Title of the Project: Real Estate Management System

Group Number: 06

Group Members:

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Introduction

System analysis and design is the process of planning, analyzing, designing, identifying, resolving, and finally implementing system-related problems for business system. Systems, processes, and technologies are the most important elements to focus on in system analysis and design. Before building an actual system, we first need to understand the importance of the system, its business value, the key functions of the system that make it easy to navigate, how this system works, and so on.

The appropriate execution of System Analysis and Design has been done in our undertaking "Real Estate Management System" where sellers and buyers can meet and partake in a virtual shared belief to complete property business without the problem of in-person site visits and scandalous cash exchanges tricks. Individual dealers or purchasers can monitor their property reports and deal with their enlistment just as access data and do activities, for example, adding, changing and eliminating property subtleties. The entry highlights safe exchanges by means of specialists and associated banks. Other than these membership based highlighted promotions are another center trait and fundamental wellspring of procuring of this specific web-based entryway based real estate business.

We identified the business need, business values, system requirements, and restrictions that may be encountered while navigating our system in order to effectively examine our system. Furthermore, we have described our system using various types of diagrams, such as a Usecase diagram to analyze our requirements, an activity diagram to describe the behavior of our system, a sequence diagram to show the messages that pass between objects, a state machine diagram to depict the various states that an object may be in, a Data flow diagram to depict the movement of data between processes, entities, and data storage, and finally, a window navigation diagram to depict how windows will be navigated through our system.

Motivation

Our motivation driving the "Real Estate Management System" was, we needed an entry to give a current property organization an internet based home where purchasers and merchants will actually want to view, trade properties legitimately while being fulfilled by getting to every one of the web-based administrations from the solace of their home.

To eliminate the traditional offline annoyance of finding real estate and reach more potential consumers through a digital system that provides quick and easy access for people who have recently moved to a new location and do not have access to local publications, especially during the ongoing COVID-19 quarantine or pandemic. This way you don't have to make repeated phone calls and travel home.

In addition, the existing system is greatly simplified as it only provides basic real estate information and details with no guarantees or guarantees for successful commerce. Our system, on the other hand, features 3D tours, interactive image galleries that are part of a media research system, wish lists, system language selection, advertising package subscriptions, built-in loan calculators and verified agent services.

In a nutshell, this project has chosen to introduce new features to the field of online real estate system, eliminate all the common dilemmas and anxieties of online real estate transactions at the commercial level, and present a safe and efficient way to do business.

System Request

Project Sponsor:

Chief Executive Officer - Navana Real Estate Ltd.

Business Need :

- When purchasing a property, it ensures that all transactions are valid and legal.
- Eliminate the traditional offline hassles of property hunting, a process that eliminates the need for frequent phone calls and site visits.
- The System makes buying, selling, and renting properties easier for customers.
- By providing a quick and easy way to access information, digital systems can reach more potential customers who have moved to a new city and also do not have access to local publications.

Business Requirements :

Website Features:

- Detailed and latest information about the property with images, map views and 360-degree video tours of the property.
- Compare between existing several properties.
- Integrated query service with an active customer care agent for urgent queries of the customer.
- Loan calculations, legal policies, interior recommendations, and property-related consultations service.
- Hand-to-hand transactions as per customer's requests.

User Features:

- Provide feedback or rate other sellers, properties and services on the system.
- Verified login / sign up system using NID / Passport number for improved security.
- Edit / Update their personal profile information.
- Can Select language according to their preferences.
- Buyers can inquiry about their specific properties.
- Sellers can add/delete advertisements and edit property information.

Admin Features:

- Approve requests of Buyers and Sellers.
- Can remove, edit and update information from the database.
- Can add, delete property information.

Business Values :

Tangible Values-

- The company 5% of the transaction between the seller and the buyer and a subscription fee for advertising and increase sales by 5% of annual offers or sales rate to attract more clients.
- The company receives income from the featured advertisements if the customer wants to sell his property urgently, so that they can apply for a special advertisement for the sale of their property, which will be displayed on the home page of the system for 15,000tk per month.
- Reduce company costs for additional staff in Tk 80,000/ per month as the on-site agent no longer has to show the property to the client.

Intangible Value -

- Improved customer service.
- Competitive position than offline system.
- Satisfaction of customers.

Special Issues or Constraints:

- Getting acceptance from the banks for property or house loan for clients.
- Supporting genuine security system for the management website through NID/Passports of clients.
- Managing original photos as majority of ads do not have original photos.
- Updating the property information 24/7 as 90% people do not remove the ads even after selling to others.
- Maintaining a balanced price because some people are unaware of the current price or the property or flats in their local area.
- Supporting legal services because many broker's post ads as an owner instead for posting as a broker.
- Maintain a proper authorization as there might be some fake listings or fake/incomplete information given by the owners.
- As clients will come from all across the country, the system must be customized by area.

Requirement Analysis

1.System Features:

1.1. Query-

Functional:

1.1.1. The system will feature a chatting section where users can ask about their queries or post discussions.

1.1.2. For desired properties buyer can ask for more details through email or call hot lines.

Non-functional:

1.1.3. User will be connected through agents for their queries via emails or hotline 24/7.

1.2. Loans-

Functional:

1.2.1. This subsection will feature a service where users can find the property's description along with requirements for loan.

1.2.2. The system will feature a loan submit request as per users convenience.

Non-function:

1.2.3. The system will have a loan calculator where the property ad and description will be displayed to help the client calculate. The loan calculator will be on every page for users convenience.

1.2.4. The loan requests will be submitted to affiliated banks for client's benefits.

1.3. Law/Policy-

Functional:

1.3.1. The system will feature a legal policy where users can see the rules and regulations of buying or renting the properties.

Non-functional:

1.3.2. If customer wants to know about buying policies or renting policies the customer care agents will be connected for client's convenience.

1.4. Recommendation-

Functional:

1.4.1. Users can see the interior based on their choice and recommendations.

1.4.2. The system will have property measurements or flat's size so that clients can navigate through their choices.

Non-function:

1.4.3. Buyer can take consultations through agents on the customer care for their desired property.

1.4.4. Buyers can sort the search result based on property price.

1.5. Compare-

Functional:

1.5.1. The portal will feature an interactive comparison section where a user can select a bunch of property.

1.5.2. Buyers can save his favorite properties to wishlist to view them later.

Non-function:

1.5.3. The buyers can select type and compare between the selected properties as their convenience.

1.5.4. There will be comparison photos related to any similar properties.

1.5.5. There will be a MAP attached to the details on the property description so that users can check the property location through a global map.

1.6. Rate-

Functional:

1.6.1. The system will feature a rating section where users can provide feedback.

Non-function:

1.6.2. Buyers can rate other sellers or provide feedback according to their preferences.

1.6.3. Buyers will be able to rate the service as they see fit or they can provide feedback for better performance.

1.6.4. Buyer also can rate the service they could get from the system,

1.7. Property Management-

Functional:

1.7.1. The system will have a feature where the necessary information can be added, removed, updated on the respective properties in exchange for a digital bond and these requests will be sent to the administrator for approval.

Non-function:

1.7.2. To make user interaction engaging the website will feature an attractive image gallery and 360° video tour which will be provided by the advertisement poster by default.

1.7.3. if anyone declares that they are providing valid information and that legal action will be taken against them if necessary the information provided by them turned out to be false.

1.7.4. The administrator will control the system database. If information needs to be changed, only the administrator has permission to make those changes.

1.7.5. If users want to add, update or remove information on their profile, property, post ads, admin can approve these requests after proper filtering.

1.7.6. Admins can approve property details as length, size, price, pictures, 360° pictures or videos etc of the properties in databases provided by the seller.

1.7.7. Advertisements will be updated every 24 hours. Any pending advertisements will be added after every 12 hours.

1.8. Fix Showcase Time-

Functional:

1.8.1. The system will feature a showcase time so that seller can schedule a showcase meeting.

1.8.2. The system will have a feature where seller can organize a meeting for the payments after booking the desired property of the buyer.

Non-functional:

1.8.3. Seller can schedule showcase time for more details.

1.9. Advertise-

Functional:

1.9.1. The website feature an advertisement section updated by the sellers.

1.9.2. The system will have an option for urgent sell. For urgency, seller can apply for a special advertisement for the sale of their property, which will be displayed on the home page of the system.

Non-function:

1.9.2. The sellers will subscribe to advertisement packages according to their roles.

1.9.4. For urgency the sellers have to manage extra fee related to the property.

2. Other Non-functional Requirements:

2.1. Operational:

2.1.1. The website will run through personal computer or tablet or smart phones. It will be responsive for Androids as well as Ios devices.

2.1.2. The user can easily search, view, add and maintain their property in a quite efficient manner from application interface.

2.2. Performance:

2.2.1. The drop-down menu on the home page does not delay more than a second before displaying the next portal page, and the user can boot the system in less than 2 milliseconds.

2.3. Security:

2.3.1. The system allows you to create accounts in a variety of ways while maintaining NID verification internally in all cases to ensure legitimate customers.

2.3.2. Data integrity must be maintained in the event of a failure or failure of the entire system and personal information of buyers and sellers is not shared or used outside the company.

2.3.3. Monetary transactions must be conducted by company representatives that combat online fraudulent practices.

2.4. Cultural and Political:

2.4.1. The company keeps local servers for processing and storing all app-related data in that particular country in accordance with Data Protection Act.

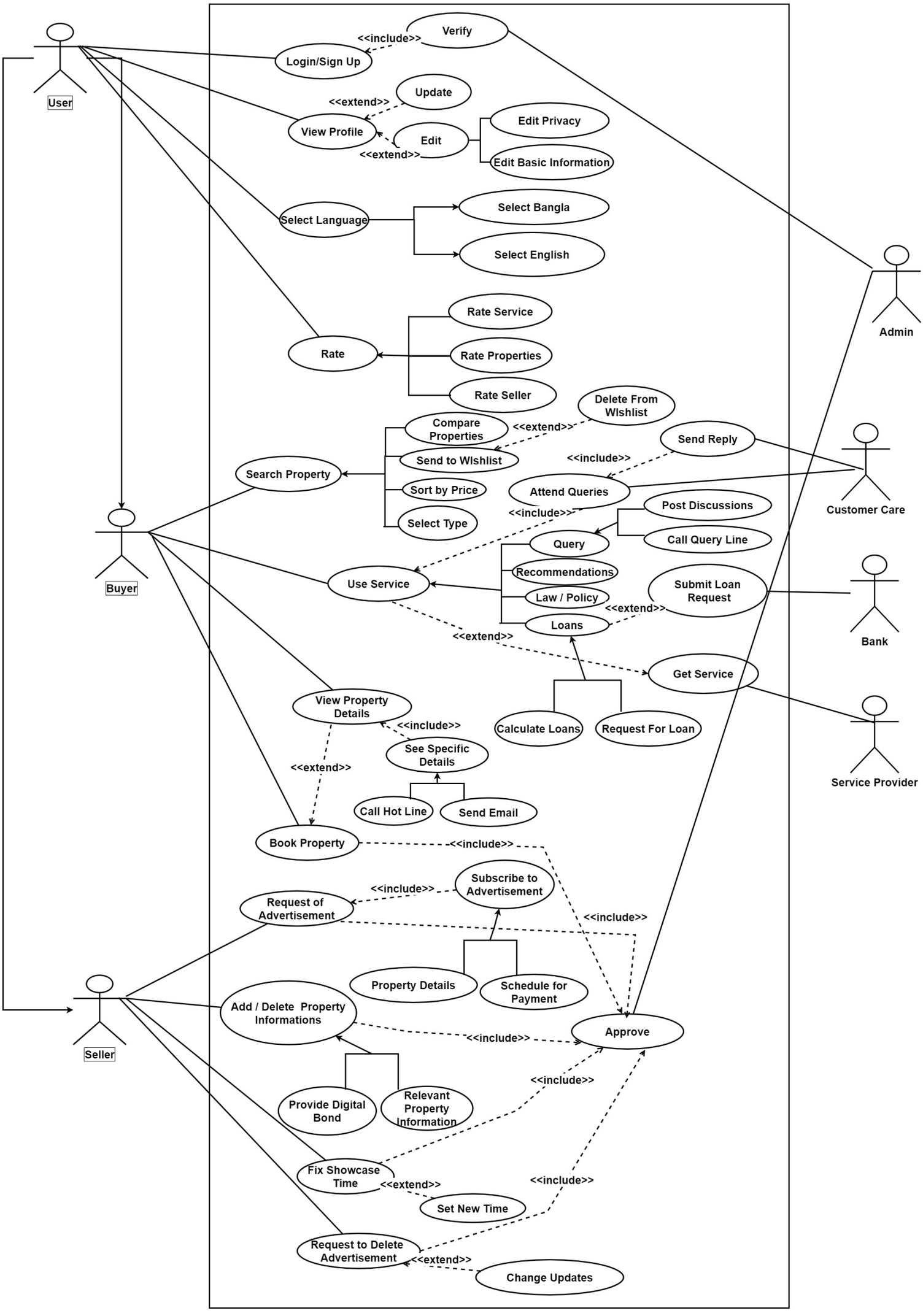
Usage Scenario

On the real estate management system, the "buyer" and the "seller" can select their desired language for viewing the system in Bangla or in English. After selecting the language, buyer can view current announcements on the home page and can log in to his/her profile to access desired property. New users can sign up with a new account using specific information. Users can view and customize their profile as they wish and can edit their privacy and information through EDIT section and update their given information through UPDATE Settings section of users profile. Finally, as one of the common features, users can rate the portal service to provide feedback on the systems experience.

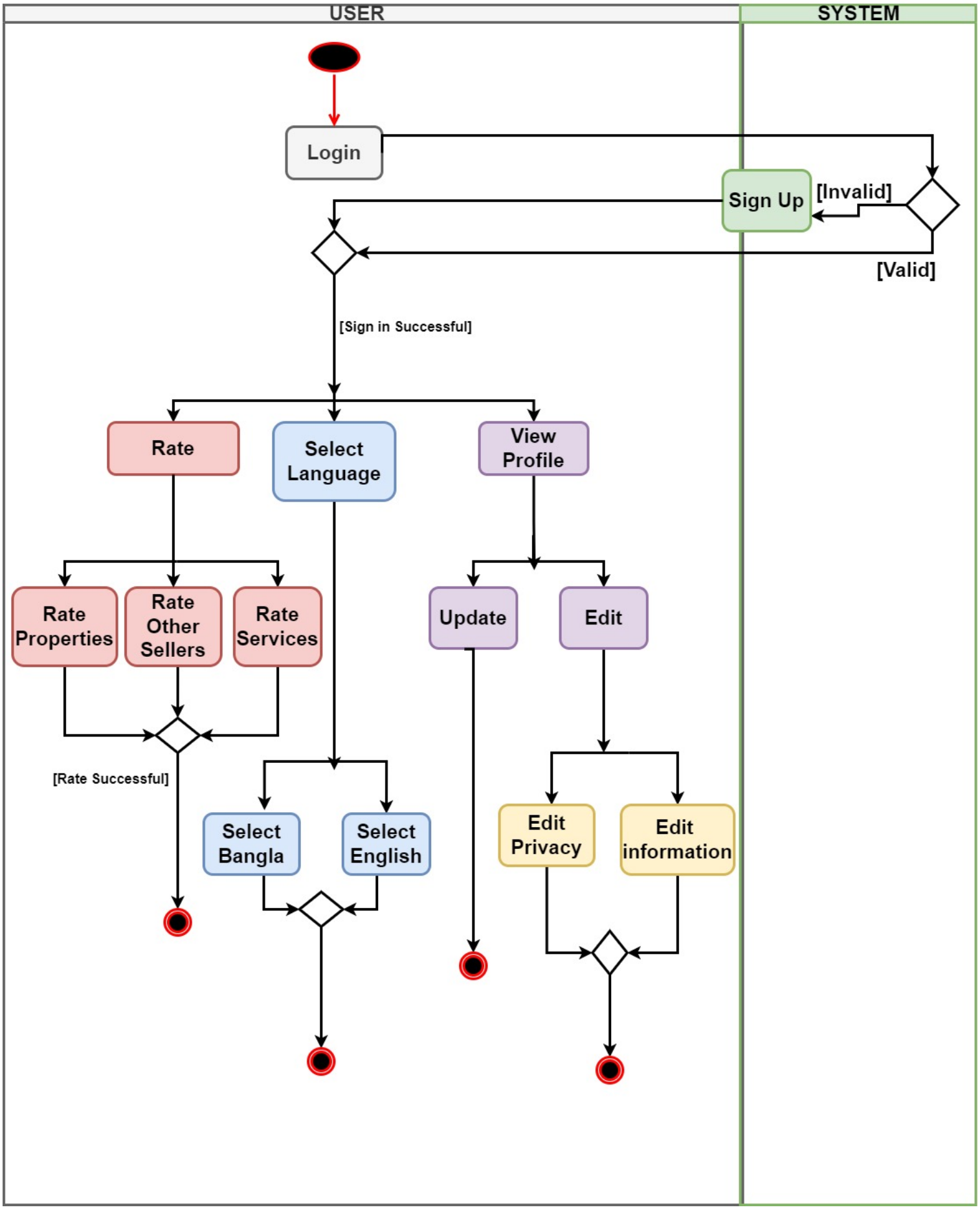
Moreover, the buyers can search for properties, allowing them to sort by price on the search results, compare with other properties, send to wish list the properties they liked and can also select the types as well. Buyers can also call our CUSTOMER SERVICE to check property information and submit important inquiries through email and the Customer Service can assist during business hours, and system administrators are available to answer valuable queries and emails. Specific details of the property can also be requested through the system. From a service point of view, buyers can inspect the inside of their real estate and get loan by submitting requests through affiliated banks.

Lastly, the Sellers can post ads of the properties by subscribing to an AD package and supplying the appropriate property details, which will be confirmed by the admin panel. Furthermore, Sellers will have the ability to add, delete, or amend their property information by circulating digital bonds with valid property information that will be accepted by the admin after approval. In the system's settings, the Seller can also adjust the showcase time of their ads. Finally, they can request that their property listing of ADs be deleted or removed from the system.

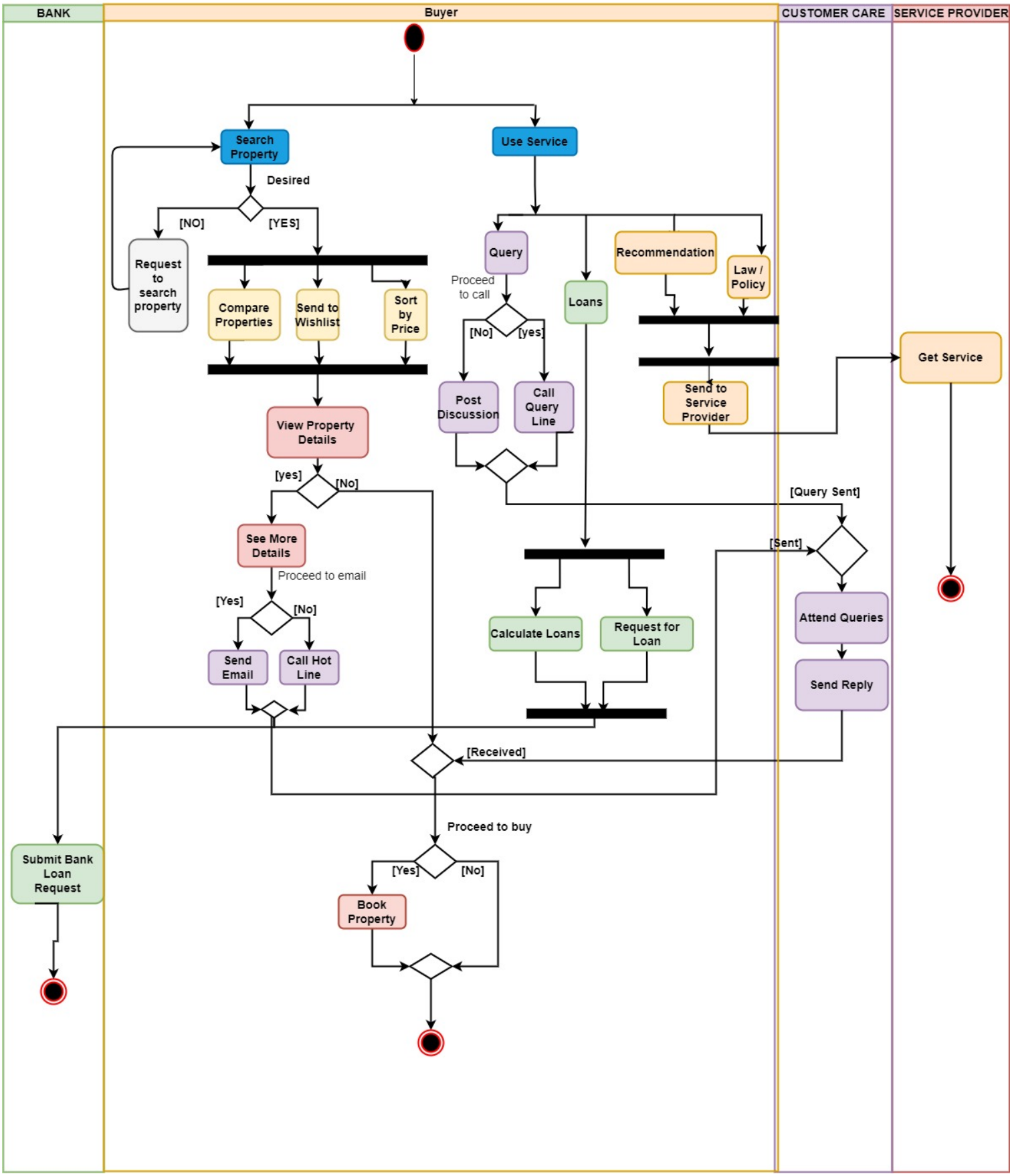
USE CASE Diagram



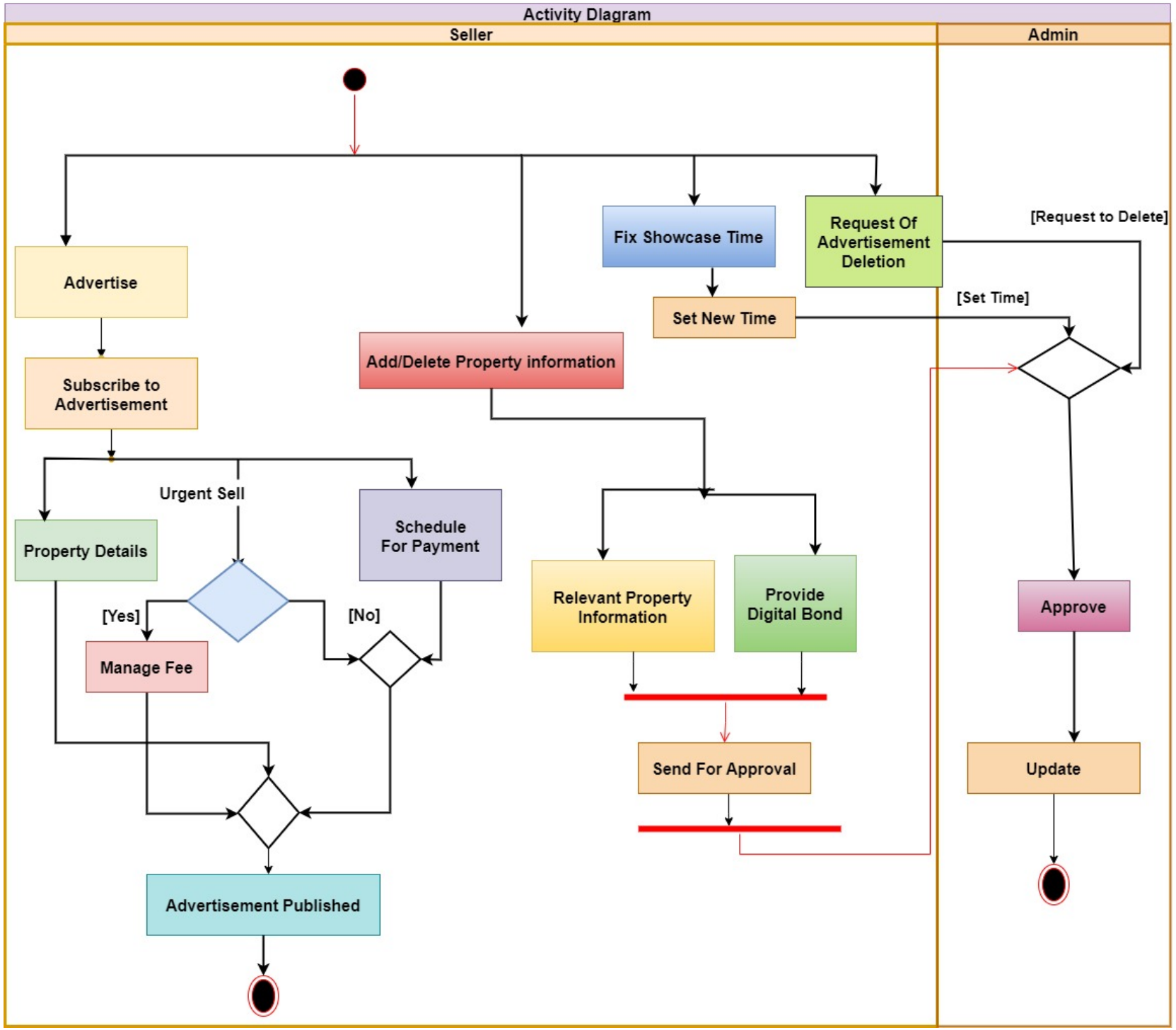
Activity Diagram For USER



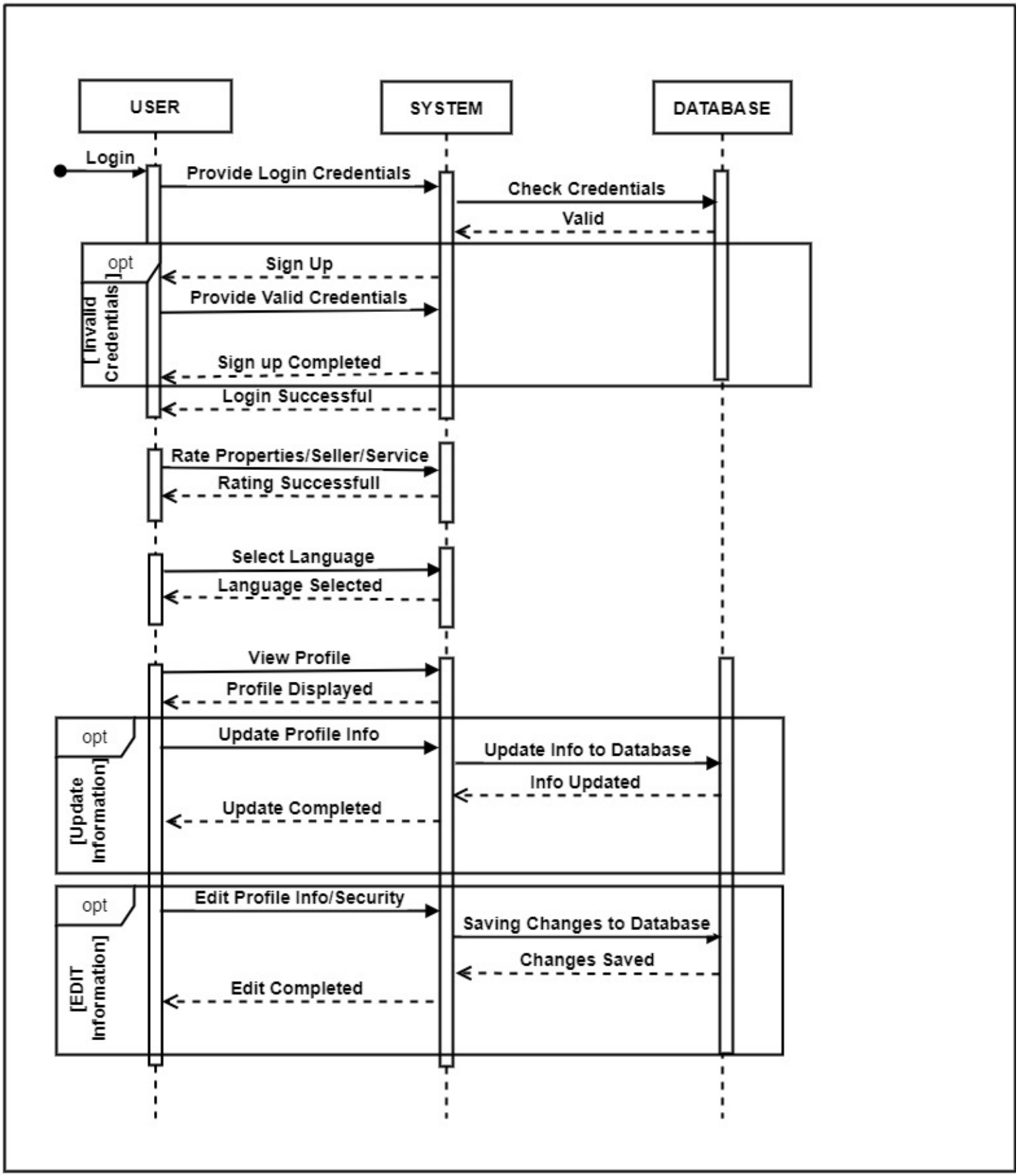
Activity Diagram For BUYER



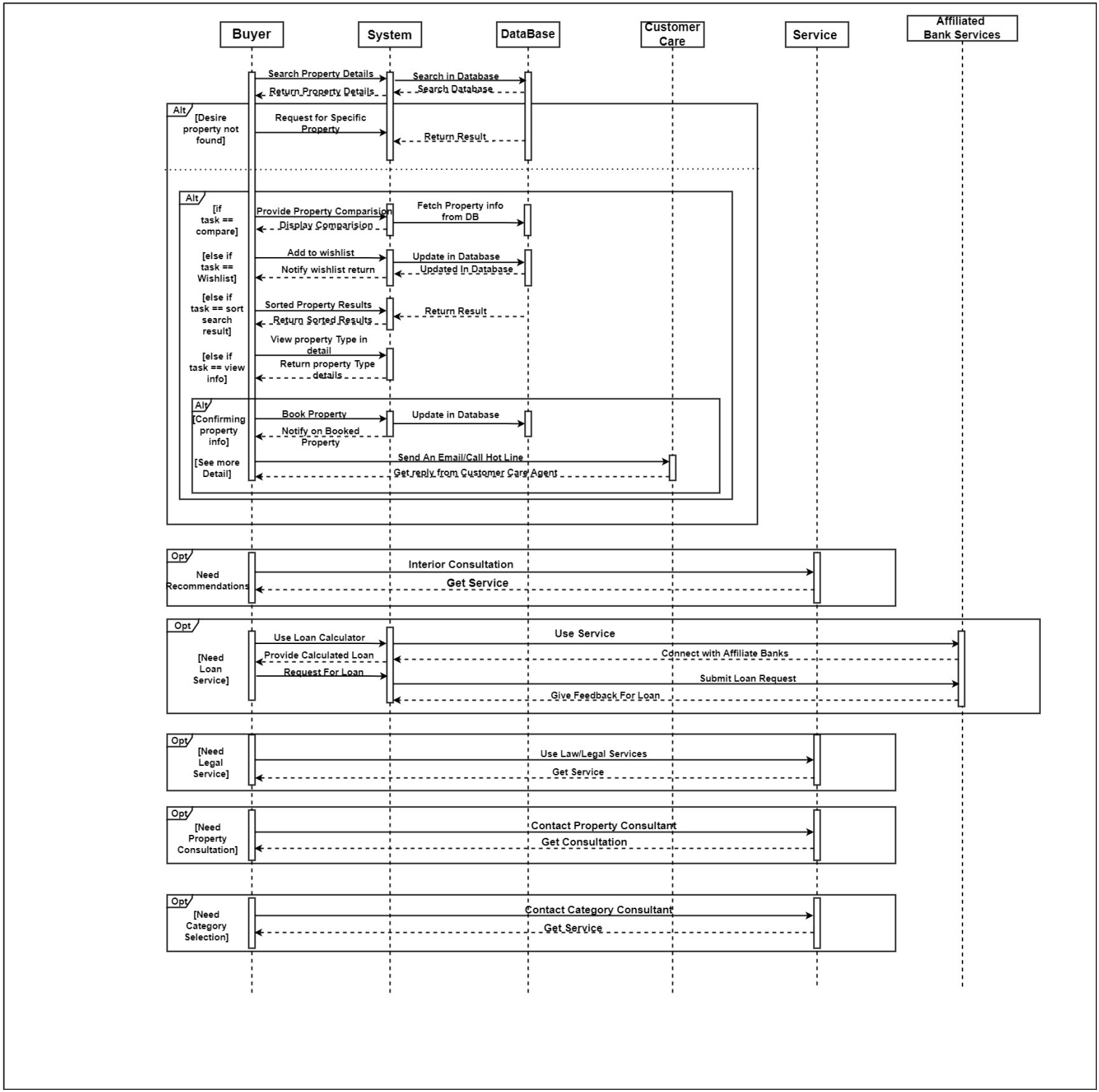
Activity Diagram For Seller



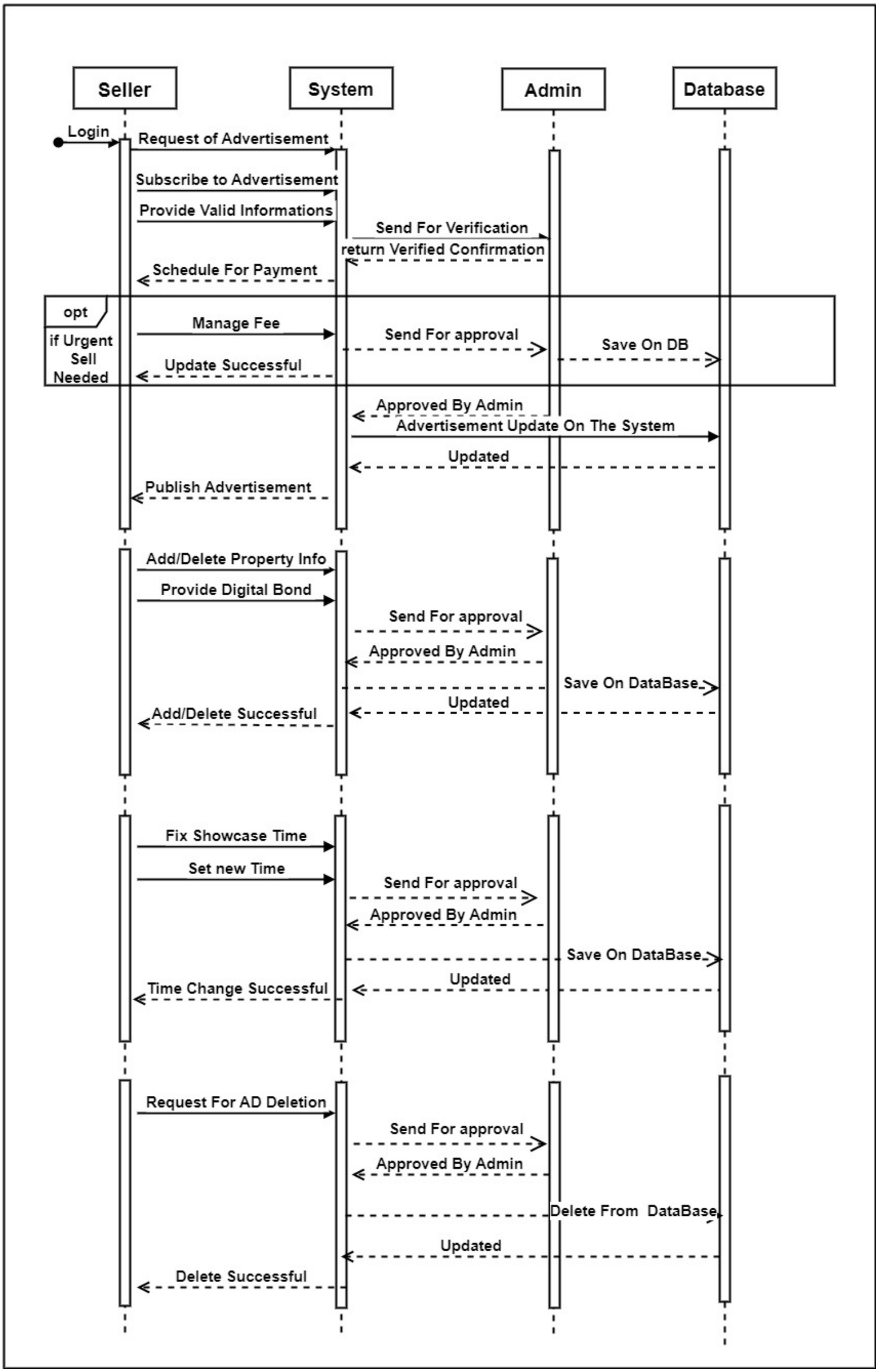
Sequence Diagram For USER



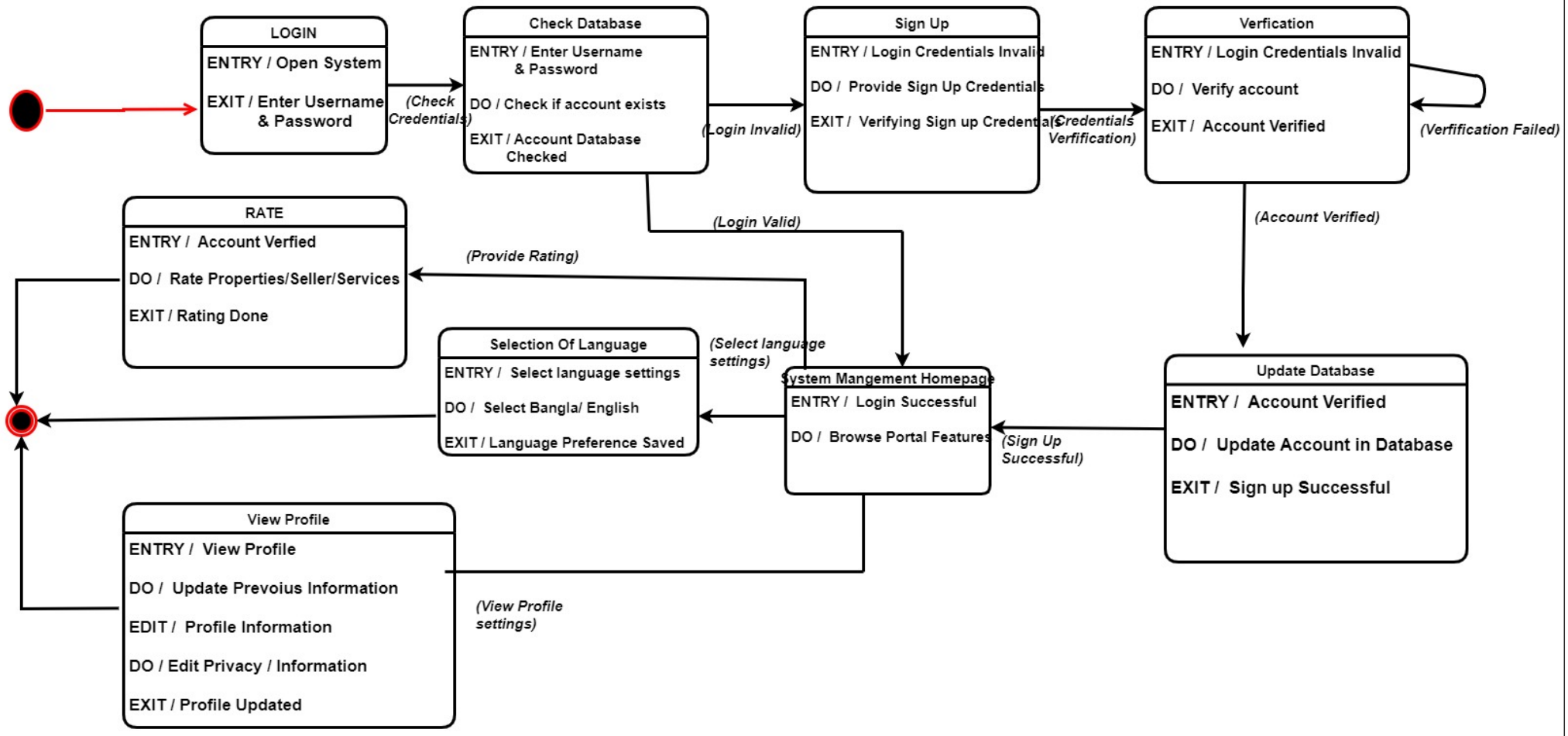
Sequence Diagram For BUYER



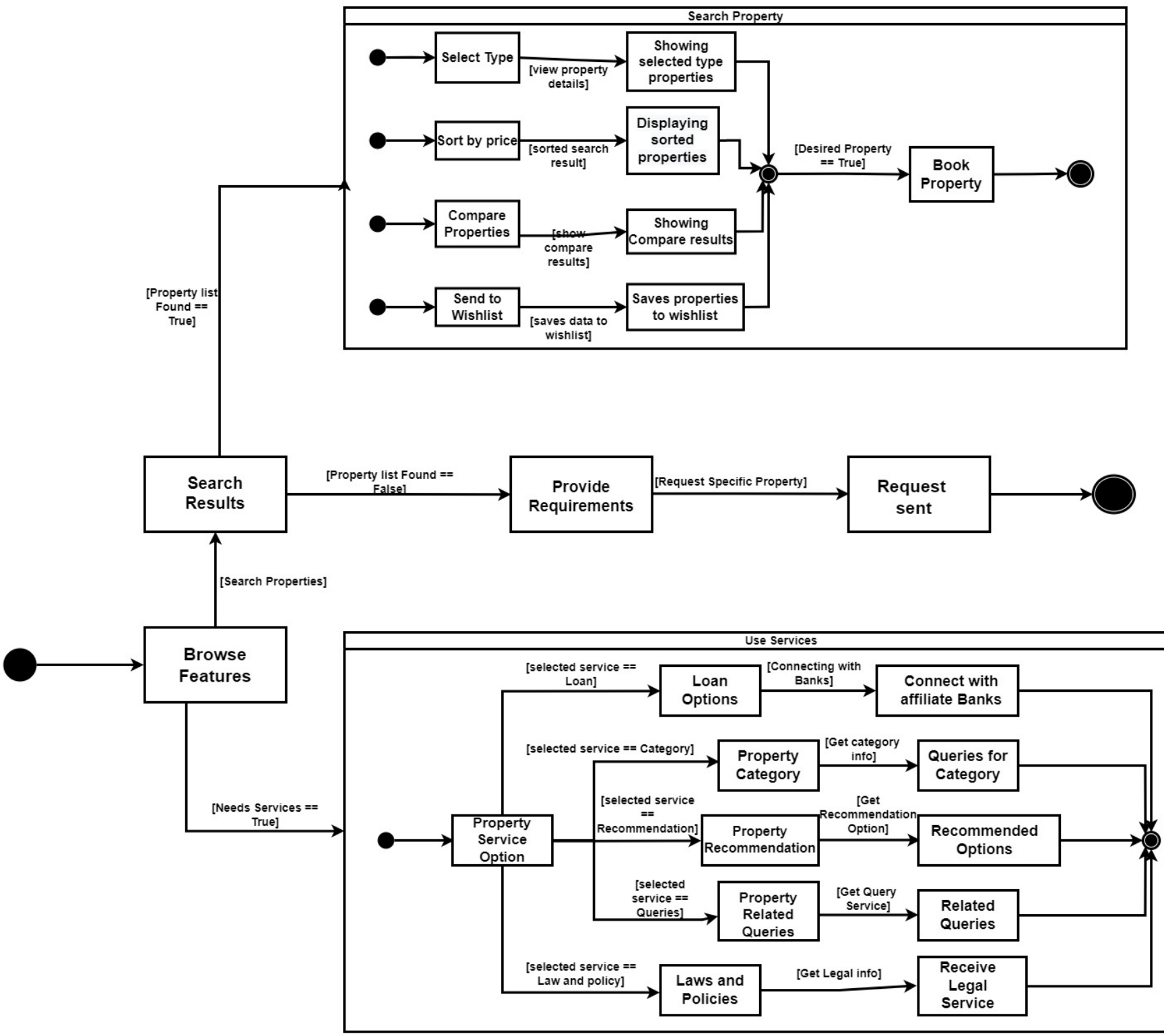
Sequence Diagram For SELLER



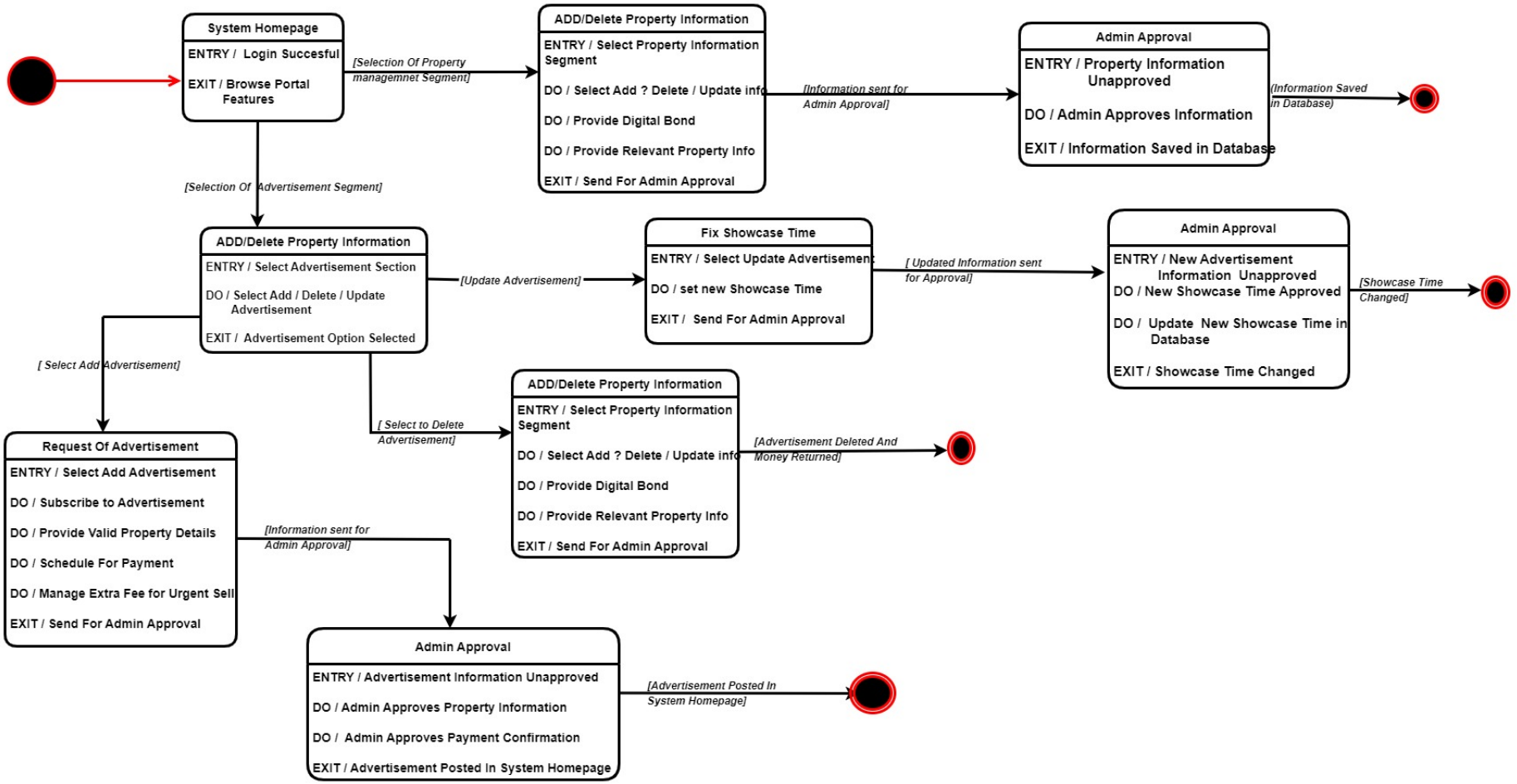
State Machine Diagram for User



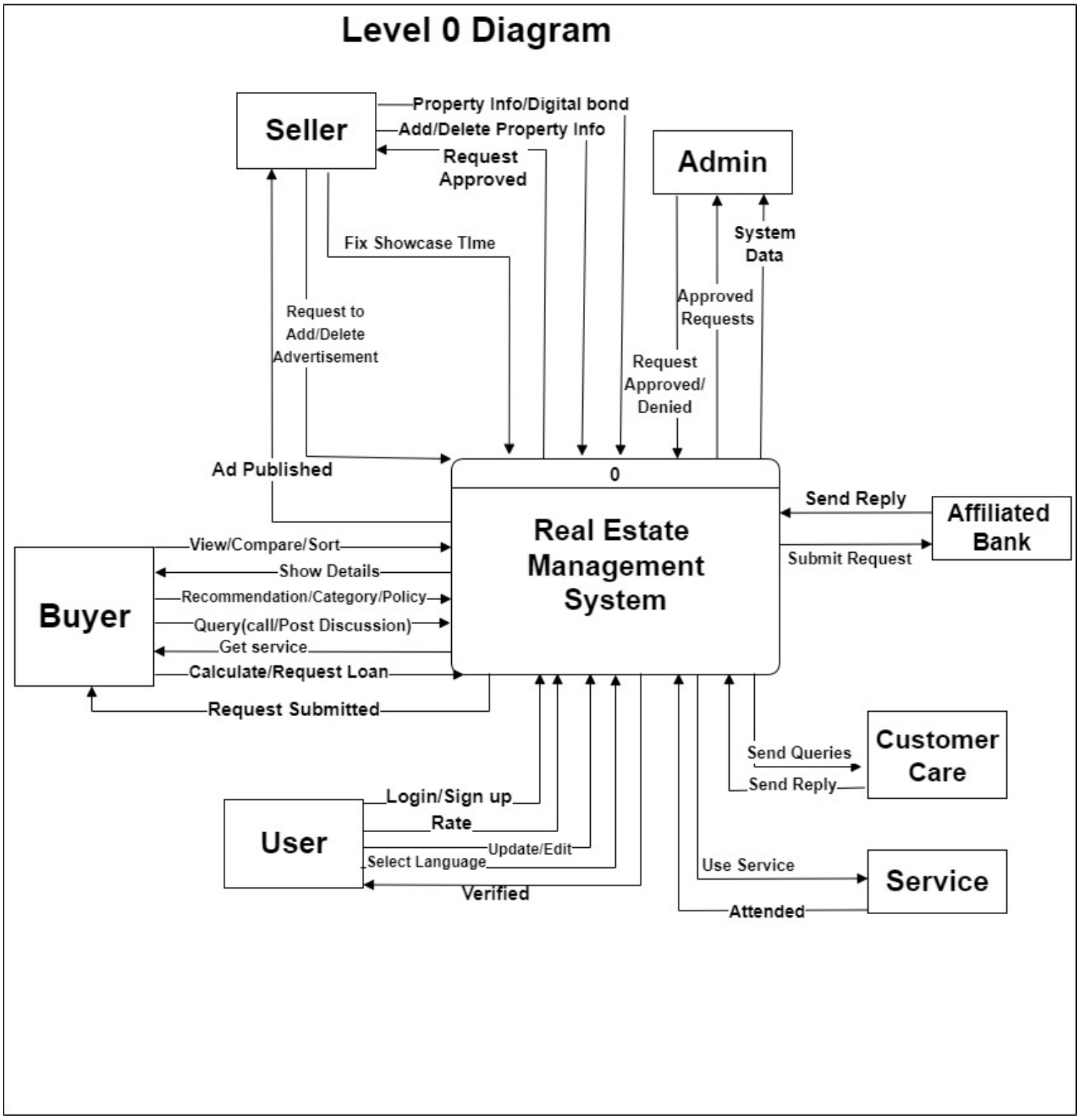
State Machine Diagram for Buyer



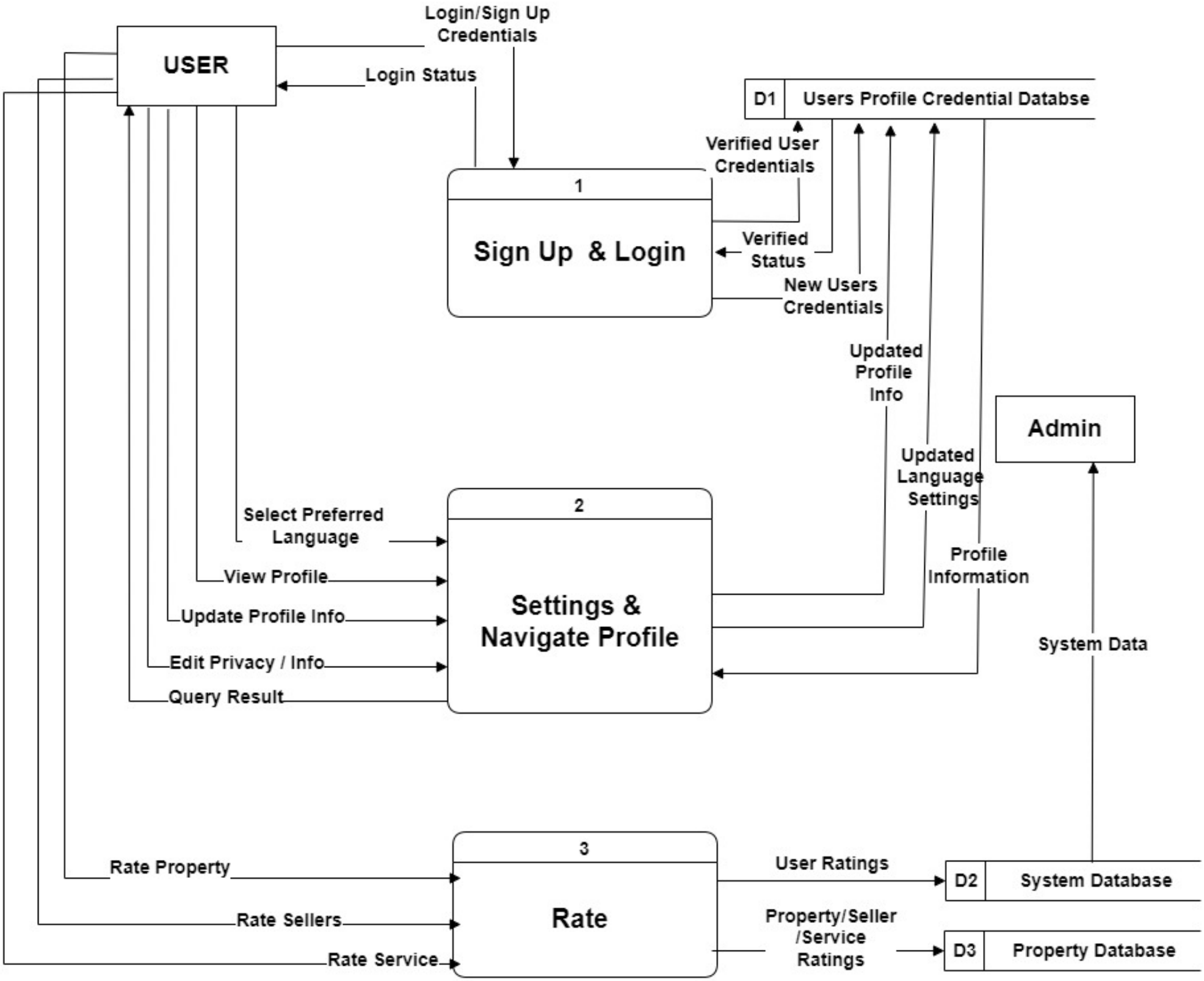
State Machine Diagram for Seller



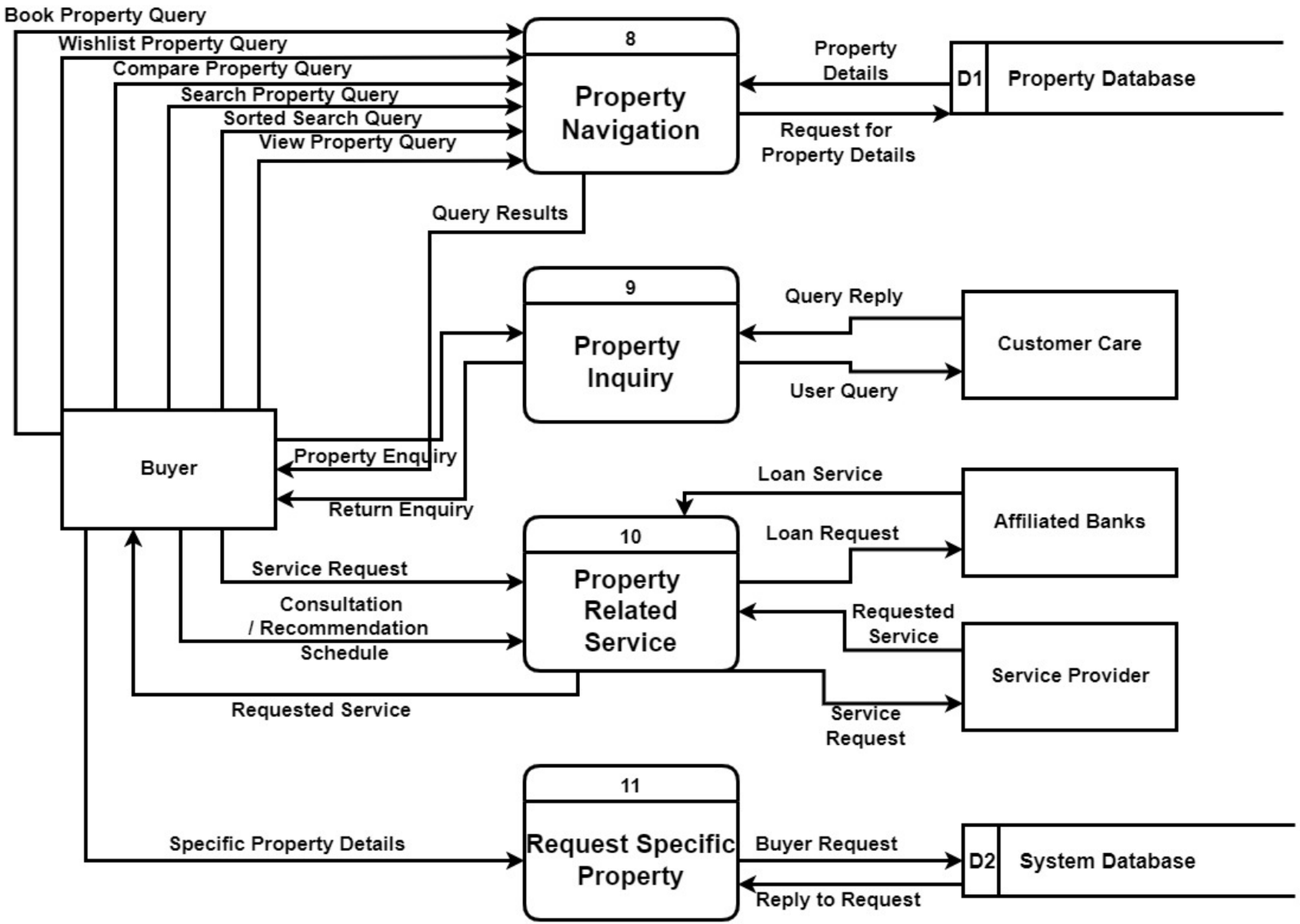
Data Flow Dagrams



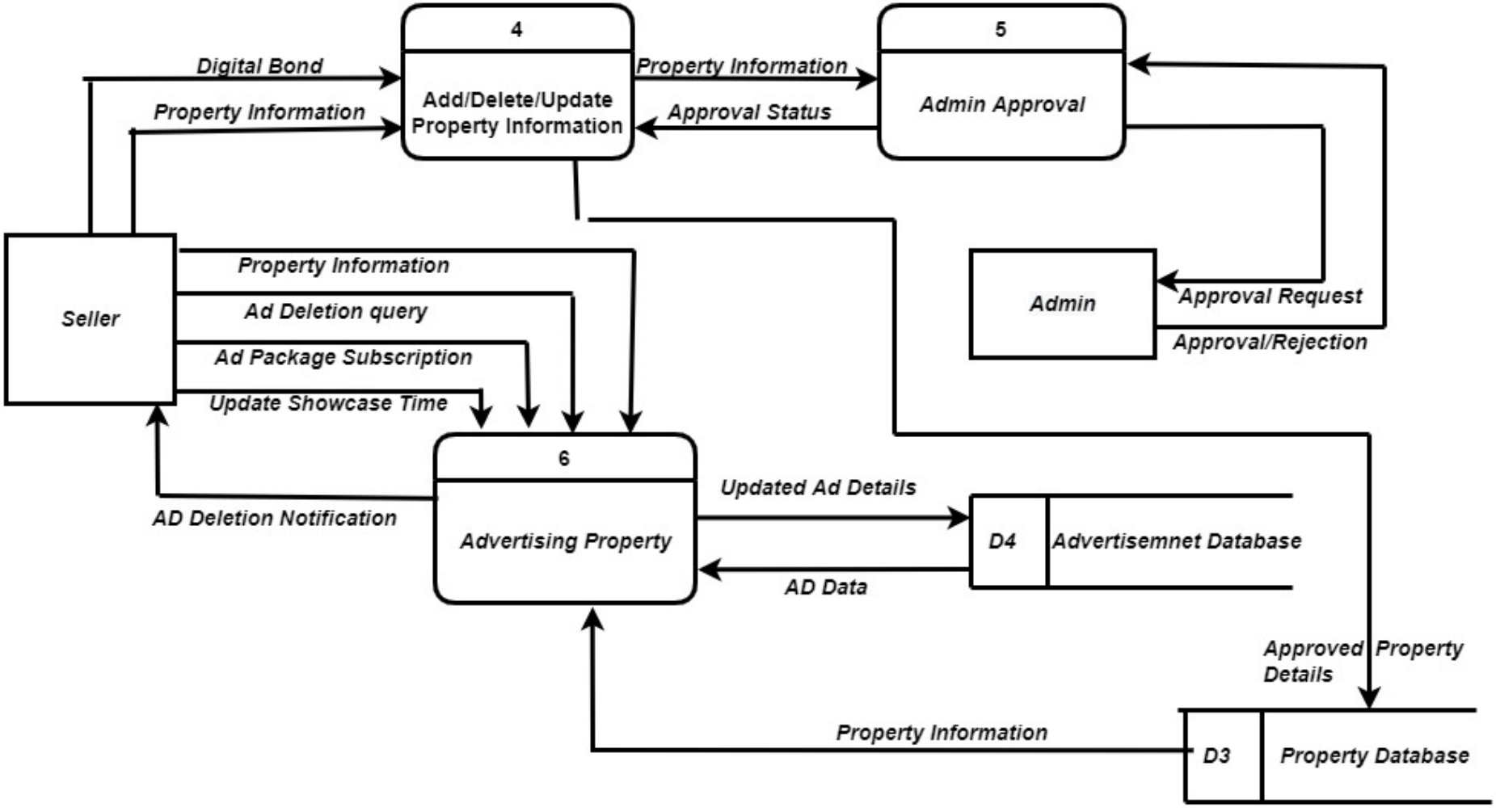
Level 1 Diagram For USER



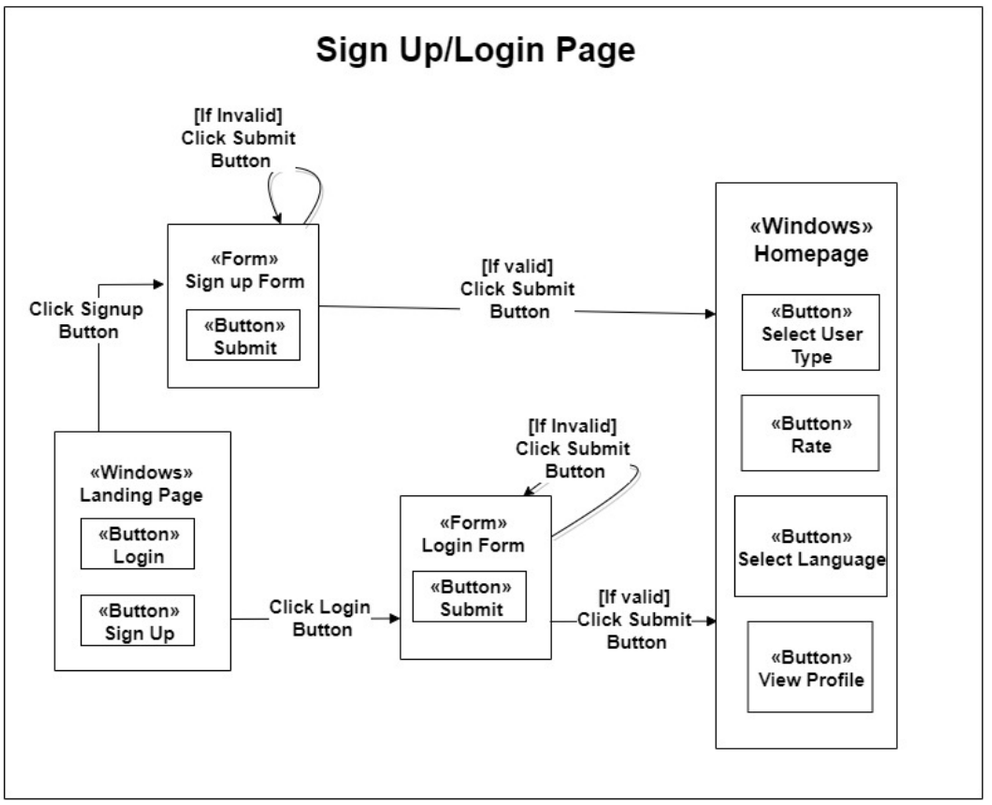
Buyer Level 1 DFD

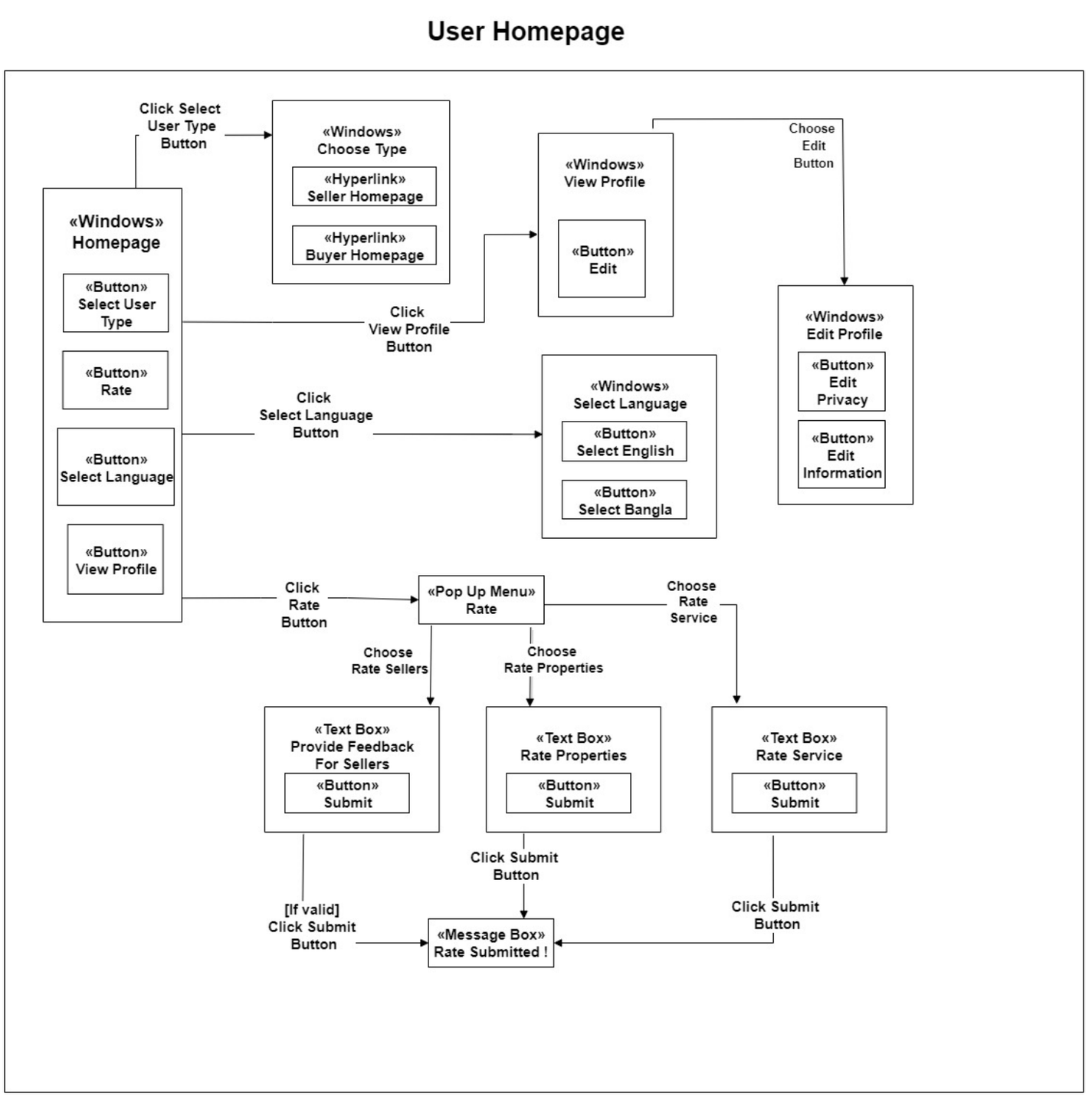


Seller Level 1 Data Flow Diagram

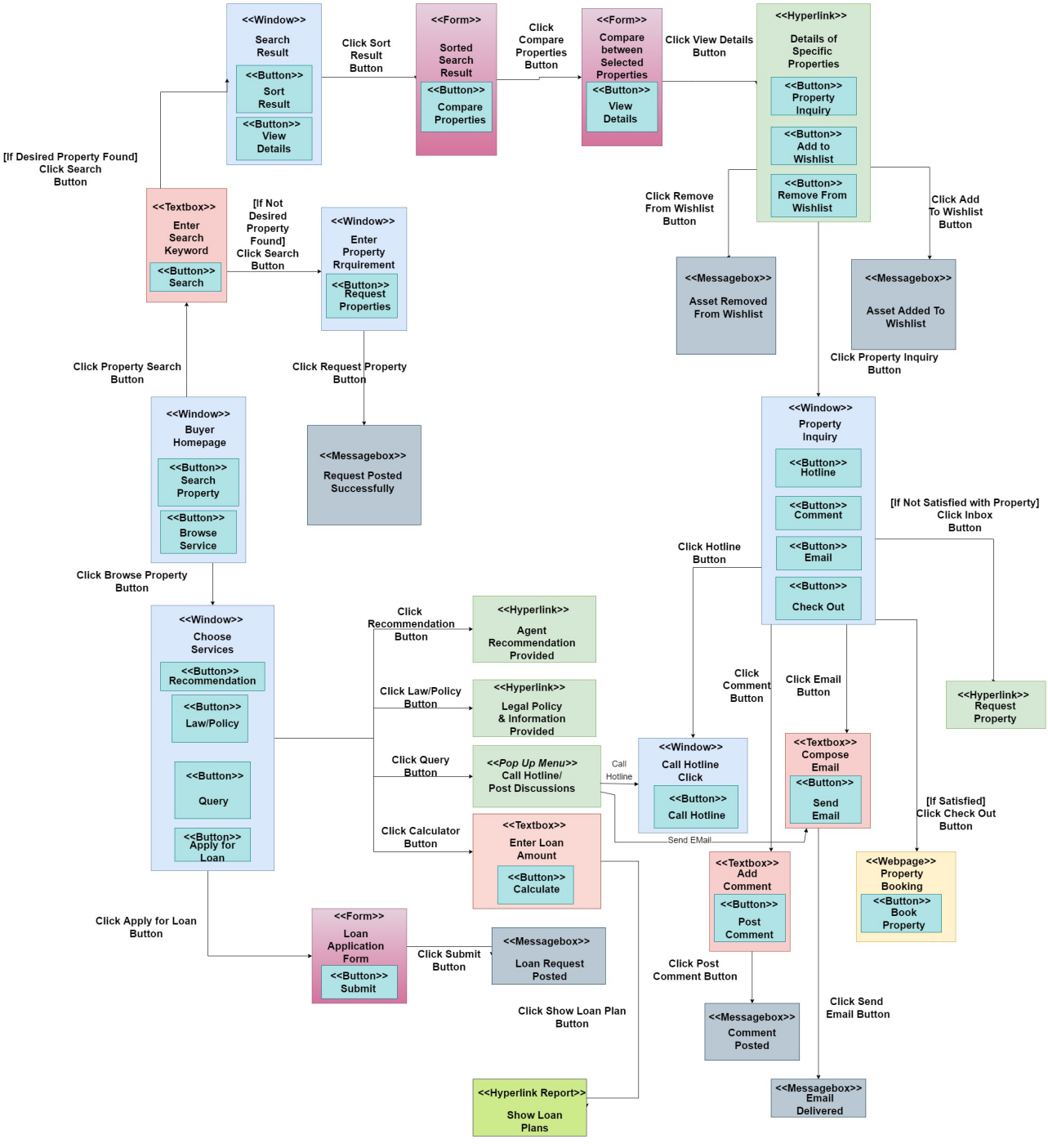


Windows Navigation Diagram

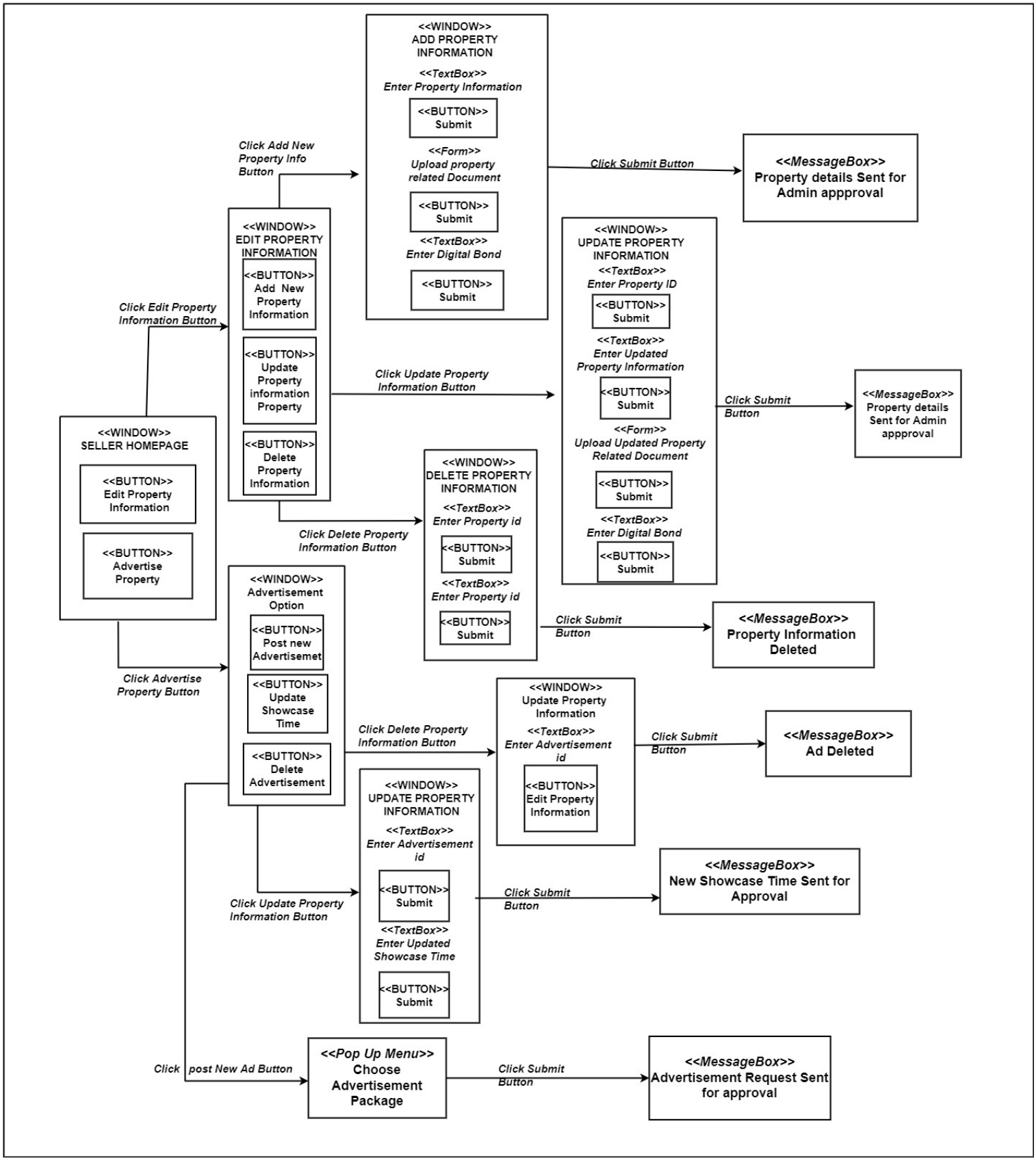




Buyer Homepage



Seller Homepage WND



Conclusion

Real Estate Management System were designed and analyzed in various segments such as Use Case diagram, Activity diagram, Sequence diagram, State Machine diagram, Data Flow diagram (Context and level 1) and Windows navigation diagrams. These figures are useful for business owners why he / she needs to select and invest in them, in order to understand the basic features and needs Developing projects to make your online real estate business more attractive and attractive The ever-growing Bangladesh real estate market. This allows you to: Add functionality to the system in progress through continuous trial errors and user feedback for keeping the structure of the system simple and intuitive by following the available system analysis blueprint as a base or map. With all this, the company is ready to meet our needs End user or Customers can also use the management system to be satisfied.