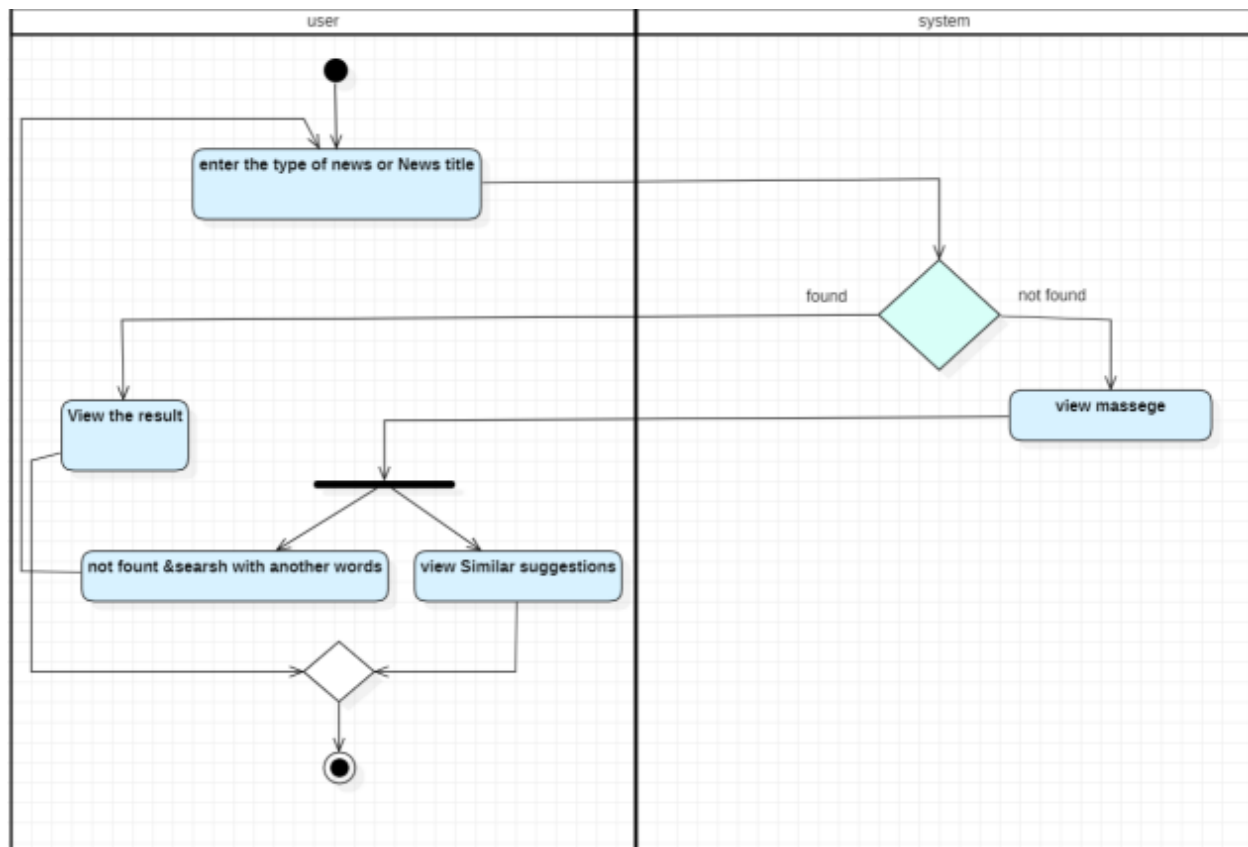


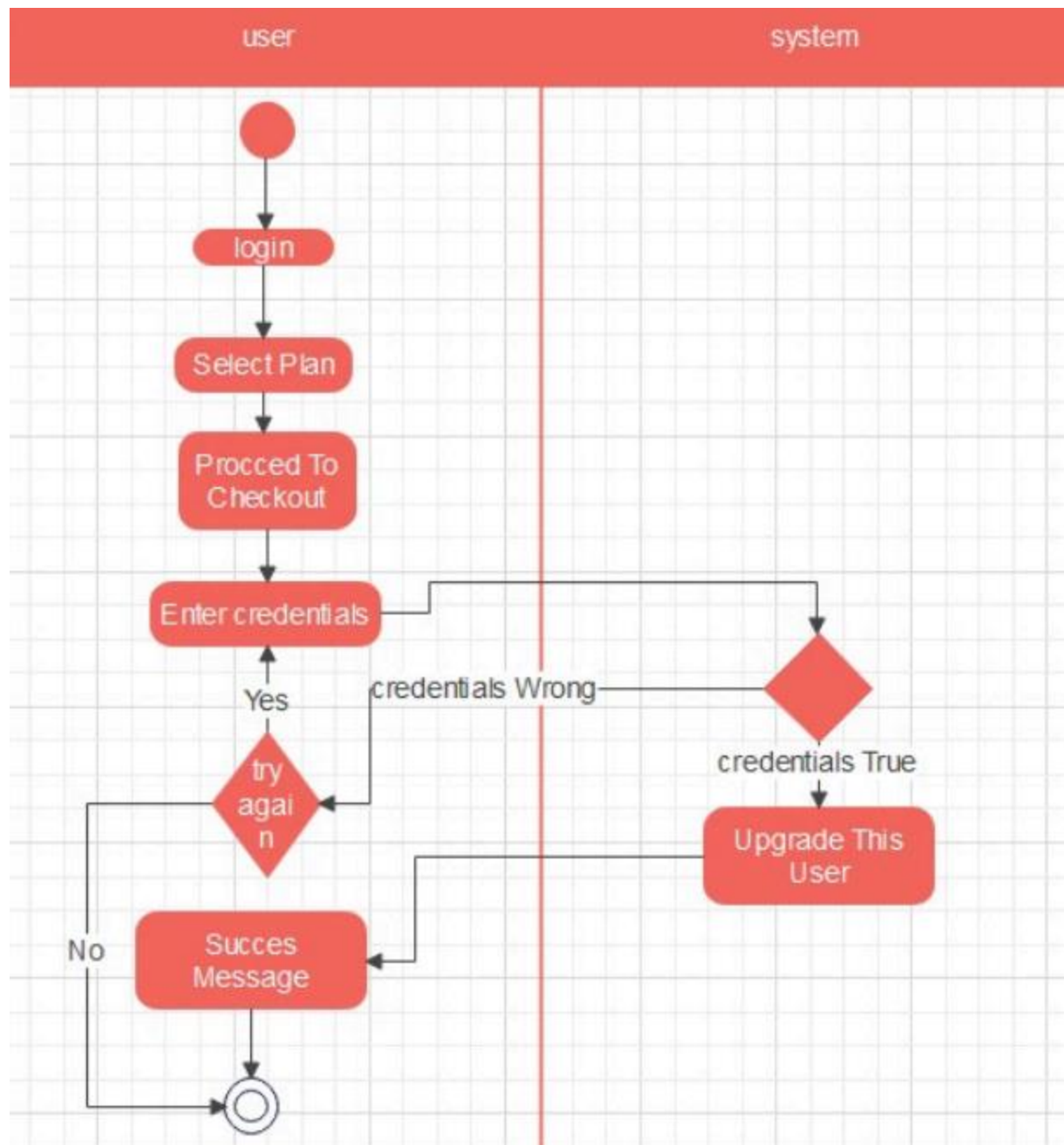




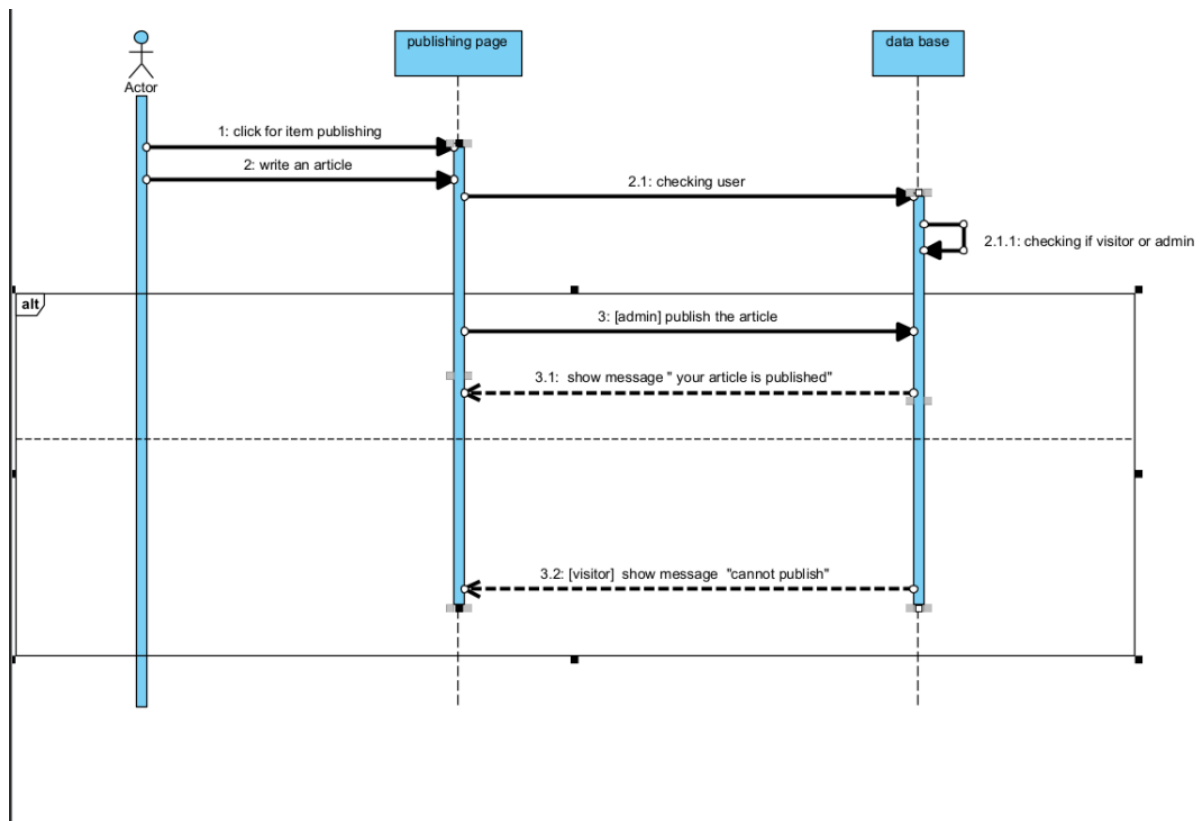
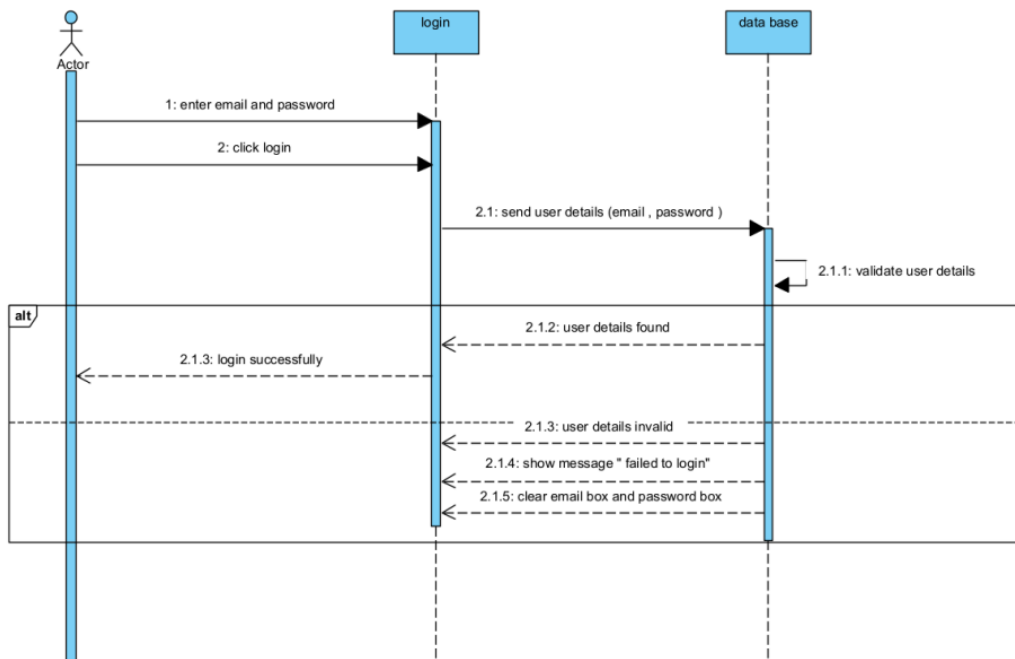


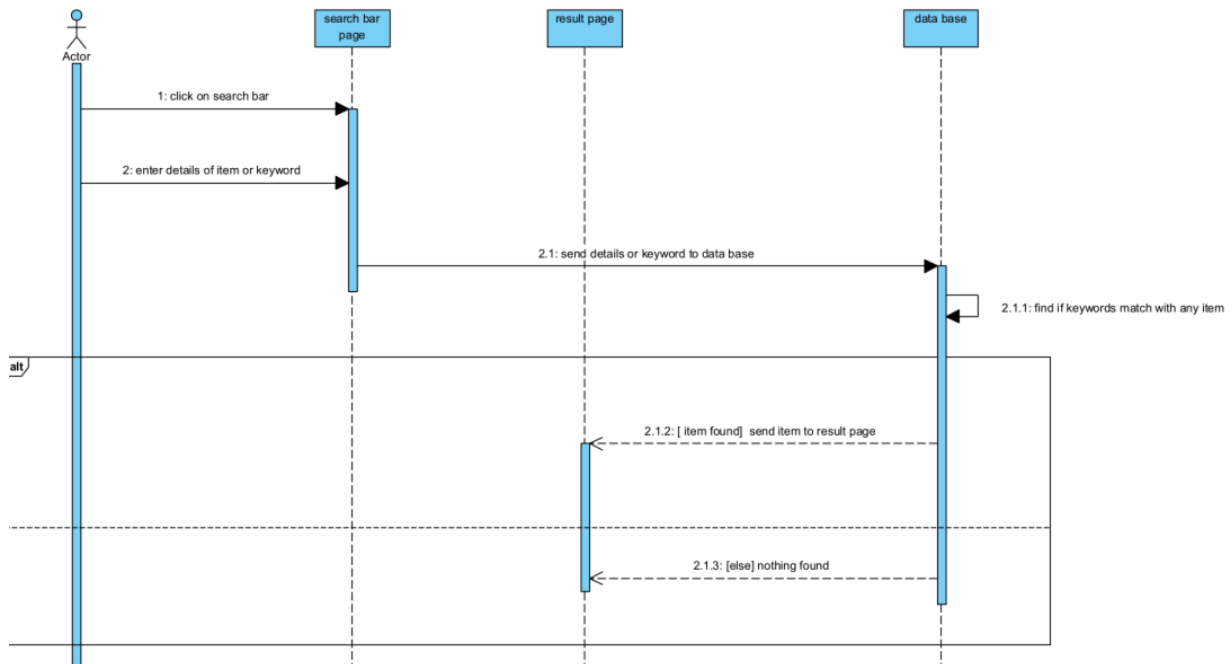
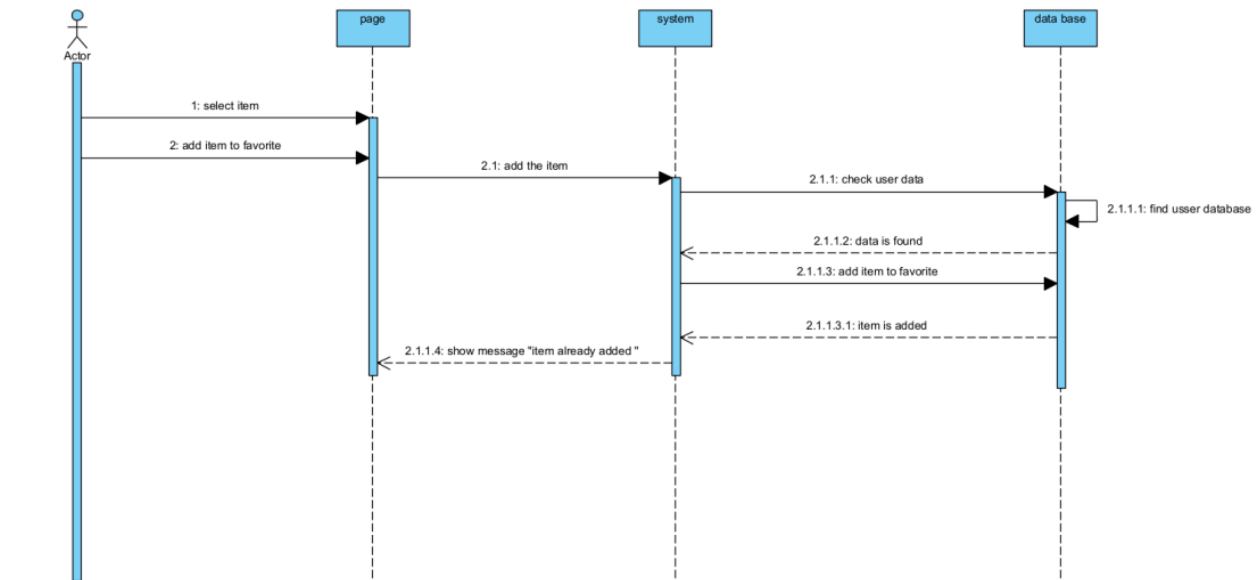


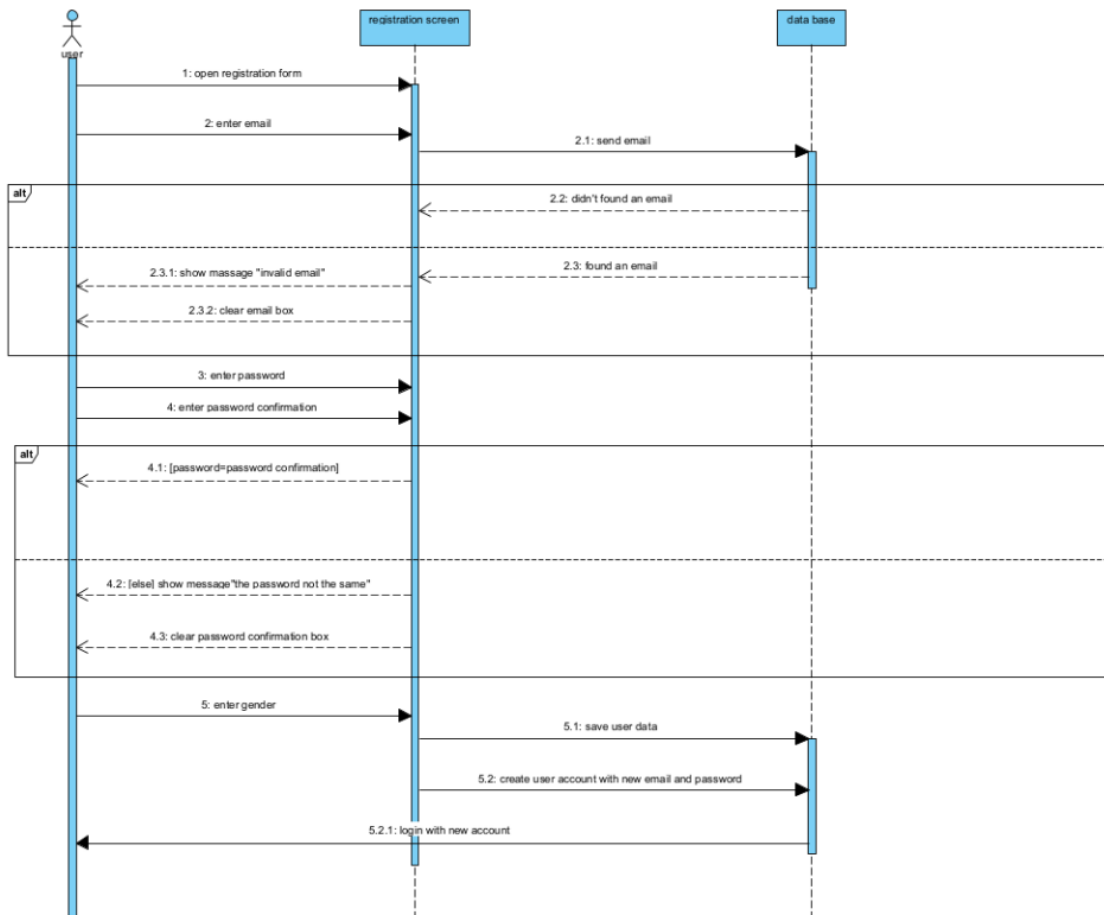
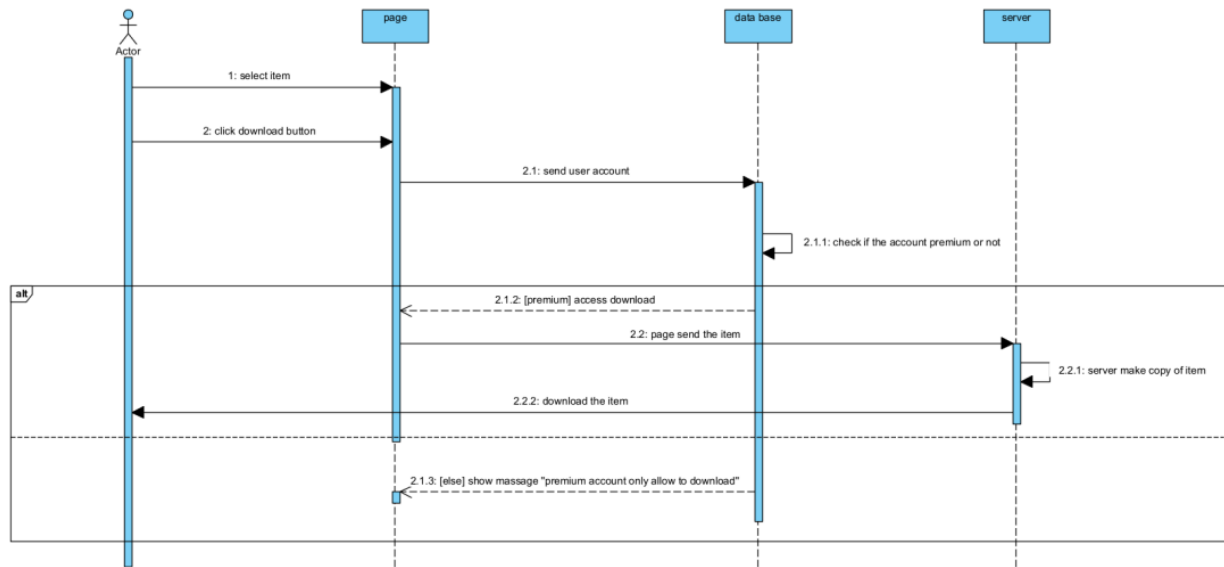


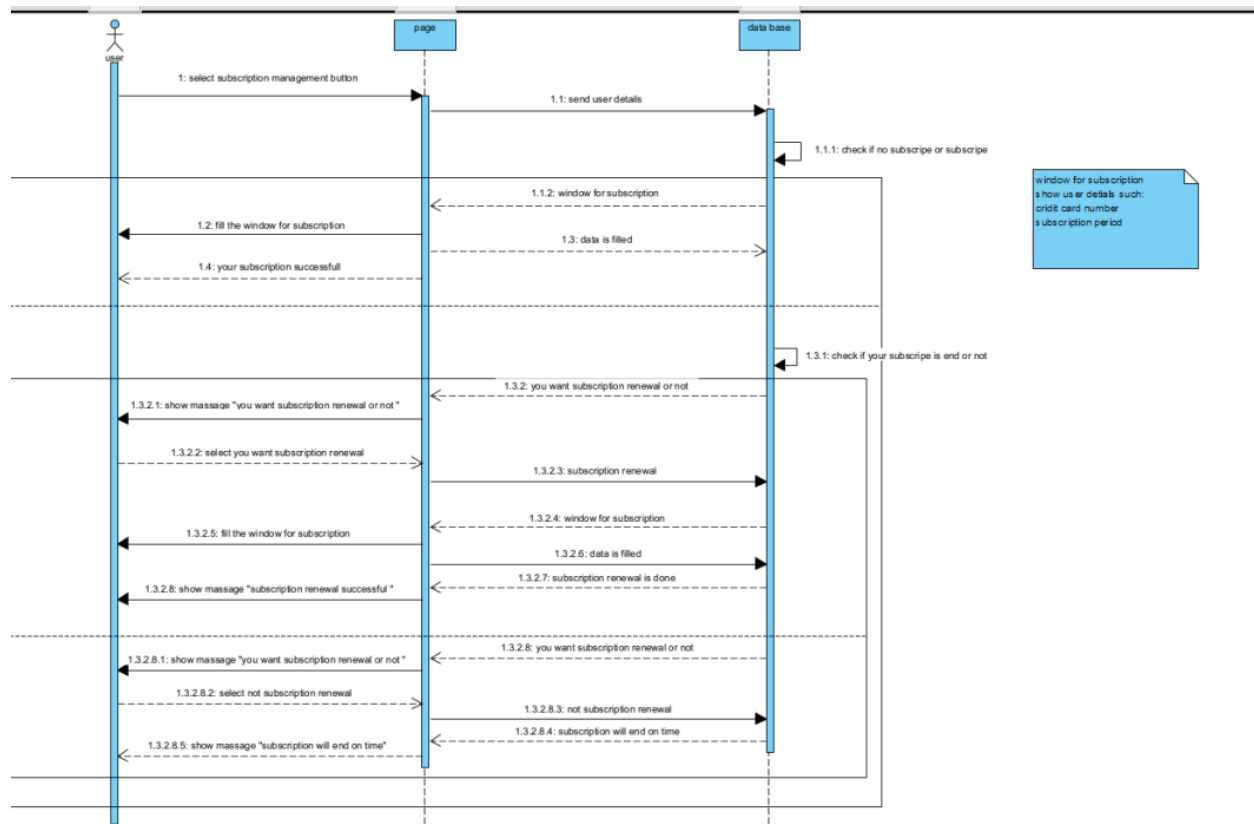


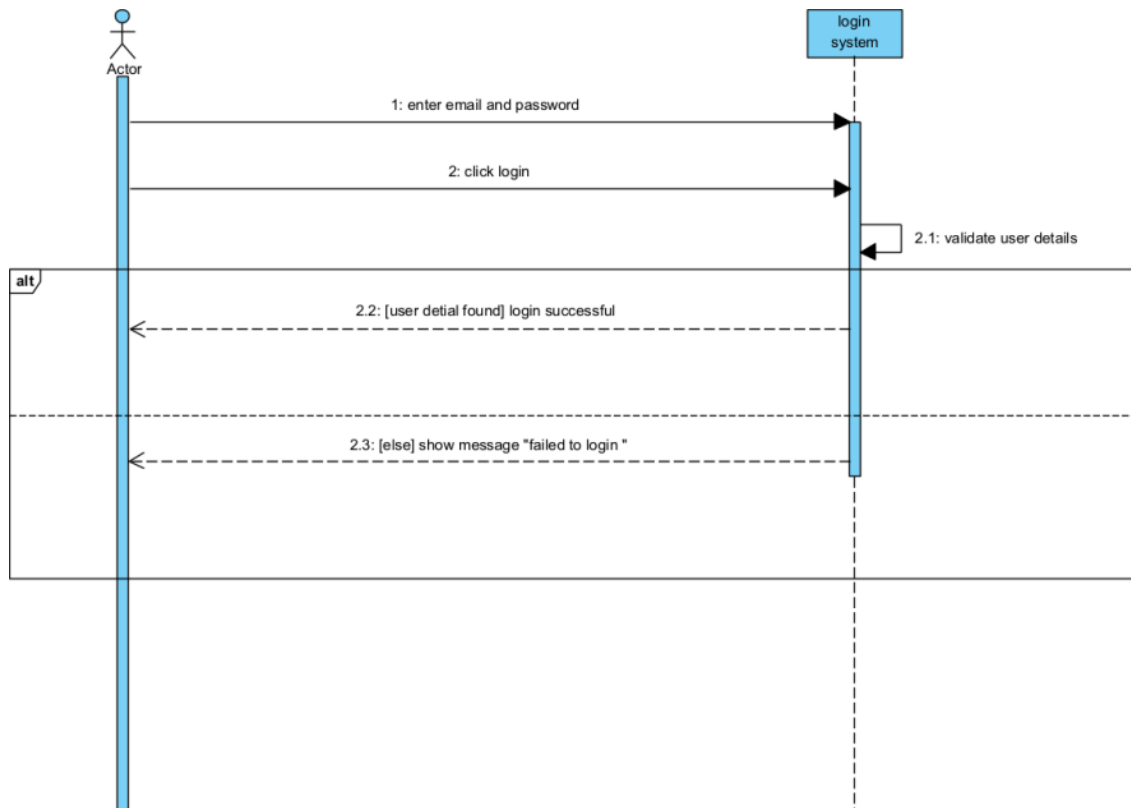
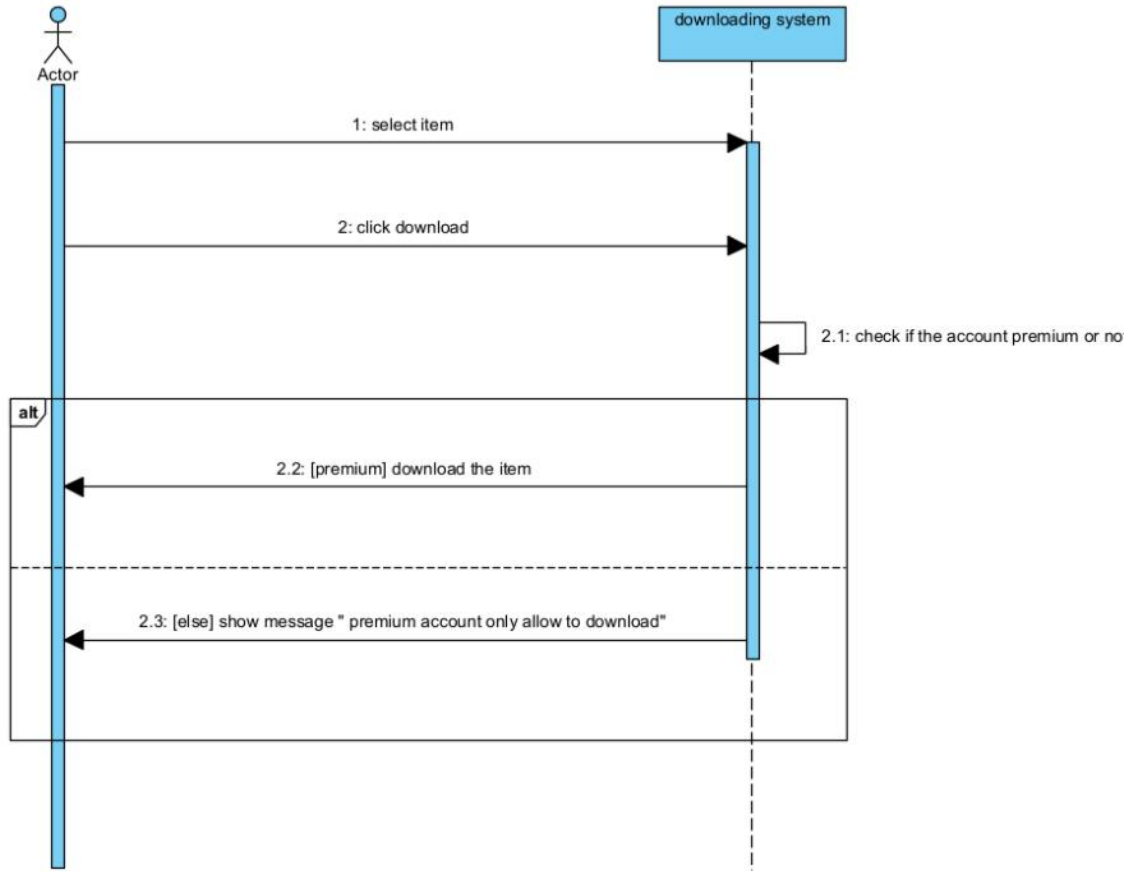
Sequence Diagram

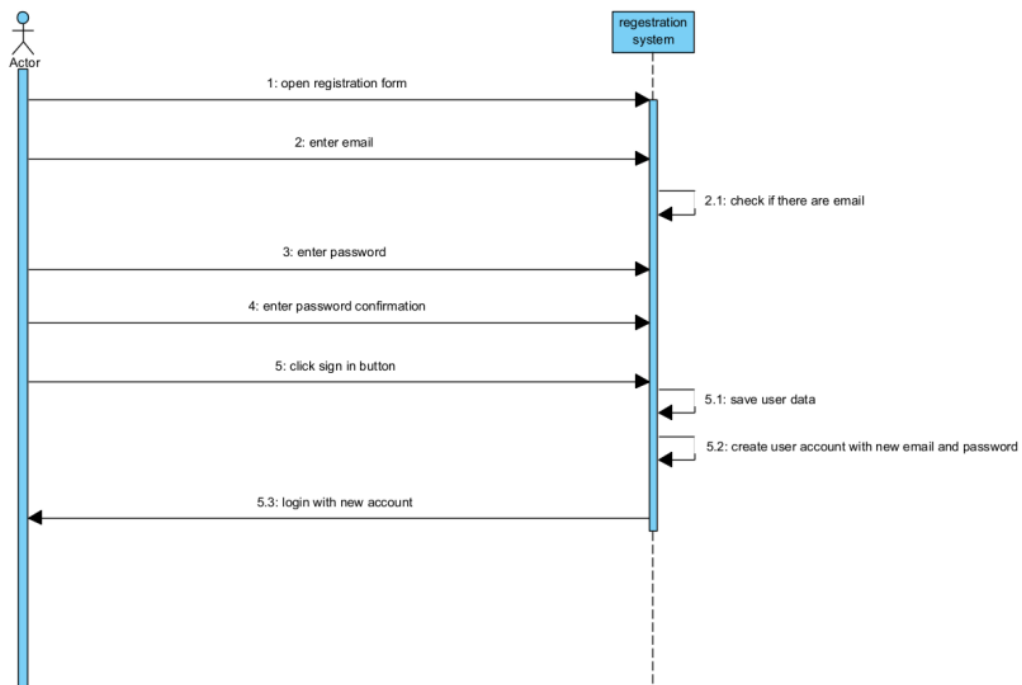
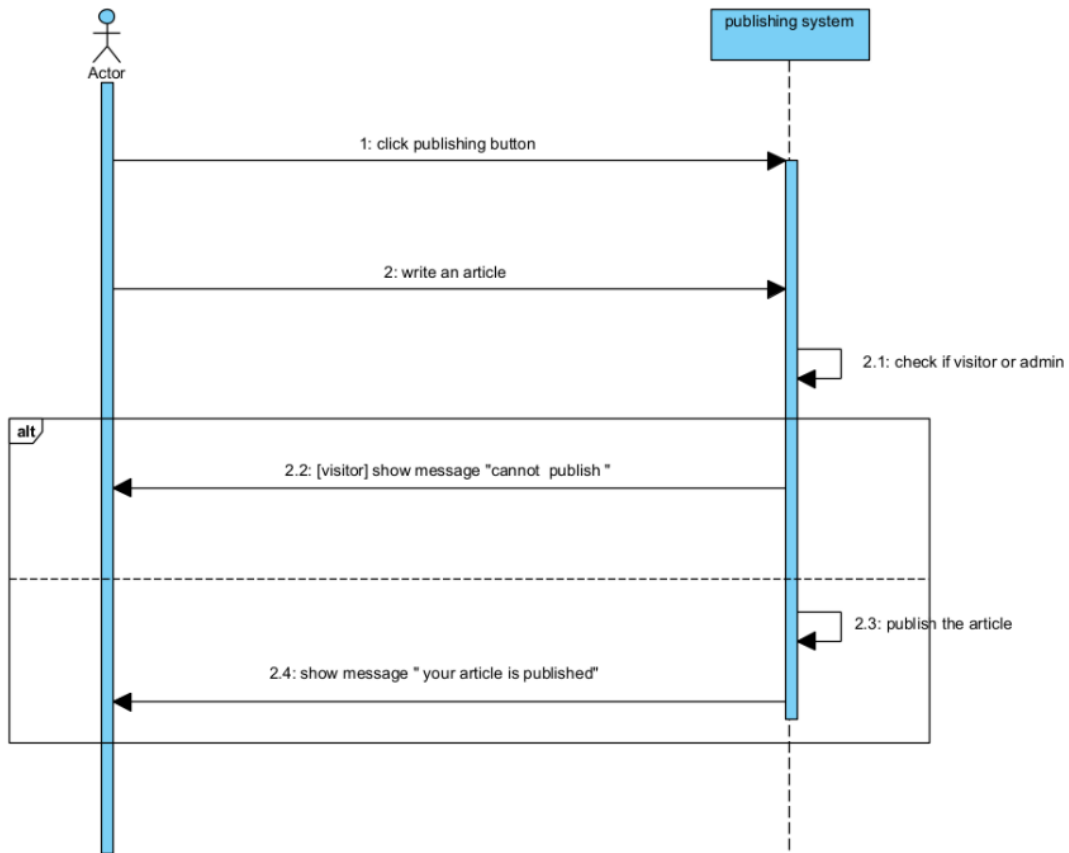


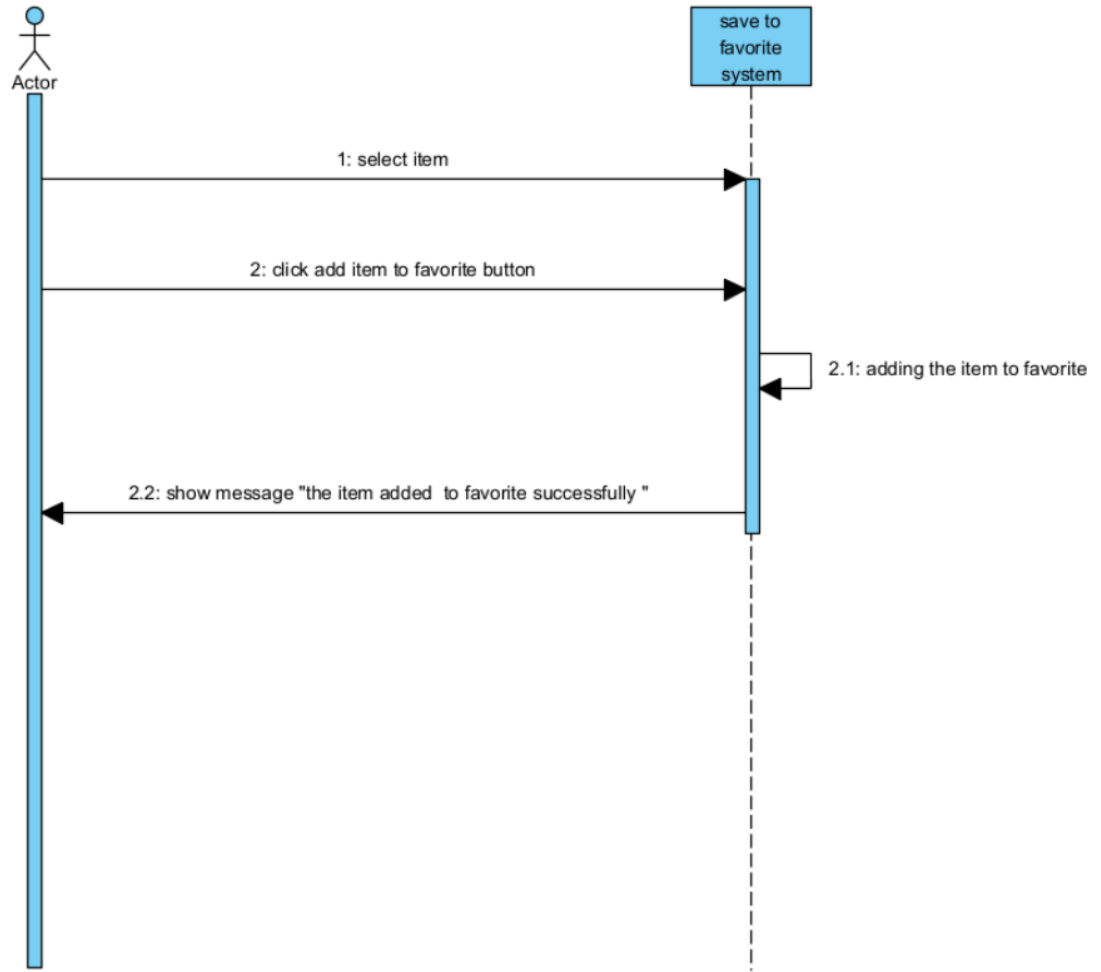


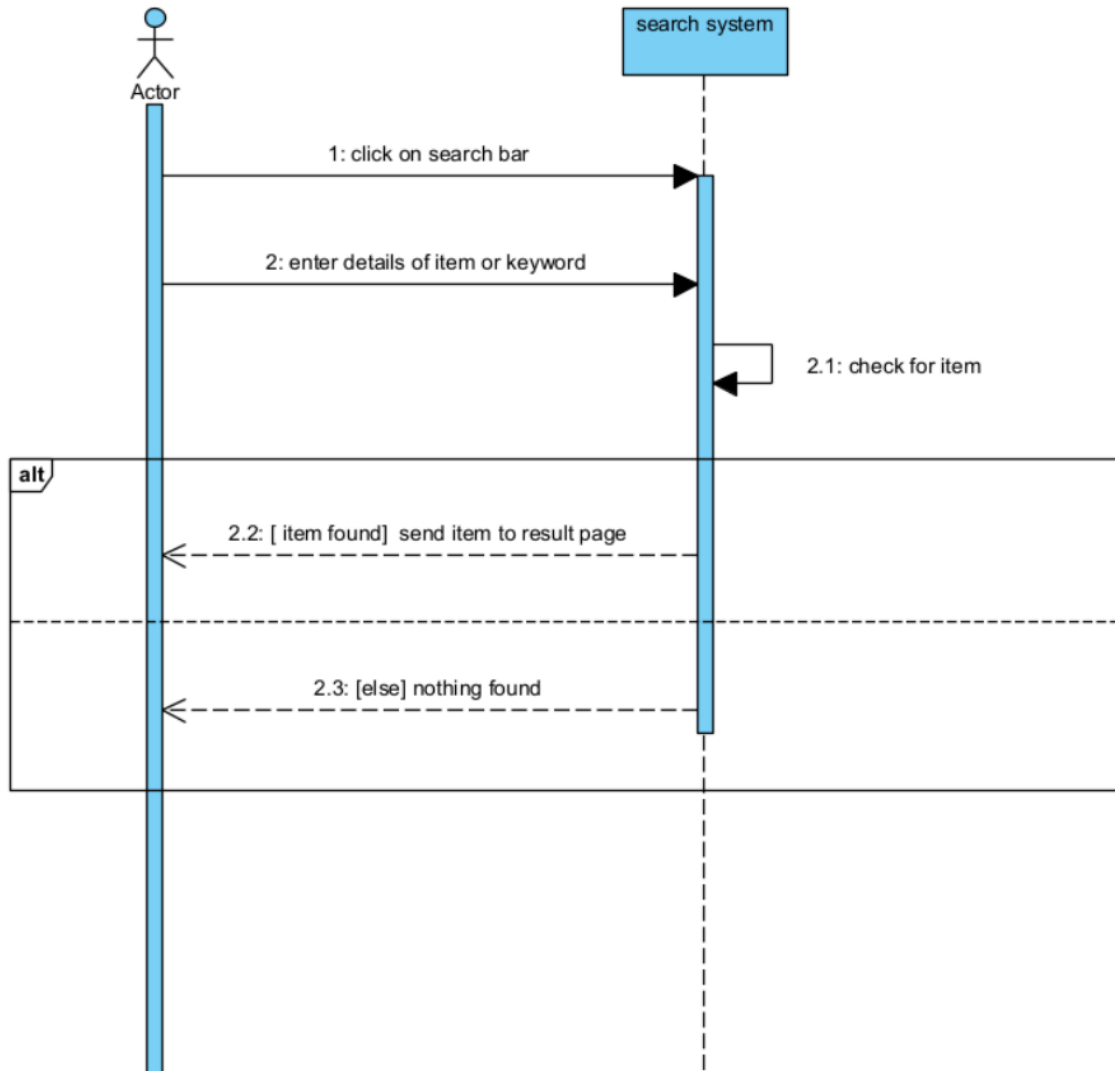


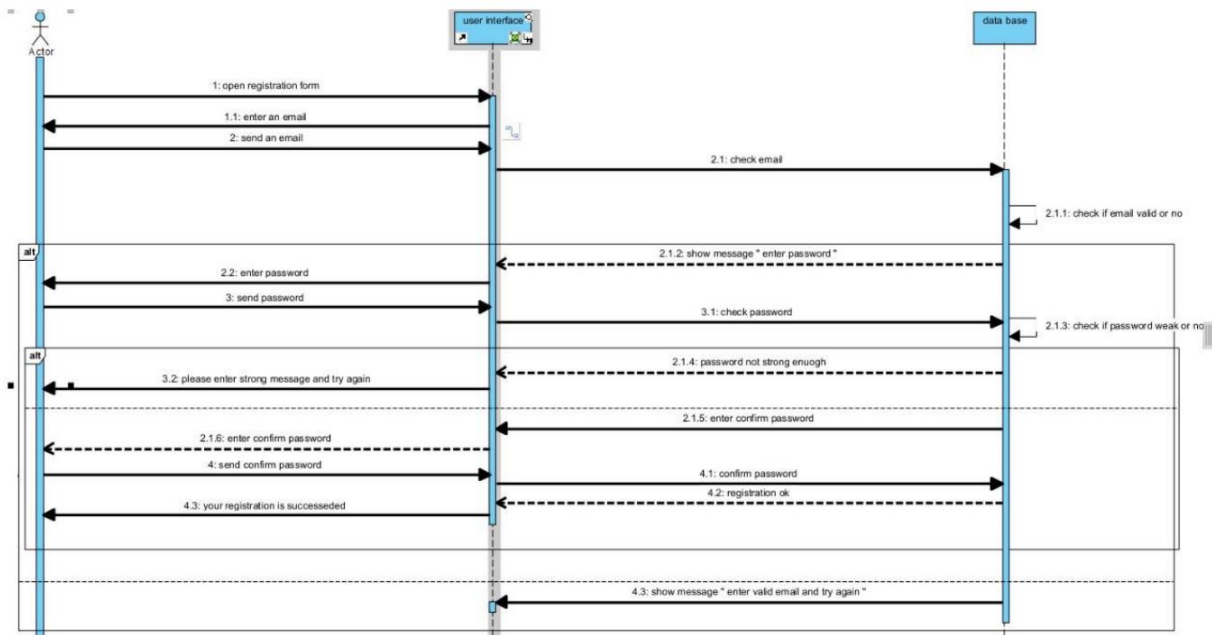
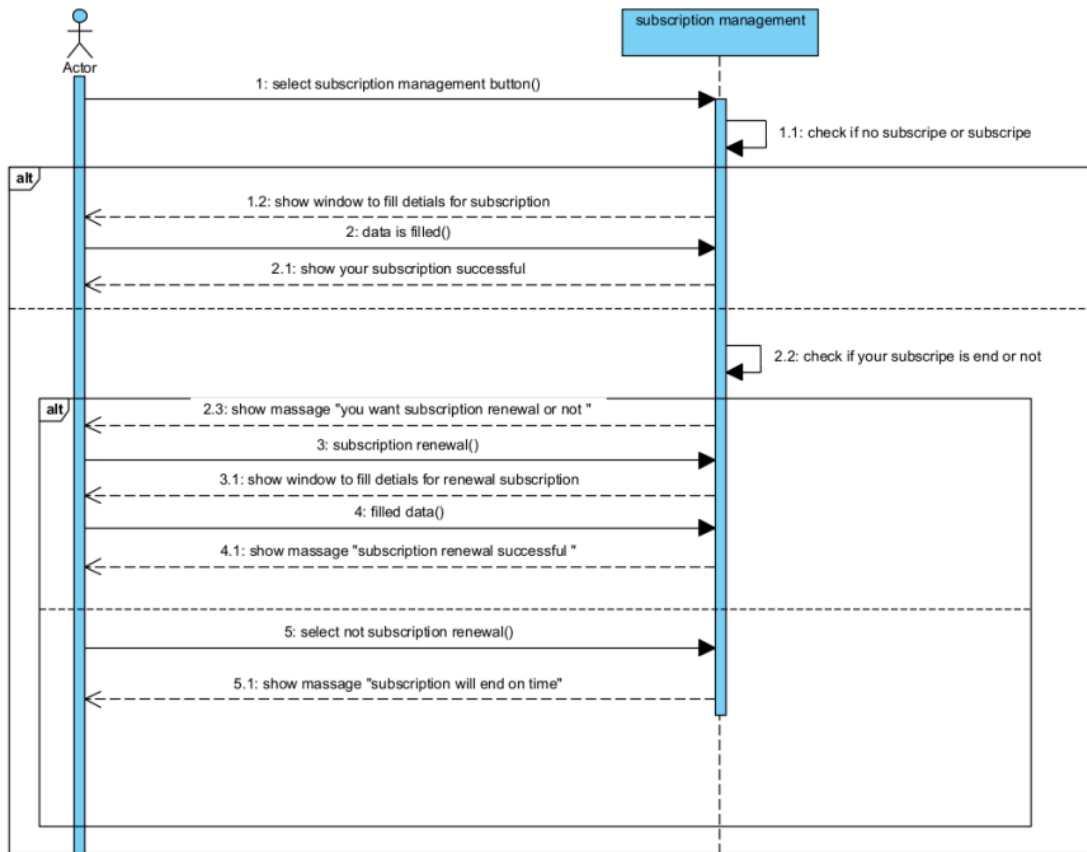




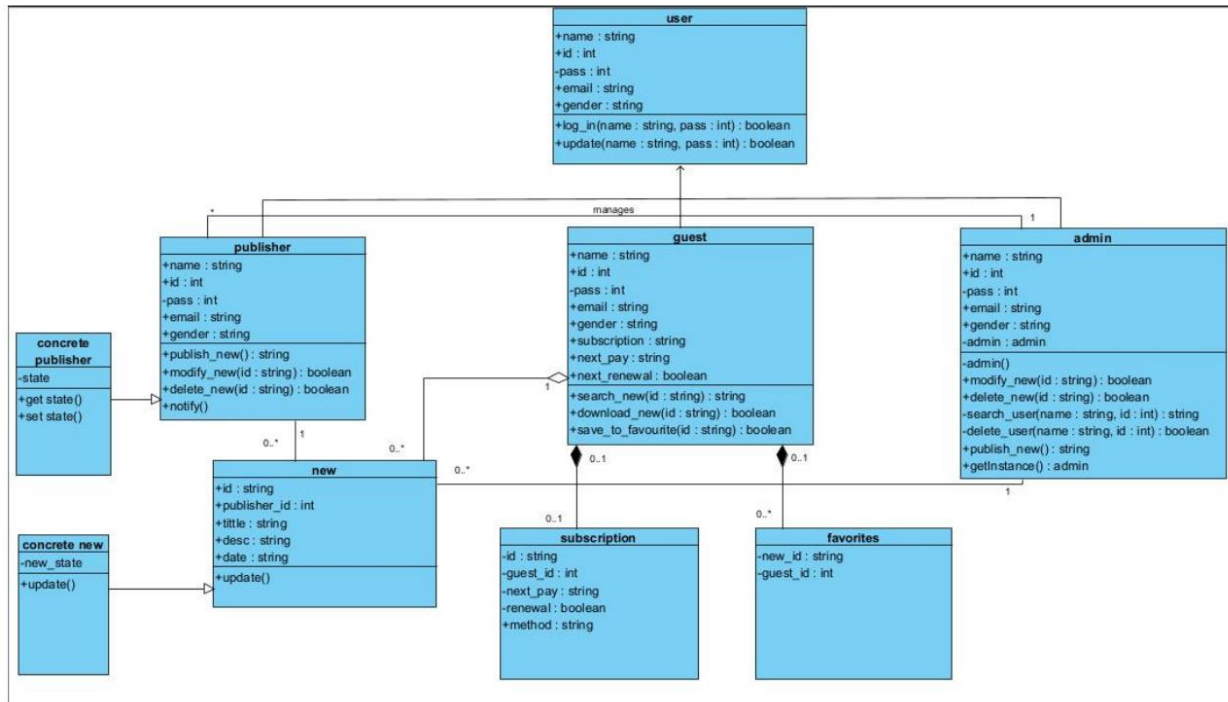
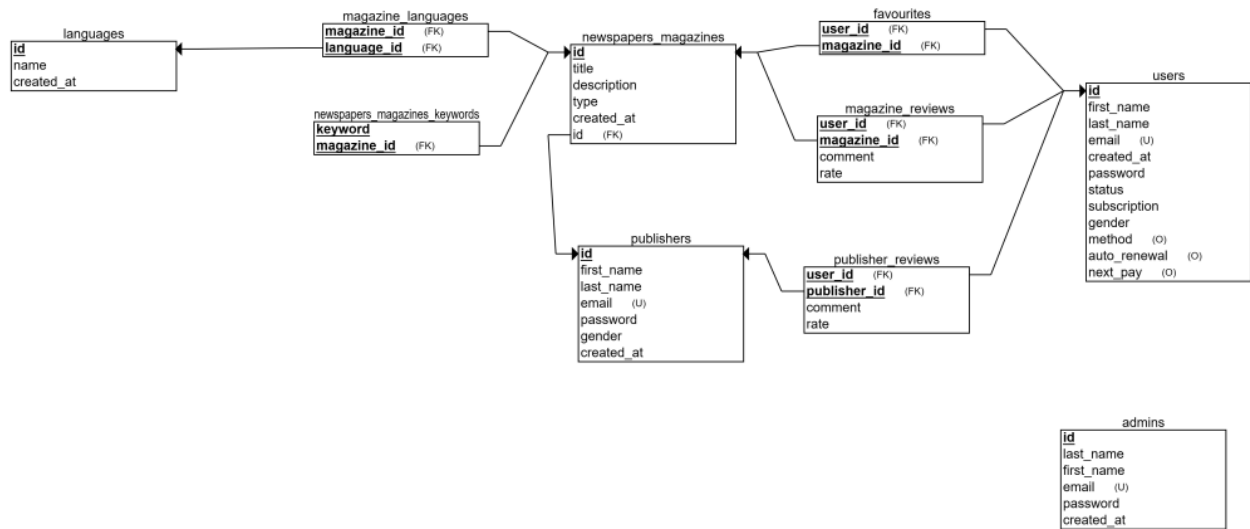


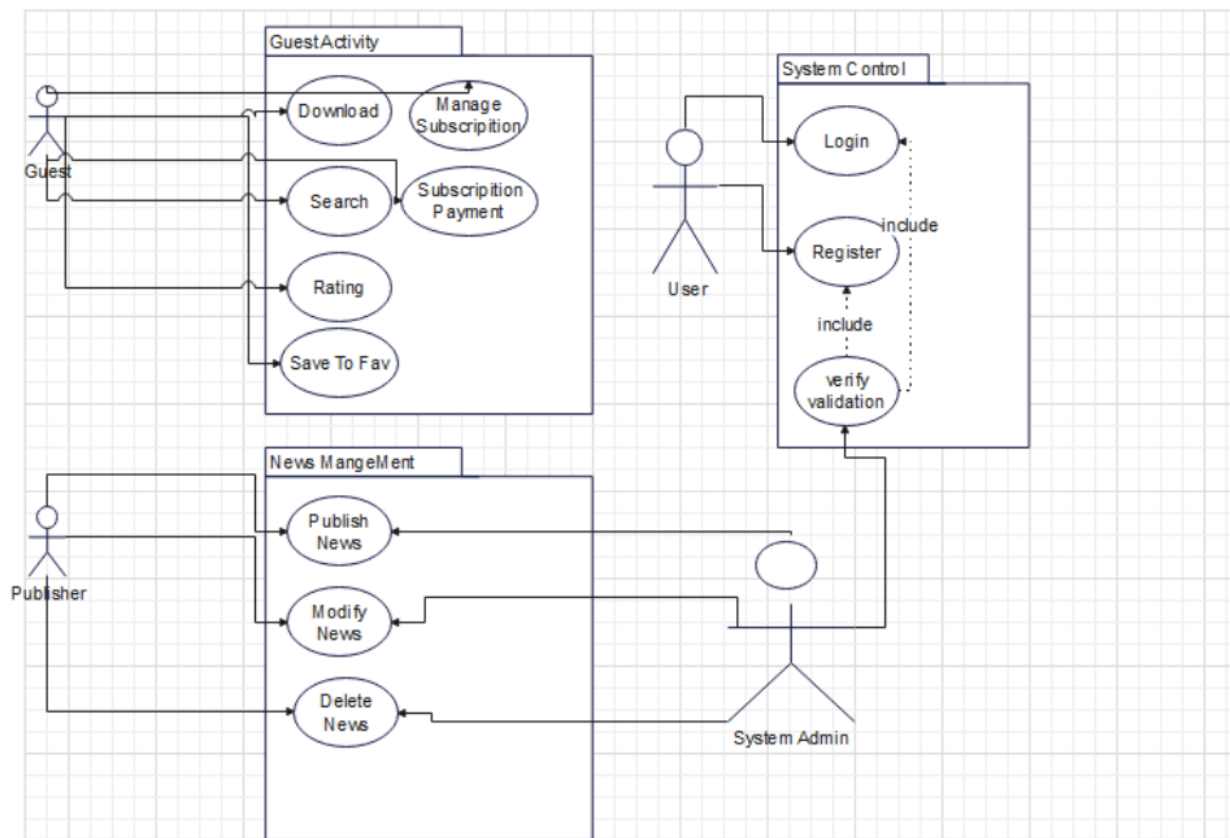
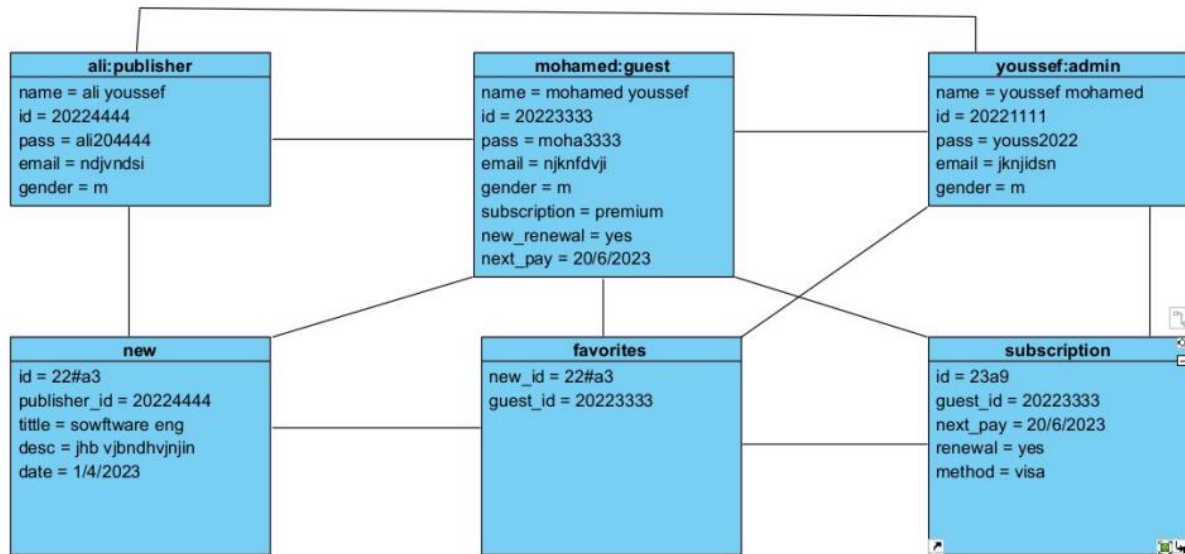




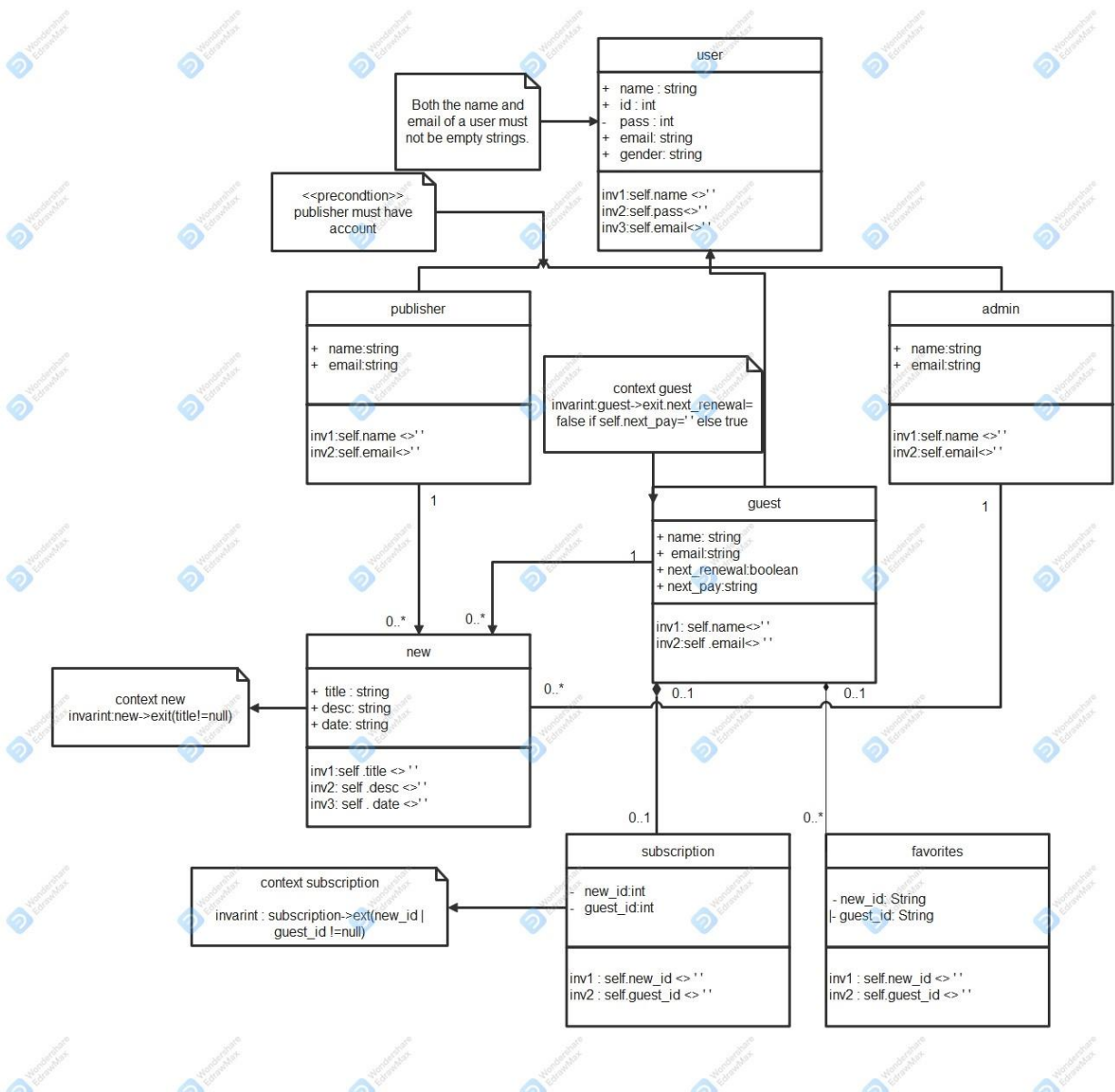


Class Diagram





OCL Diagram



SELECTED DESIGN PATTERNS

CREATIONAL: SINGLETON PATTERN

context : It is very common to find classes for which only one instance should exist

example : admin class

problem : How do you ensure that it is never possible to create more than one instance of a admin clas

s. And provide a global point of access to it.

forces : public constructor cannot guarantee that no more than one instance will be created.

The admin instance must also be accessible to all classes that require it,

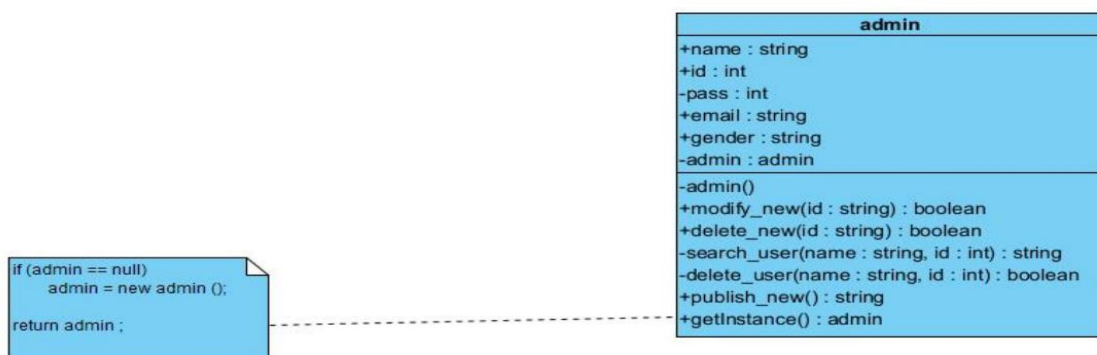
therefore it must often be public.

solution : Have the constructor private to ensure that no other class will be able to create an instance of t

he class admin.

Define a public static method, The first time this method is called ,it creates the single instance of the c

lass “admin” and stores a reference to that object in a static private variable.



SELECTED DESIGN PATTERNS

STRUCTURAL: DELEGATION PATTERN

context : publisher class has 3 methods and admin class has the same 3 methods

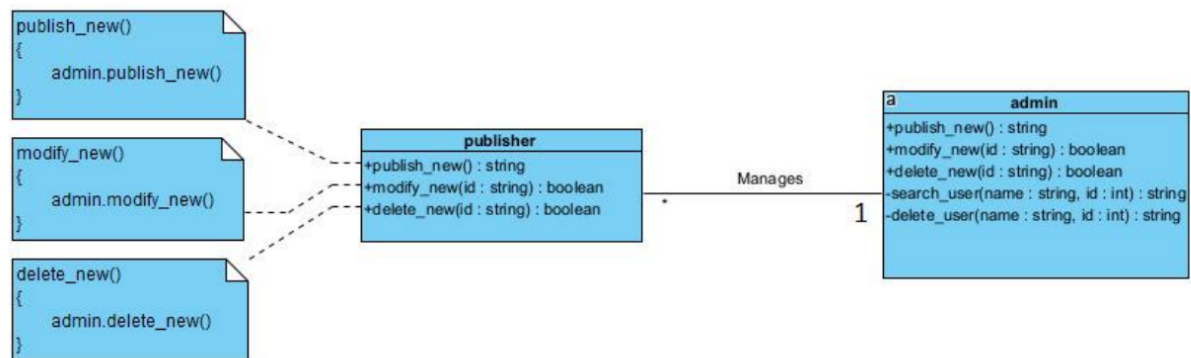
problem : we need to reuse the methods that is inside admin class in publisher class

Forces : we want to minimize development cost by reusing methods

solution : make an association between publisher class and admin class . then , The 3 methods

(publish_new - modify_new - delete_new) in the publisher class calls the same 3

methods in the admin class to perform the required task.



SELECTED DESIGN PATTERNS

BEHAVIOURAL: OBSERVER

Context:

- When partitioning a system into individual classes you want the coupling between them to be loose so you have the flexibility to vary them independently.

Problem:

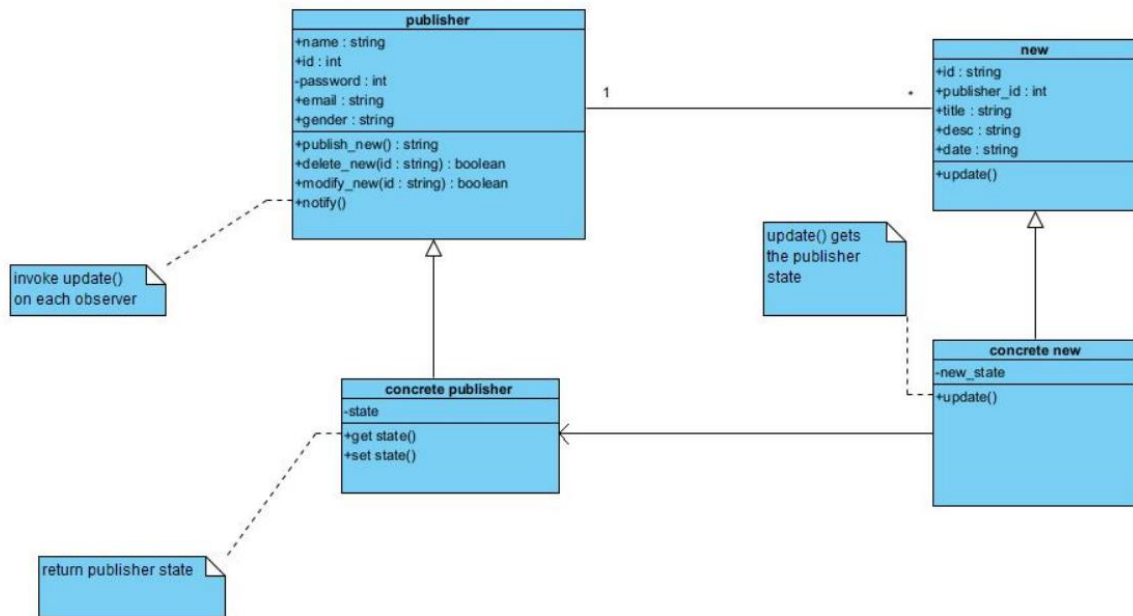
- A mechanism is needed to ensure that when the state of the class (publish) changes the class(new) is updated to keep him in step.

Forces:

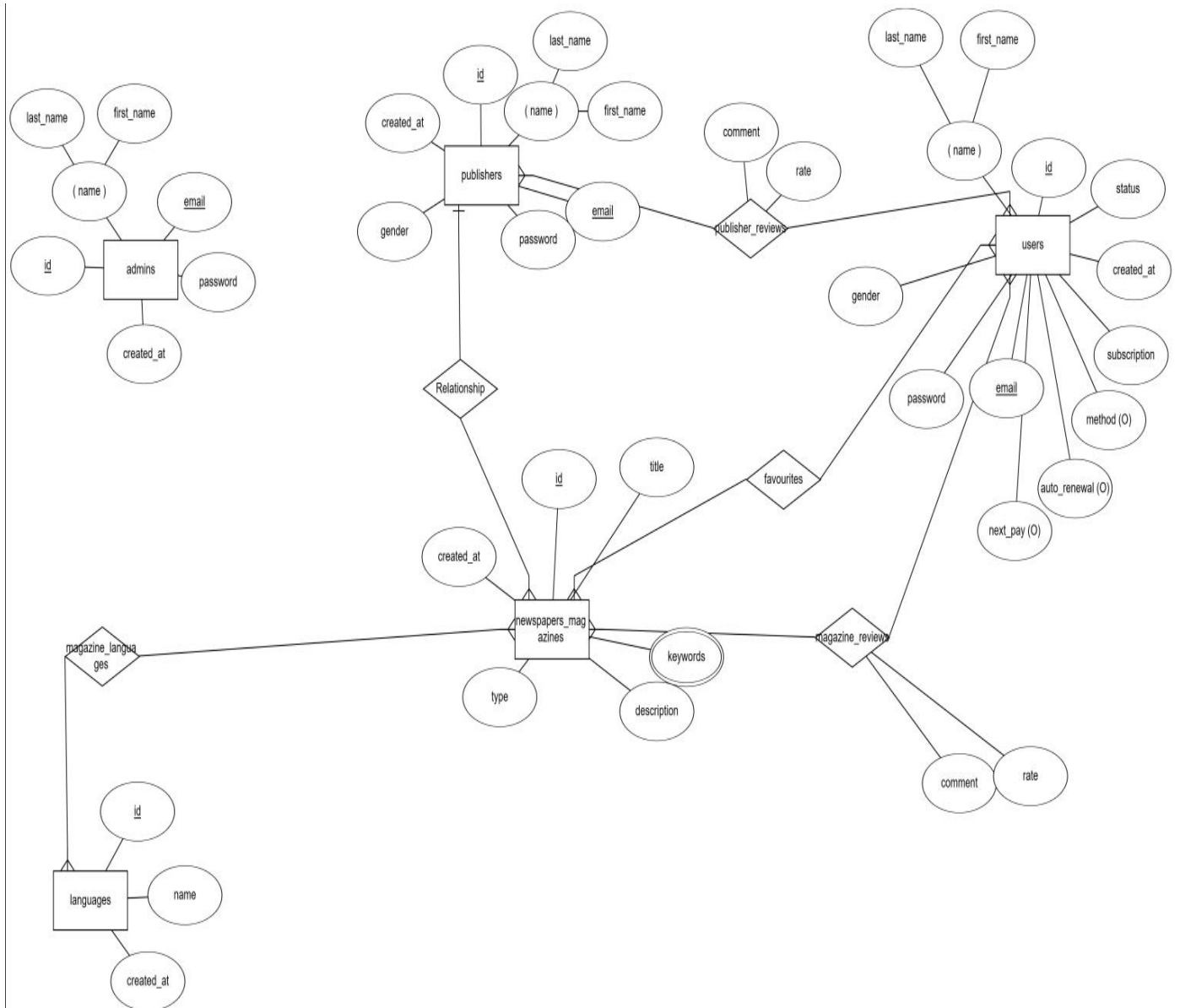
- The different parts of a system have to kept in step with one another without being too tightly coupled.

Solution:

- One object has the role of the subject "(publisher)" and one or more other objects the role of observers"(new)". The observers register themselves with the subject, & if the state of the subject changes the observers are notified & can then update themselves.
- we will use the Pull Model : where the subject simply notifies the observers that there have been changes, and it's the responsibility of the observers to find out the details they need to update themselves



ERD



Use-case description

ID number & name	login
Actor(s)	User that can be either guest or publisher
Goal	The user logs in to my page. We use the site's features.
Precondition	He must have created his own account before.
Postcondition	After entering his correct data and logging in, show him a welcome message, and then he starts using the site with all its features.
Main success scenario	<ul style="list-style-type: none">1) First, the user enters the username.2) the user enters the password for his account, and the data must be correct,3) he clicks on the login button4) welcome message appears on the page,5) he begins using site.
Extensions	2.1) change his password 2.2) click "forgot password " if user forgot his password

ID number & name	register
Actor(s)	User that can be either guest or publisher
Goal	create a new account for the user so that he can use the features of the site and interact with it.
Precondition	Non
Postcondition	After that, all the data and the creation of the account. The user is transferred to the login page. Then he logs in with the new account and uses the features of the site and starts using it Thus the username chosen by this user has been reserved It cannot be used by another user..
Main success scenario	<ol style="list-style-type: none"> 1) The user clicks on create a new account 2) The page turns it into a page. the registration 3) The user puts the name. 4) He puts. Date of birth. 5) He puts the password consisting of a specified number of letters and numbers, not less than them 6) He puts the e-mail name of his account. 7) He clicks on finish.

ID number & name	Search
Actor(s)	Guest
Goal	I search for an article, a piece of news using its .title or article type.
Precondition	User must be logged in.
Postcondition	The search results show which the user was looking for.and its results are similar
Main success scenario	<ol style="list-style-type: none"> 1) The user clicks on the search field. 2) Then he writes what he wants to find. 3) Then all possible search results appear 4) The user chooses the desired result 5) Then it appears on the page.
Extensions	<p>2.1) Can be searched by type.</p> <p>2.2) Using. the word for the news.</p>

ID number & name	Download
Actor(s)	Guest
Goal	Download Articles and news that the user wants.
Precondition	User must be logged in & premium subscriber
Postcondition	The format of the selected item starts in the user's download list. It is available in any state, even if it is offline.
Main success scenario	<ol style="list-style-type: none"> 1) First, the user selects and selects the item to be downloaded. 2) Secondly, the user starts by clicking on the download tab. 3) The download starts in the list of downloads in the user account. 4) The .user uses the .item he downloaded at any time.

ID number & name	Save to favorite
Actor(s)	Guest
Goal	Adding titles and news that the user is interested in in his favorites list.
Precondition	User must be logged in.
Postcondition	The selected item is added to the favorites list.
Main success scenario	<ol style="list-style-type: none"> 1) The user selects and selects the article and news to be added to the favorites list. 2) The user clicks on the heart sign 3) The selected item is added to the list of favorites.

ID number & name	Manage subscription.
Actor(s)	Guest
Goal	Users manage their subscriptions, including turning off auto-renewal If a subscriber.
Precondition	User must be logged in & have an account & the system Verifies if it is subscribed or not.
Postcondition	canceling the subscription, all features on the site will be disabled or when re new it will open the features again
Main success scenario	<ol style="list-style-type: none"> 1) The user logs into the account settings. 2) He chooses to cancel the subscription, or he chooses to renew the subscription 3) .turn it into the page. 4) He confirms if he wants to unsubscribe. 5) Enter the password to confirm

ID number & name	Premium subscription
Actor(s)	Guest
Goal	Ah, the user subscribes to the Premium system to take advantage of its features.
Precondition	The user must have created an account and logged in.
Postcondition	He is transferred to the payment page. Then he chooses the appropriate method and then activates the subscription.
Main success scenario	<ol style="list-style-type: none"> 1. The user logs in 2. Opt-in. Premium subscription slot. 3. The user chooses the appropriate package for him 4. He enters the appropriate payment method for him 5. Press confirm by entering the password. 6. does the subscription.

ID number & name	Publish news
Actor(s)	Publisher
Goal	And publishing news and articles by the publisher.
Precondition	The user must have a publisher account that can publish and have validity.
Postcondition	The news is added in the latest news section and in the section related to the type of news so that the user can easily access it.
Main success scenario	<ol style="list-style-type: none"> 1. The user logs in with his account. 2. The publisher uploads the news and article he wants to publish. 3. He chooses the type of news. 4. Then press the line on the Publish button. 5. Then, the article and the news are displayed on the site.