DECONSTRUCTION OF OLX SYSTEM USING UML MODELS REPORT

Subbiah Soundarapandian

S3825012

Contents

EXECUTIVE SUMMARY:

- This report aims at deconstruction of the business system named "OLX India" ("OLX - Free classifieds in India, Buy and Sell for free anywhere in India with OLX Online Classified Advertising", 2021). OLX India is a part of the overall OLX group.

- The Amsterdam head-quartered company was originated in Argentina in 2006 and went on to grow its business around 40 countries in the world.

- However, in 2010 it had been acquired by the South African media group 'Naspers'. It has been a top business in countries like India, Brazil, and Poland.

- Here, we conduct a comprehensive analysis of this system and talk on its stakeholders and its target customers.

- The services offered by the system to its target customers are shown using multiple UML diagrams like class diagram, activity diagram, etc., in this report.

- We also criticize the system by adding points of my own recommendations and ideas on things that can be improvised on the system.

BUSINESS CASE:

In this section, let us have a look on the background of the system and the background of the industry on which the system is based on.

BACKGROUND OF THE CLASSIFIEDS INDUSTRY:

- OLX India is the largest online classified marketplace of the country that lists the used or unused items which are likely to be sold by the users.

- Online classifieds are generally the platforms that are used by anyone to sell or offer any kind of items. It could be Homes, Cars, Electronic devices etc.

- OLX does not act as a middleman here while it just remains as a platform for the transactions. Hence people can avoid any extra fee while buying a used item.

- Online classifieds' revenue depends on the ads system like google ads, Sponsored Listings etc.

- For example, OLX India's one of the revenue-generating methods includes sponsored listings where in the premium user pays some amount of money to make sure his item stays in the top 10 items listed.

Deconstruction of OLX system

BACKGROUND OF OLX GROUP:

- As mentioned earlier, OLX INDIA is a part of the OLX group. OLX is an acronym of the term 'Online-Exchange'.

- OLX was founded in 2006 by the latinos Fabrice Grinda and Alec Oxenford in Argentina. ("OLX", 2021)

- OLX group was initially sponsored by companies like Nexus Venture Partners, General Catalyst Partners etc.

- Once the company achieved some stability, a South African Media group called 'Naspers' took over. Naspers is one of the biggest technology investors in the world. Since then, it managed to expand its business across 40 countries.

- Naspers took advantage of the fact that online-trading giants like e-bay failed to capitalise its businesses across emerging countries like India etc.

- OLX hence managed to attract large number of customers across emerging countries.

- It is reportedly attracting millions of customers every month in each of the countries.

SERVICES OFFERED BY OLX:

OLX is basically a classifieds portal where anyone can buy or sell the goods by posting an advertisement. The services offered are as follows,

- Selling of Goods – Customers can post an advertisement of their new or used product and post an advertisement with their contact details on it so that anyone who wishes to buy the product can contact and do negotiations to get the item. Customers can also sell big properties like apartments, halls etc.

- Buying of Goods – Customers can browse the listings in each of the category like cars, electronics etc and decide on which item to buy. Once they finalise, they can contact the seller and get the item either by pick-up or delivery.

- Rent – OLX also acts as a medium for posting ads of renting items like motor vehicles, apartments etc.

- Careers – OLX provides career opportunities for different set of people.

OPPORTUNITIES OFFERED BY OLX:

- OLX enables the users to view their desired items by categorising all the products accordingly.

- As mentioned earlier, the OLX group provides career opportunities to lot of young talents and hence a vast amount of opportunity is here.

Subbiah Soundarapandian(s3825012)

Deconstruction of OLX system

- It acts as a great platform for sellers as they can sell whatever they wish in a single platform at no cost. Hence it is very much cost-effective for both buyers and sellers.
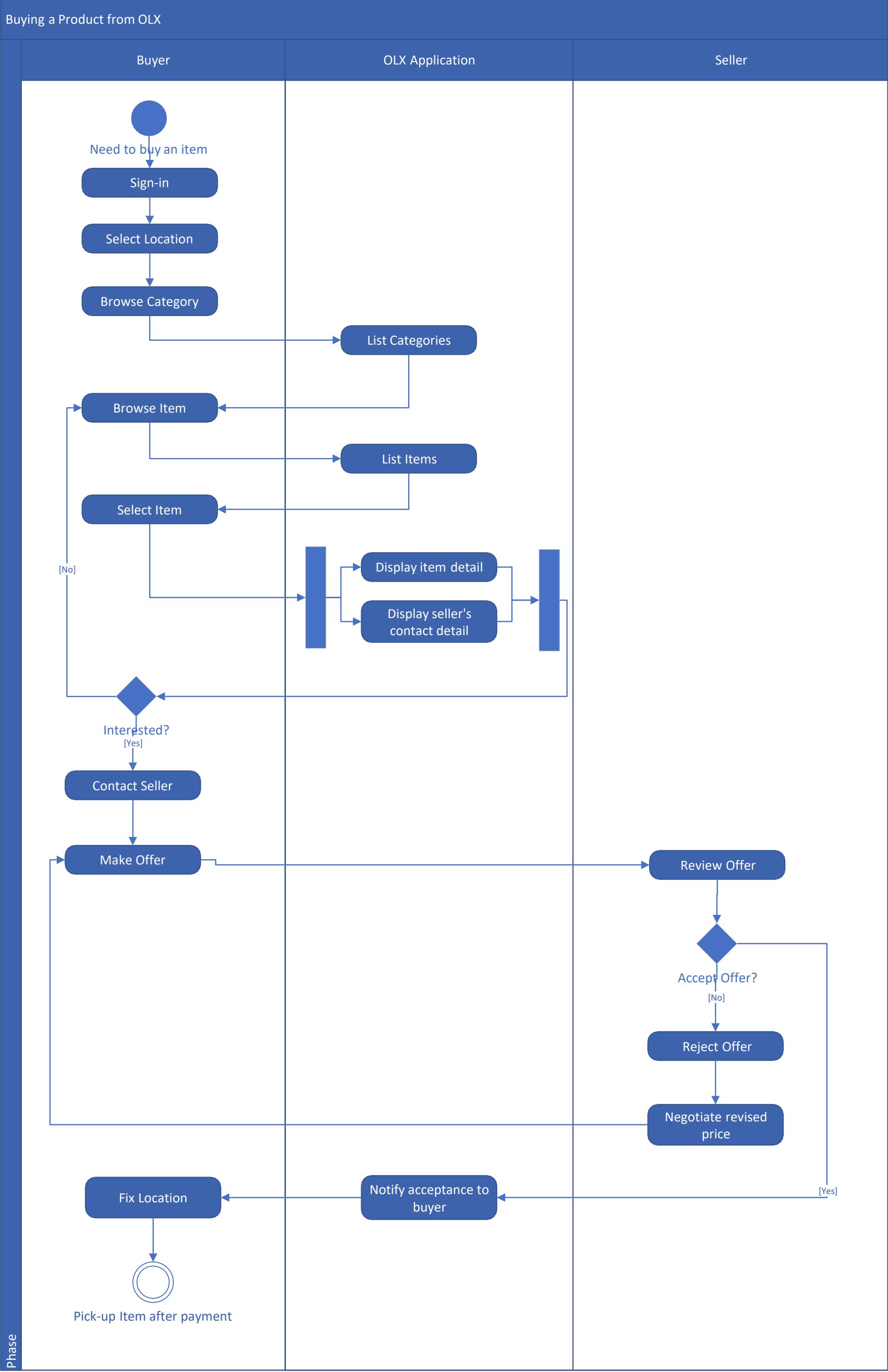- There are lot of opportunities offered by OLX in the real estate sector as well.

OPERATIONS OF SYSTEM:

The operation of the system is represented in the form of following UML diagrams,

- Activity Diagram
- Use Case Diagram
- Class Diagram
- State Machine Diagram

Now let us look at the above-mentioned diagrams one by one in the following pages.

UML ACTIVITY DIAGRAM OF A BUSINESS PROCESS
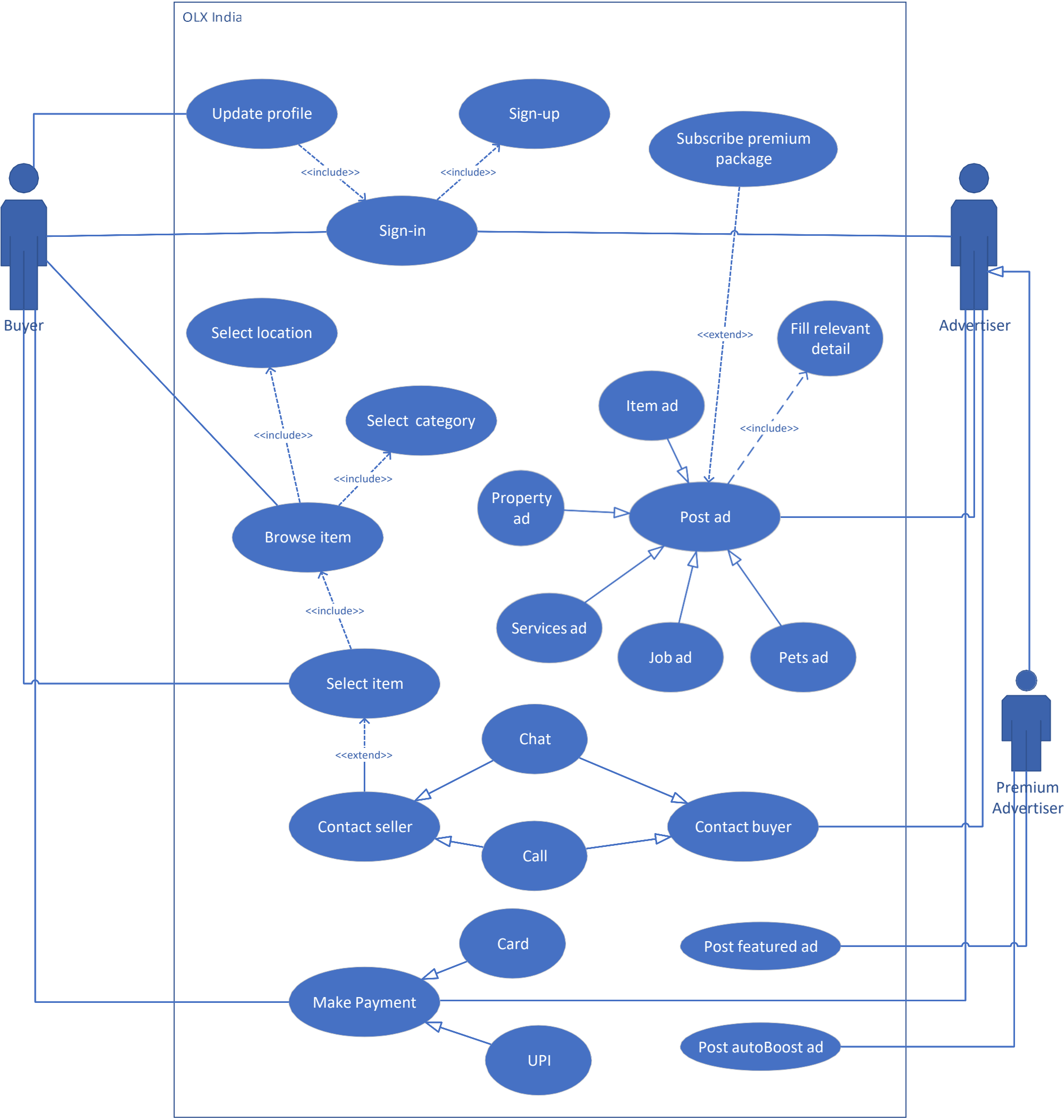
Deconstruction of OLX system

UML-ACTIVITY DIAGRAM:

- The previous diagram shows the business process of buyer buying a new or used product from the OLX app.

- As a first step of the process, the user signs into the app and start browsing items in his category of interest.

- Once he selects the items, the app displays the item information and the seller information whom the buyer can contact in case if he is interested.

- If the buyer is not satisfied with the item or its rate, he can still go back and start browsing other items.

- If he is interested, he can contact the seller and make an offer to procure the product.

- If the seller is not happy with the buyer's proposal, he can negotiate for a better price with the seller.

- Once the seller is fine with the buyer's proposal, the seller accepts the offer and app notifies the buyer that the seller has accepted the proposal.

- After that, the buyer can fix the location with seller to pick up the item.

Note: Here payment is done only after receiving the item and checking if it is good or not.

USE CASE DIAGRAM – OLX INDIA
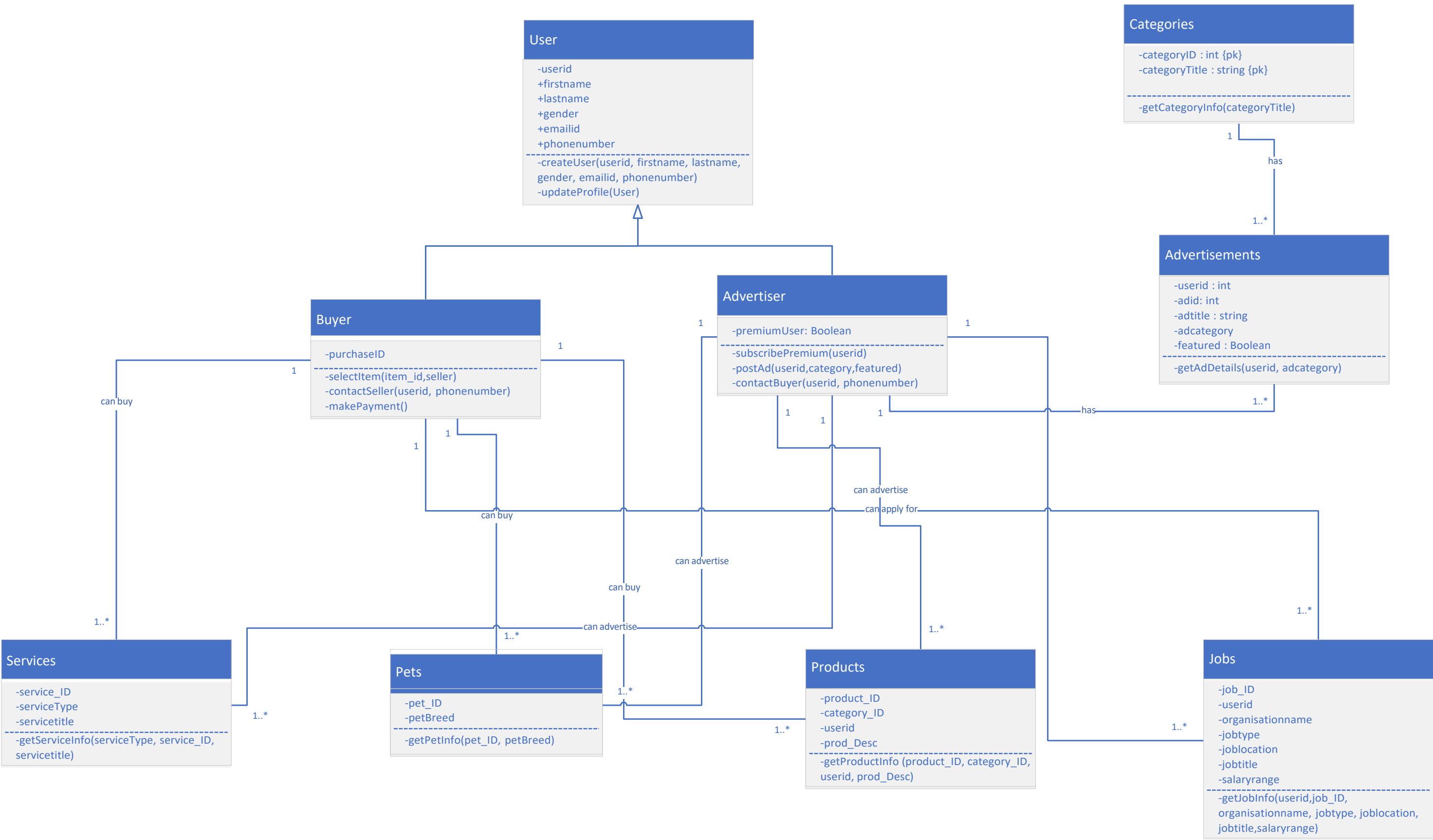
Deconstruction of OLX system

UML OVERALL USE CASE DIAGRAM:

- Previous diagram shows the Overall Use-Case diagram of the OLX India application.

- The two main actors are buyers and the advertisers.

- Buyers are the people who wishes to buy new or used items from the sellers.

- Advertisers are anyone who posts advertisement to sell their product. For example, advertiser can be a builder or owner who wishes to rent or sell their property or can be a dealer who wishes to settle things between two interested parties. (Note: OLX does not act as a middleman here. It is just a platform to buy or sell products or properties).

- Buyer and Advertiser can sign-in the app provided they have already signed up to the app. They can also update their profile now and then provided they are already logged in to the app.

- Buyer can browse and select their items provided they have already selected the category and location. Should he wish to proceed further with procuring the item, he has the option to contact the seller or dealer who has posted the advertisement and negotiate the price.

- Once the buyer is satisfied with the product, he can make payment either using card or any UPI (Unified Payment Interface) systems.

- Coming to advertiser, he can post any kind of ads like job ads, services ads, product ads etc. Here products include electronics, motor vehicles etc.

- Advertiser can also subscribe for premium packages to make sure their item stays on the top of the listings.

- Premium advertiser is a child of advertiser. He can do anything a advertiser does but has an extra capability of posting an featured or boost-up Ad.

Deconstruction of OLX system

EXPANDED USE CASE DIAGRAM

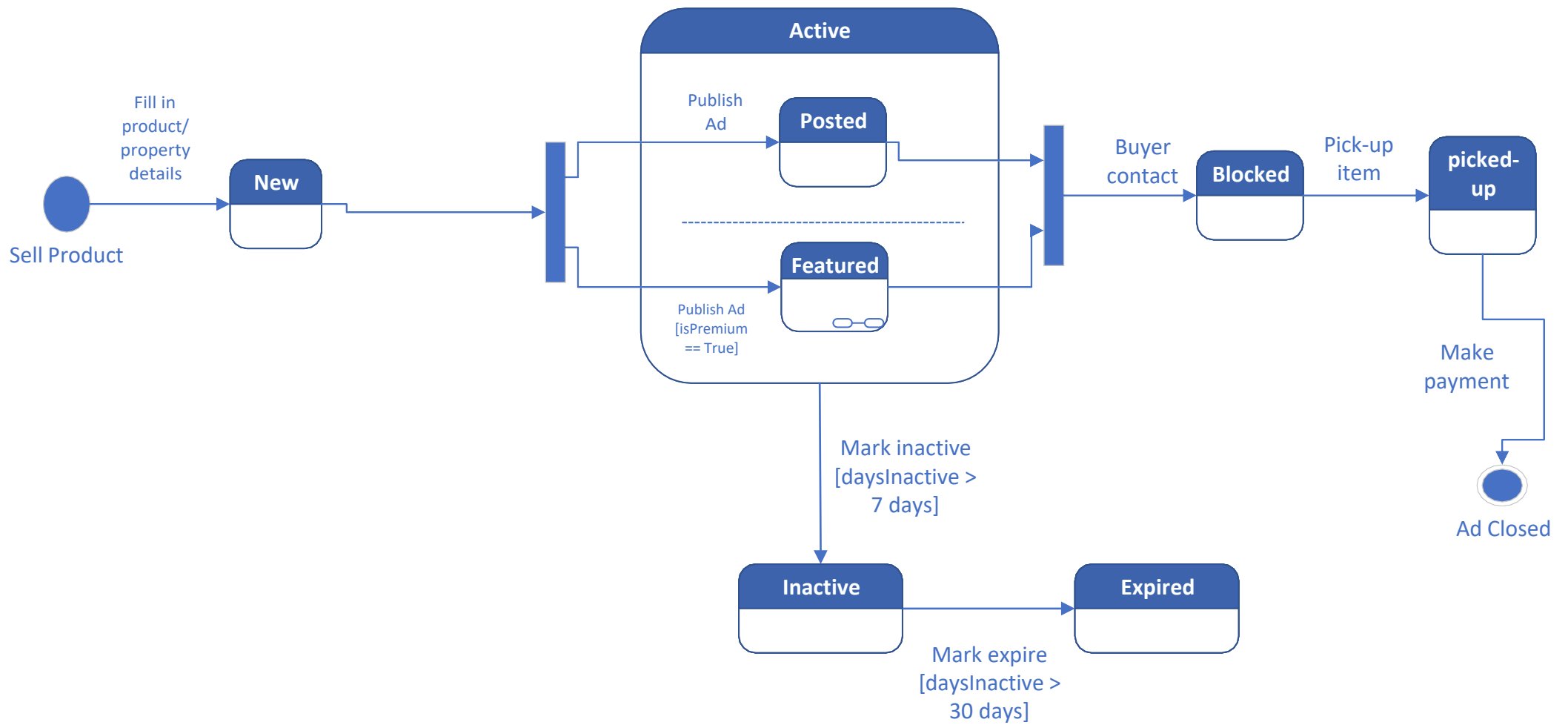| Use Case Name:	Select item	
Scenario:	Buyer selects an item to buy or rent	
Triggering Event:	Buyer wants to buy an item of his interest.	
Brief Description:	When the buyer signs-in the app, he selects the location and category to browse items of his wish and then he selects the item.	
Actors:	Buyer	
Related Use Cases:	Includes: Browse item. Extends: Contact seller	
Stakeholders:	Buyer	
Preconditions:	1. Buyer is signed into the app. 2. Buyer has chosen the location. 3. Buyer has chosen the category	
Postconditions:	1. Buyer should be able to see the product and its contact details.	
The flow of Activities:	**Actor**	**System**
	1. Buyer updates location.	
		2.The app refreshes the home page corresponding to the location entered.
	3. Buyer hits "Categories" tab.	
		4. The app displays all the categories present.
	5. Buyer hits his category of interest.	
		6. The app displays the items as per the category selected.
	7. Buyer browses the list of items.	
	8. Buyer selects the item he wishes to procure.	
		9. The app displays the product details and "seller description"
Exception Conditions	1. If the location entered is invalid, display "location not found"	

Subbiah Soundarapandian(s3825012)

UML CLASS DIAGRAM – OLX INDIA APPLICATION

User
- -userid
- +firstname
- +lastname
- +gender
- +emailid
- +phonenumber
- -createUser(userid, firstname, lastname, gender, emailid, phonenumber)
- -updateProfile(User)

Categories
- -categoryID : int {pk}
- -categoryTitle : string {pk}
- -getCategoryInfo(categoryTitle)

Advertisements
- -userid : int
- -adid: int
- -adtitle : string
- -adcategory
- -featured : Boolean
- -getAdDetails(userid, adcategory)

Buyer
- -purchaseID
- -selectItem(item_id,seller)
- -contactSeller(userid, phonenumber)
- -makePayment()

Advertiser
- -premiumUser: Boolean
- -subscribePremium(userid)
- -postAd(userid,category,featured)
- -contactBuyer(userid, phonenumber)

Services
- -service_ID
- -serviceType
- -servicetitle
- -getServiceInfo(serviceType, service_ID, servicetitle)

Pets
- -pet_ID
- -petBreed
- -getPetInfo(pet_ID, petBreed)

Products
- -product_ID
- -category_ID
- -userid
- -prod_Desc
- -getProductInfo (product_ID, category_ID, userid, prod_Desc)

Jobs
- -job_ID
- -userid
- -organisationname
- -jobtype
- -joblocation
- -jobtitle
- -salaryrange
- -getJobInfo(userid,job_ID, organisationname, jobtype, joblocation, jobtitle,salaryrange)

Deconstruction of OLX system

UML – CLASS DIAGRAM:

- Previous diagram shows the UML class diagram of the app 'OLX India'.

- There are about 9 classes in the UML class diagram of the system.

- The main class here is the user who is anyone logging into the system. Further it is generalized into buyer and advertisers.

- Each buyer can buy or apply for one or more products, pets, services etc. and each advertiser can advertise for one or more products, pets, services etc.

- However, each product or pet can be advertised only by one advertiser and bought by only one buyer.

- Each advertisement belongs to only one category however each category can have one or multiple advertisements.

UML – CLASS DIAGRAM:

Subbiah Soundarapandian(s3825012)

UML STATE MACHINE DIAGRAM - ADVERTISEMENT

Sell Product

Fill in product/ property details

New

Active

Publish Ad

Posted

Publish Ad [isPremium == True]

Featured

Buyer contact

Blocked

Pick-up item

picked-up

Make payment

Ad Closed

Mark inactive [daysInactive > 7 days]

Inactive

Mark expire [daysInactive > 30 days]

Expired

UML – STATE MACHINE DIAGRAM:

- Previous diagram shows the state machine diagram for the object advertisement.

- There are about 7 states in total for the object 'advertisement' in the diagram.

- The first state being New which is a draft state where all the details of the property or product is being filled.

- The next state is the active state of the advertisement where in it can be both a featured ad as well as the normal ad.

- It can go to inactive and expired state based on the number of days of inactivity.

- From active state, it goes to booked and picked-up state after which the buyer pays the money and procures the item from the advertiser (seller).

USER INTERFACE OF THE SYSTEM:

In this part of the report let us look at the pros and cons of the user interface of the system.

GOOD SIDE OF UI:

- Signing up in this app is very easy and simple. It is done with simple authentication of OTP that is sent to mobile number.

- Products are properly categorized under relevant categories so that people do not get confused on where to search what.

Deconstruction of OLX system

OLX Autos (Cars)

Cars

Properties

For Sale: Houses & Apartments
For Rent: Houses & Apartments
Lands & Plots
For Rent: Shops & Offices
For Sale: Shops & Offices
PG & Guest Houses

Mobiles

Mobile Phones
Accessories
Tablets

Jobs

Data entry & Back office
Sales & Marketing
BPO & Telecaller
Driver
Office Assistant
Delivery & Collection
Teacher
Cook
Receptionist & Front office
Operator & Technician
IT Engineer & Developer
Hotel & Travel Executive
Accountant
Designer
Other Jobs

Bikes

Motorcycles
Scooters
Spare Parts
Bicycles

Electronics & Appliances

TVs, Video - Audio
Kitchen & Other Appliances
Computers & Laptops
Cameras & Lenses
Games & Entertainment
Fridges
Computer Accessories
Hard Disks, Printers & Monitors
ACs
Washing Machines

Commercial Vehicles & Spares

Commercial & Other Vehicles
Spare Parts

Furniture

Sofa & Dining
Beds & Wardrobes
Home Decor & Garden
Kids Furniture
Other Household Items

Fashion

Men
Women
Kids

Books, Sports & Hobbies

Books
Gym & Fitness
Musical Instruments
Sports Equipment
Other Hobbies

Pets

Fishes & Aquarium
Pet Food & Accessories
Dogs
Other Pets

Services

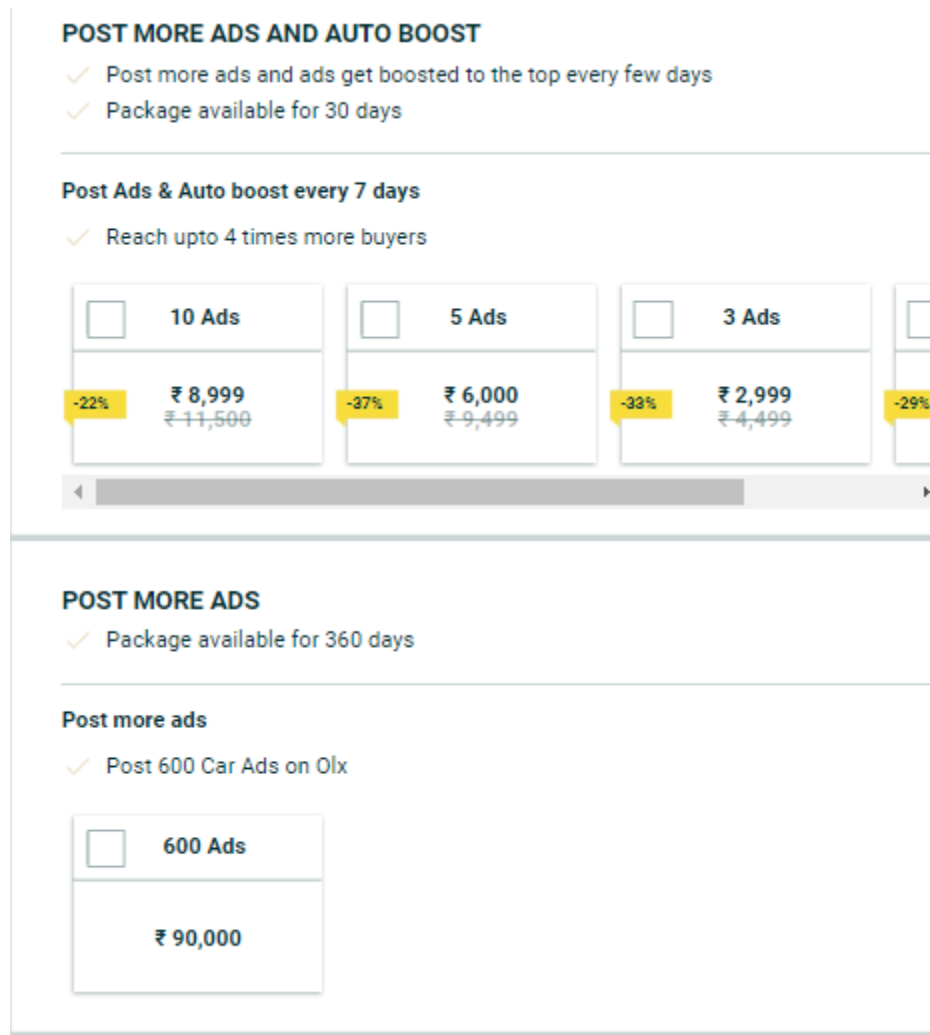Electronics & Computer
Education & Classes
Drivers & Taxi
Health & Beauty
Other Services

- Many premium subscriptions are available which makes it easier for the users to get the one they wanted based on the volume of ads they post on OLX.
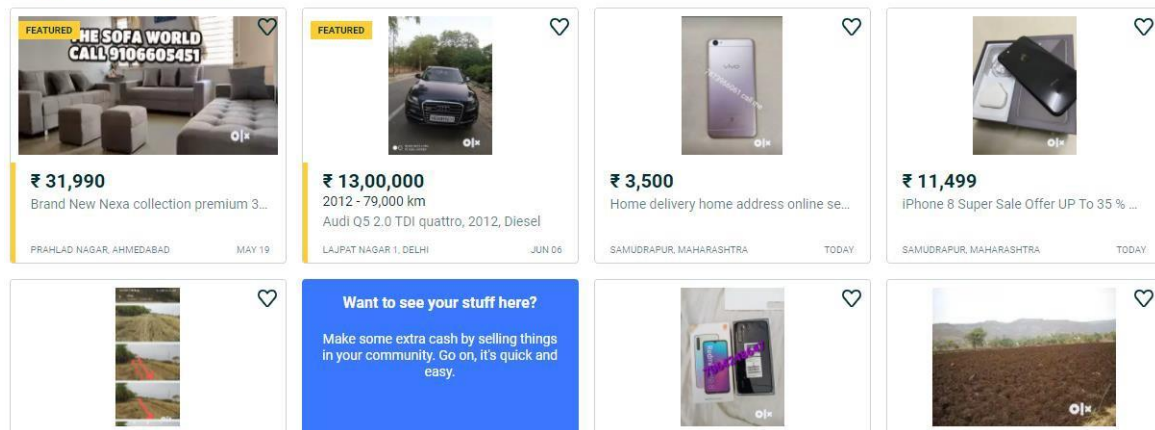
Subbiah Soundarapandian(s3825012)

UGLY SIDE OF UI DESIGN:

- Though the products are finely categorized, there are way too many categories in such a way that it turns out to be vast for the customers who do not have anything in mind to buy but they have just come to look if they would get anything for cheaper price.
- Aesthetics of the website could be improved a bit more. Even though it has been many years since the launch, it still looks like it is one of the new websites that have just come to the classifieds market.
- Since there are already a set of fresh recommendations, home page does not look like one as it might lead customer to some other products other than what they had in mind. The recommendations could be irrelevant.
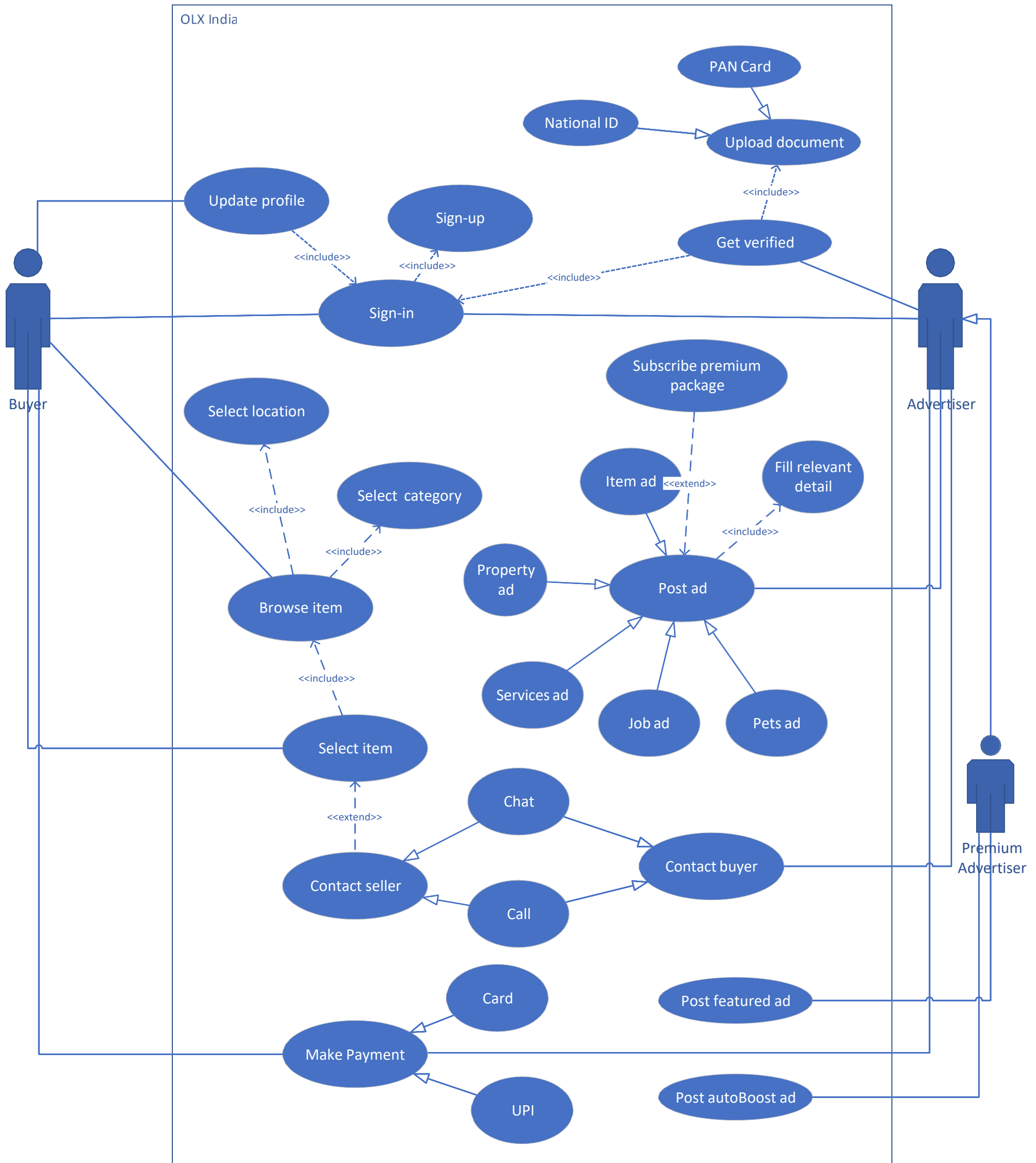
Deconstruction of OLX system

IMPROVED FEATURES:

- Even now, there are many online scams happening in OLX app.

- Many fraudsters pretend to be a genuine seller only to cheat the buyers and lure them into fraudulent activities. To prevent that, it is better to have a verified tag to all the sellers to prevent such scams.

- It can be done by verification of the documents of the seller by the OLX app itself.

- This new feature is added in the overall use case diagram of the app.

- To get verified, the seller or advertiser should have signed in and uploaded all the relevant documents.

- We also look at the expanded use case diagram of the newly added functionality.

USE CASE DIAGRAM WITH ADDITIONAL FEATURES – OLX INDIA

Deconstruction of OLX system

Use Case Name:	Get verified	
Scenario:	Advertiser verifies his account	
Triggering Event:	Advertiser wants to verify their account to be genuine	
Brief Description:	When the advertiser signs-in the app, he verifies his account by uploading all the relevant documents and wait for the system to approve.	
Actors:	Advertiser	
Related Use Cases:	Includes: Sign-in, Upload document	
Stakeholders:	Advertiser	
Preconditions:	1. Advertiser is signed into the app. 2. Advertiser uploaded their documents.	
Postconditions:	1. Advertiser account is verified.	
The flow of Activities:	**Actor**	**System**
	1. Advertiser signs into the app.	
		2.The app displays the homepage.
	3. Advertiser hits "Verify me" tab.	
		4. The app displays verification page.
	5. Advertiser uploads National ID card.	
	6. Advertiser uploads PAN card.	
	7. Advertiser hits "upload".	
		8. The App verifies the documents.
		9. The App displays "Advertiser verified".
Exception Conditions	5. If the document entered is invalid, display "Invalid Document". 6. If the document entered is invalid, display "Invalid Document".	

Subbiah Soundarapandian(s3825012)

REFERENCES:

1. OLX - Free classifieds in India, Buy and Sell for free anywhere in India with OLX Online Classified Advertising. (2021). Retrieved 17 June 2021, from https://www.olx.in/

2. OLX. (2021). Retrieved 17 June 2021, from https://www.cleverism.com/company/olx/