



Adoptee
SAVE A LIFE. ADOPT A PET

PROJECT PROPOSAL

"Adoptee" - An Application for Pet Adoption and Animal Support

SCS2202 - Group Project 1 - CS Group 26

Table of Contents

1. Introduction	1
1.1. Problem Statement	1
1.2. Our Solution	1
1.3. How Is It Different?.....	1
2. Project Goals and Objectives	2
3. Project Scope	3
3.1. Project Boundaries	3
3.2. Project Constraints	3
3.3. Project Assumptions.....	4
4. Project Deliverables	4
5. Project Feasibility	5
5.1. Social Feasibility.....	5
5.2. Technical Feasibility.....	6
5.3. Operational Feasibility	7
5.4. Economical Feasibility	7
5.5. Legal and Ethical Feasibility	8
5.6. Schedule Feasibility	8
6. Requirements	9
6.1. Functional Requirements.....	9
6.2. Flow Charts	10
6.3. Use Case Diagrams.....	13
6.4. Use Case Descriptions and Activity Diagrams	17
6.5. Component Diagram.....	18
7. Quality Attributes.....	19
7.1. Usability.....	19
7.2. Security.....	19
7.3. Availability	19
7.4. Performance and Reliability	20
7.5. Maintainability	20
7.6. Portability / Interoperability	20
8. Technologies to be used	21
9. Project Timeline	22
10. Declaration	23
11. Appendices.....	24
Use Case Descriptions	24
Activity Diagrams.....	45

List of Abbreviations

Abbreviation	Explanation
API	Application Programming Interface
CORS	Cross-Origin Resource Sharing
PaaS	Platform as a Service
RCE	Remote Code Execution
RDBMS	Relational Database Management System
SDLC	Software Development Life Cycle
SLA	Service Level Agreement
SMTP	Simple Mail Transfer Protocol
SSL	Secure Sockets Layer
UI	User Interface
XSS	Cross Site Scripting

Details of Project Supervisor and Co-supervisor

Proposed Project Supervisor (Academic Staff of UCSC)

Name of the supervisor: Ms. A. Lakshika Nanayakkara

Signature of the supervisor:

Date: 2021/06/

Proposed Project Co-Supervisor (Assigned by Course Coordinator)

Name of the co-supervisor: Mr. Dushan Dinushka

Signature of the co-supervisor:

Date: 2021/06/

The Client of the Project

Name of the client: Ms. A. Lakshika Nanayakkara

e-mail address of the contact person: aln@ucsc.cmb.ac.lk

1. Introduction

1.1. Problem Statement

Many organizations in Sri Lanka work towards the well-being of street dogs and other stray animals. Fostering, vaccinations, rescues, treatments are some of the activities they perform. Few of the organizations have their websites but the majority use social media platforms to promote their activities. This makes it hard for them to reach new people because it's difficult to find the proper platform for animal care in social media. Due to that reason, people have to waste their time searching for the appropriate organization. It's necessary to have a proper platform to care for or report an injured animal, announce adoptions and donations with less effort. Through that, we can facilitate those injured and help needed animals.

1.2. Our Solution

"Adoptee" is the platform where people can find a pet to adopt and continue the adoption process online. Not only that, if someone wants to report an injured or abandoned animal that must be taken care of then the "Adoptee" is the platform to connect both client and the organization. The application also allows people to directly donate to an organization or sign up for a recurring donation (a sponsorship) through which we can create an animal friendly community. It helps us to crowdfund the projects and other required items, such as food, medicine and vaccinations required for animals, payments for doctors' consultations and other infrastructure development costs, etc.

Due to the current prevailing situation in the country, we noticed that animal consultation is a problem. If our animal suffers from a disease, we need to have an opinion from a specialist. But due to the restrictions, we faced difficulties taking our pet to the animal care centre. Then we noticed that it's better to offer a service for consulting veterinary doctors online with audio/video consultation. And the doctors can also maintain the health records of the animals for their future references.

1.3. How Is It Different?

Currently, the activities related to animal welfare are scattered across the web and social media, and they are managed and organized by different organizations and community groups. Most of the time they are restricted to one group of animals like cats or dogs. When we refer to those resources, we notice that most of them focus on building a community and it takes considerable time to filter out relevant information due its poor organization. In addition to that, they are not going to facilitate the consultations for the animals which is necessary these days.

Our product brings all of these activities and organizations to one platform, which can attract and encourage more people to join and participate in animal related activities. Through this platform we can build an animal friendly community and give them a chance to donate to a needy animal. Anyway, it is applicable for any size organization, from small community groups to large organizations. The simplicity and user-friendliness of the system interfaces make it very productive for the users and helps us to create a large community.

2. Project Goals and Objectives

Our main goal is to introduce a web-based system for animal shelters around the island to carry out pet adoption processes and rescuing processes through one platform. Through that, we can encourage society to adopt animals and to reduce the death rate of stray animals due to accidents and ignorance. This system can facilitate veterinary doctor consultations during emergency periods and provide an efficient platform for donations, sponsorships and fundraising campaigns for shelters can be given as other goals of the project.

Objectives

- Identify requirements of the relevant non-profit organizations through discussions.
- Develop a web application to cater to animal adoption processes, related case reporting processes and other secondary facilities for non-profit organizations working towards animal welfare.
- To provide a platform for veterinary doctor consultations during these epidemic situations.
- To provide a platform where the animal friendly community can take part in the donation activities.
- Learn technologies related to web application development and enhance documentation skills.
- Improve teamwork and individual soft skills.

3. Project Scope

3.1. Project Boundaries

3.1.1. Users

- Guest User
- Registered User
- Organization User
- Organization Admin

3.1.2. In-scope

- Create a platform to advertise pets available for adoption and send notifications to registered users.
- Create an advertisement for pet adoption through a notification system.
- Maintain separate feeds for shelters containing shelter details and recent work.
- Searching interface for pet adopters.
- Interface to send adoption requests online.
- Report cases about injured/abandoned animals.
- Interface for shelters to respond to adoption requests and reported cases.
- Make donations / raise funds for animal shelters.
- Buy merchandise, subscriptions for sponsorships of animal shelters.
- Portal to consult veterinarians and to make payments for consultations.
- Generate Prescriptions.
- Maintain health records of animals.
- Review shelters/organizations.
- View Statistical reports of organizations such as average adoption rate, donations received, popularity, merchandise sales etc.

3.1.3. Out of scope

- Managing transportation of animals to their destination.
- Stock Management for shelter/organization merchandise sales.
- Internal management functions/features of organizations

3.2. Project Constraints

- One user cannot have more than one account.
- Only registered users are allowed to send adoption requests.
- An animal who is already requested to be adopted cannot be requested by another user.
- If an adoption request is not completed within 48 hours, that opportunity is made available in the system again.

- One reported case can only be allocated to one shelter.
- One time slot for veterinary consultations can only be allocated for one user.

3.3. Project Assumptions

- All users have access to an internet connection and own an email address.
- Valid information is published by shelters and incident reporters.

4. Project Deliverables



Web based Application



SRS Document



User Guide



Administrators Manual
(With deployment instructions)

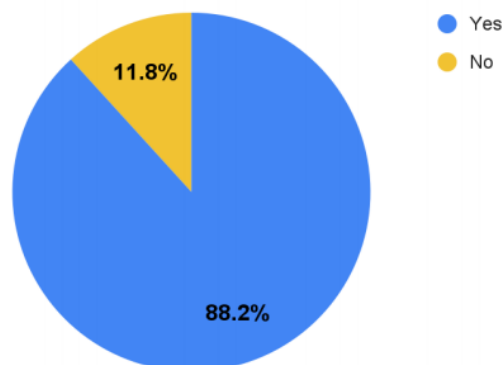
5. Project Feasibility

5.1. Social Feasibility

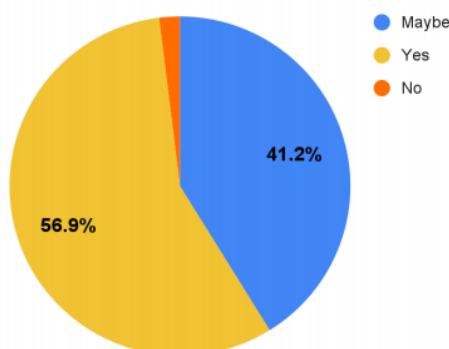
There are many animal welfare organizations in Sri Lanka. Pet adoption and animal rescues have tremendous support and contribution from society, and there are also some communities formed around the charity operation.

We have conducted a public survey including questions on reporting injured/abandoned animals, pet adoptions, veterinary consultations and other related animal welfare activities. It helped us to understand public opinion and willingness towards pet adoption through one platform. The survey had more than 100 responses¹ and most of them were very positive with their opinions. So, we can safely assume that people are willing to use our system and the majority of the people mentioned that it's better to have an online platform for this idea. The following images show some of the responses we received during the survey.

Q4. Would you like to have an online platform to search for pets up for adoption and to complete most of the process online?

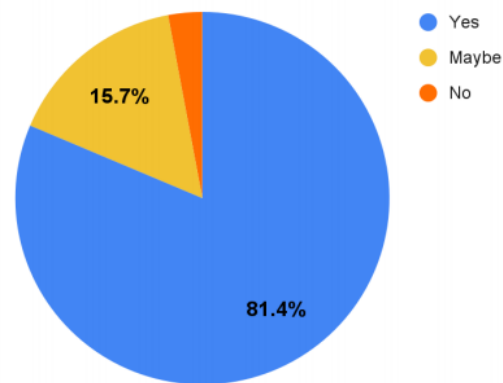


Q7. Would you inform relevant organizations immediately if you randomly see an injured animal on the street?



¹ Survey had 102 responses which can be accessed at <https://bit.ly/3pqyw84>

Q8. Would you inform the relevant organizations immediately if you have an online platform to report such incidents?



After contacting around a dozen animal shelters and animal welfare organizations through phone and email, we found that they are very interested and happy to use such a system because they don't have such a system currently.

We are building the system as a self-service platform targeting both the users and charity organizations. Therefore, it won't require any human intervention for day-to-day operations such as an admin user.

5.2. Technical Feasibility

This section measures the flexibility of practical implementation of building of our web-based platform by using the selected technical solutions. The main deliverable of this project is a web app built using HTML, CSS and JS in the frontend and PHP in the backend which utilizes MySQL as the datastore. Apache HTTP Server is used to run the PHP applications.

The platform relies on; Google Maps API to show locations, an SMS gateway to send notifications, a payment gateway to accept payments and also uses SMTP to send emails.

In addition to that, GitHub is used as the code collaborative and version control tool and then we use collaborative tools like Zoom, Google Meet' to manage the veterinary doctor consultation process.

Most of these technologies are either open source or freely available. The team have to gain adequate technical knowledge before and while building the system. It is a tremendous task, but the timeline allows us to gain a considerable amount of technical knowledge before starting the actual development work and the rest while building the system itself.

The system could be easily hosted in any cloud provider as we would not be using any proprietary or vendor locked technologies.

5.3. Operational Feasibility

This section measures how well the proposed solution meets the user requirements of the system to solve the issues in the existing system. Therefore, it is necessary to meet desired requirements to be operationally feasible. At present most of the activities which are related to animals are carried out through social media platforms, which is time consuming. Sometimes, it does not provide the necessary details of what we require for its messy structure. From our platform, we have proposed to classify the relevant activities with respect to the animal types. And also due to the existing epidemic situation in the country, it's necessary to have a proper platform to connect veterinary doctors to have a medical opinion of pet's diseases.

Our solution is a web application accessed through the internet. So, to use and operate the system,

- Users are required to have an internet connection.
- A mobile phone or a computer with a recent version of a web browser installed should be available.
- Users must have a basic knowledge of IT & using the internet.
- Payments & donations requires an intermediate level of knowledge in online & card-based payments

Because there is no need of providing special training to use the system or any dedicated HR resources to maintain the system, the project is operationally feasible

5.4. Economic Feasibility

This section is the place where we focus on the cost estimations of our solution.

- The platform requires hosting for both the application and the database.
 - "The free tier" capacity offered by a suitable cloud provider is enough for a moderate level of traffic to the site.
 - An increase in cost is expected when the user base grows.
- The Web app requires a domain name to reach the public it costs around Rs 3000 a year for a ".LK" domain
- Even though sending emails can be done for free, SMS notifications can incur a charge of \approx Rs 0.80 per notification. Which is an operational cost of the system.
- We use open-source technologies and other free tools like Visual Studio Code for the development of the product. They won't require any paid licences so the cost for those is zero
- Since it is developed by a team of university undergraduates, development cost also can be taken in as none
- With respect to those expenses, it is easily affordable and therefore we can say our solution is economically feasible.

5.5. Legal and Ethical Feasibility

- The identity of the users & organizations is verified at registration.
- Building and deploying the system does not break any laws.
- The application is built in compliance with the licenses of the open-source software technologies that are used.
- Necessary measures to protect the privacy and personal data of the users are included in the system.
- Transparency into how the system handles payments and donations is provided through the system.
- It is expected that the users won't misuse the prescriptions in a way that can cause legal or ethical issues to the system.

5.6. Schedule Feasibility

- The project spans a duration of 9 months.
- According to that, the estimated man hours for the project completion can be mentioned as follows,
 - Weekdays working hours = 5 hours
 - Weekend working hours = 5 hours
 - Number of group members = 4
 - Number of weeks = 36
 - Total man hours = $(5 + 5) * 4 * 36$ hours = 1440 hours
- We are using an iterative waterfall model for development and with requirement gathering almost done, we can predict that with the identified features and scope it is possible to finish the other tasks of the SDLC and complete the development of the product by the January of 2022.
- Also, requirements are almost stable at this point so there won't be any major changes to the requirements that can affect the schedule of the project.

6. Requirements

6.1. Functional Requirements

The following requirements were derived after contacting animal welfare organizations and veterinary doctors. Also, the responses received for the public survey were used to identify public user requirements.

6.1.1. Pet Adoption

- Organizations shall be able to list the animal available for adoption.
- Users shall be able to browse and select a pet to adopt.
- A registered user shall be able to request to adopt a pet.
- Organizations shall be able to accept or reject an adoption request.

6.1.2. Animal Rescues

- Users shall be able to report about an injured or abandoned animal.
- An organization shall be able to take responsibility to take care of a reported incident.
- Users shall be able to contact an organization in an emergency through the system
- Organizations shall be able to provide updates on a report and the users shall be able to view them.

6.1.3. Animal Welfare Organizations

- Organizations shall be able to post updates about their welfare work.
- Users shall be able to view the work that an organization has done.
- Users shall be able to provide feedback & complaints to organizations.
- Organizations shall be able to accept donations and ask for funding.
- Users shall be able to donate and sponsor a monthly amount to organizations.
- Users shall be able to opt out of the monthly sponsorship.
- Organizations shall be able to sell their merchandise through the platform and Users shall be able to buy them.
- Organizations shall be able to have multiple users managing the organization.

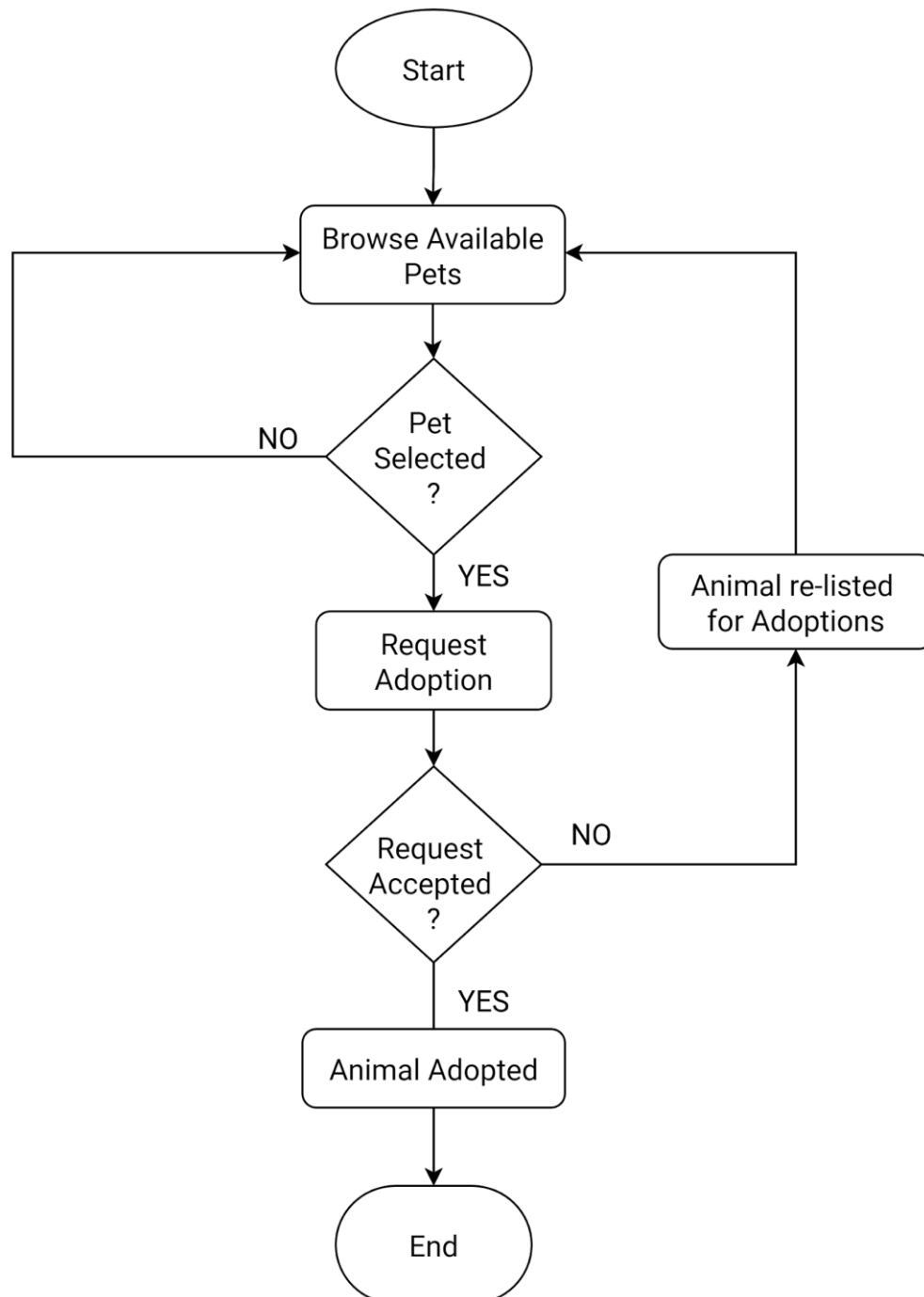
6.1.4. Veterinary Consultations

- Users shall be able to consult a doctor and get medical advice through the system.
- Users shall be able to communicate with doctors through messages, photos and video calls when necessary.

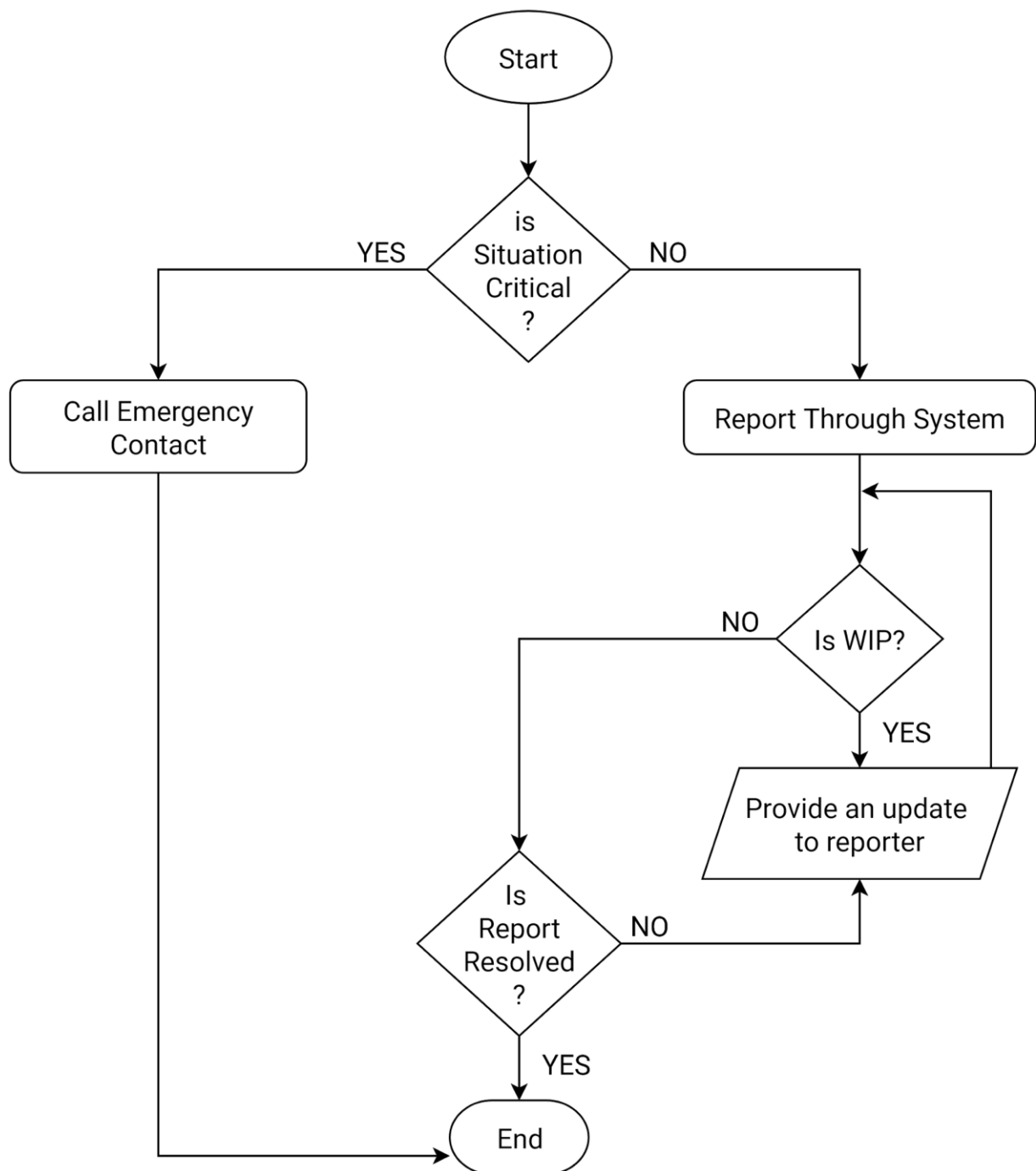
- Doctors shall be able to send a prescription to the user through the system.
- Doctors shall be able to see the medical records of the animal in previous consultations.
- Users shall be able to pay for the consultations.

6.2. Flow Charts

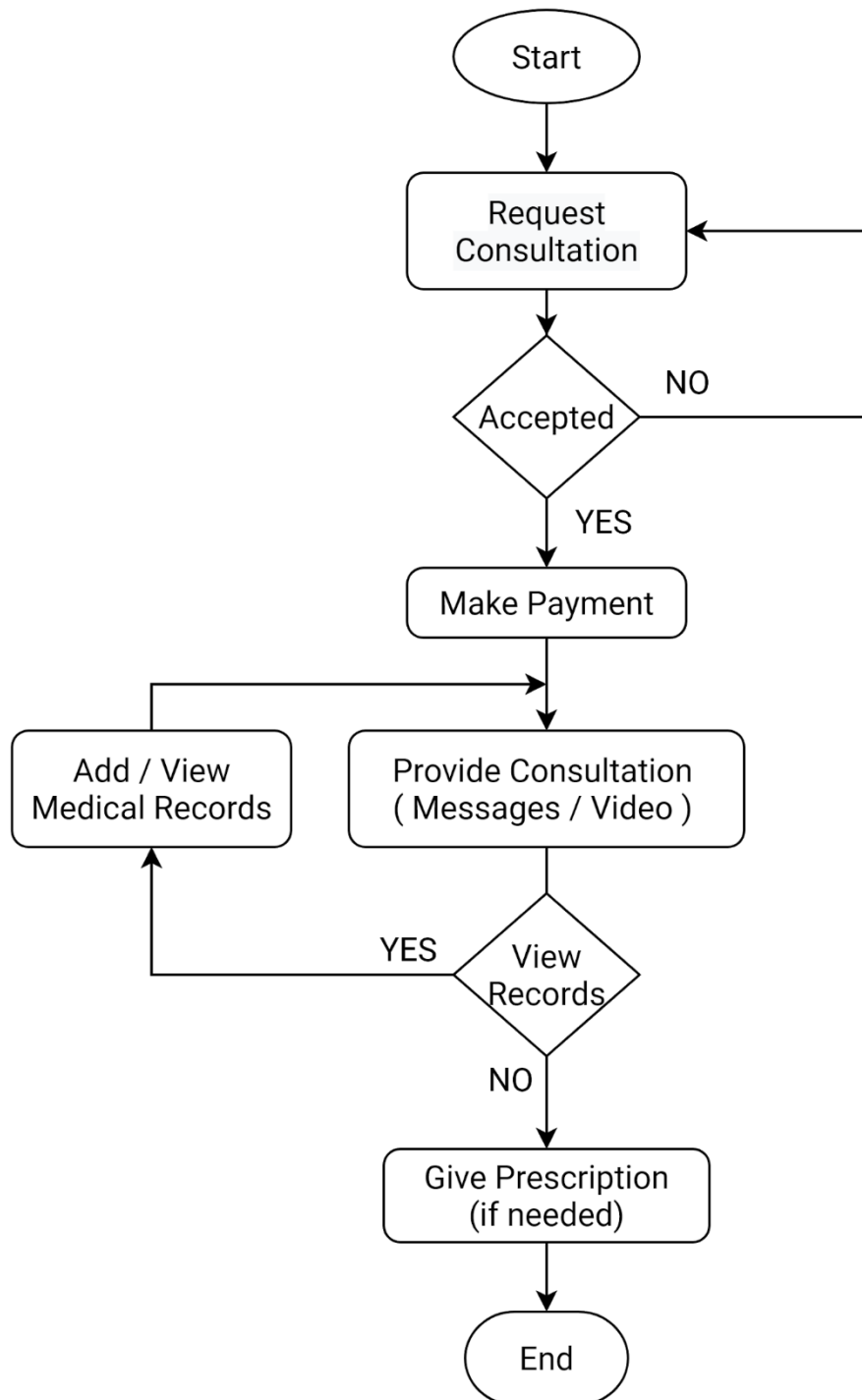
Adoption Process



Animal Rescues

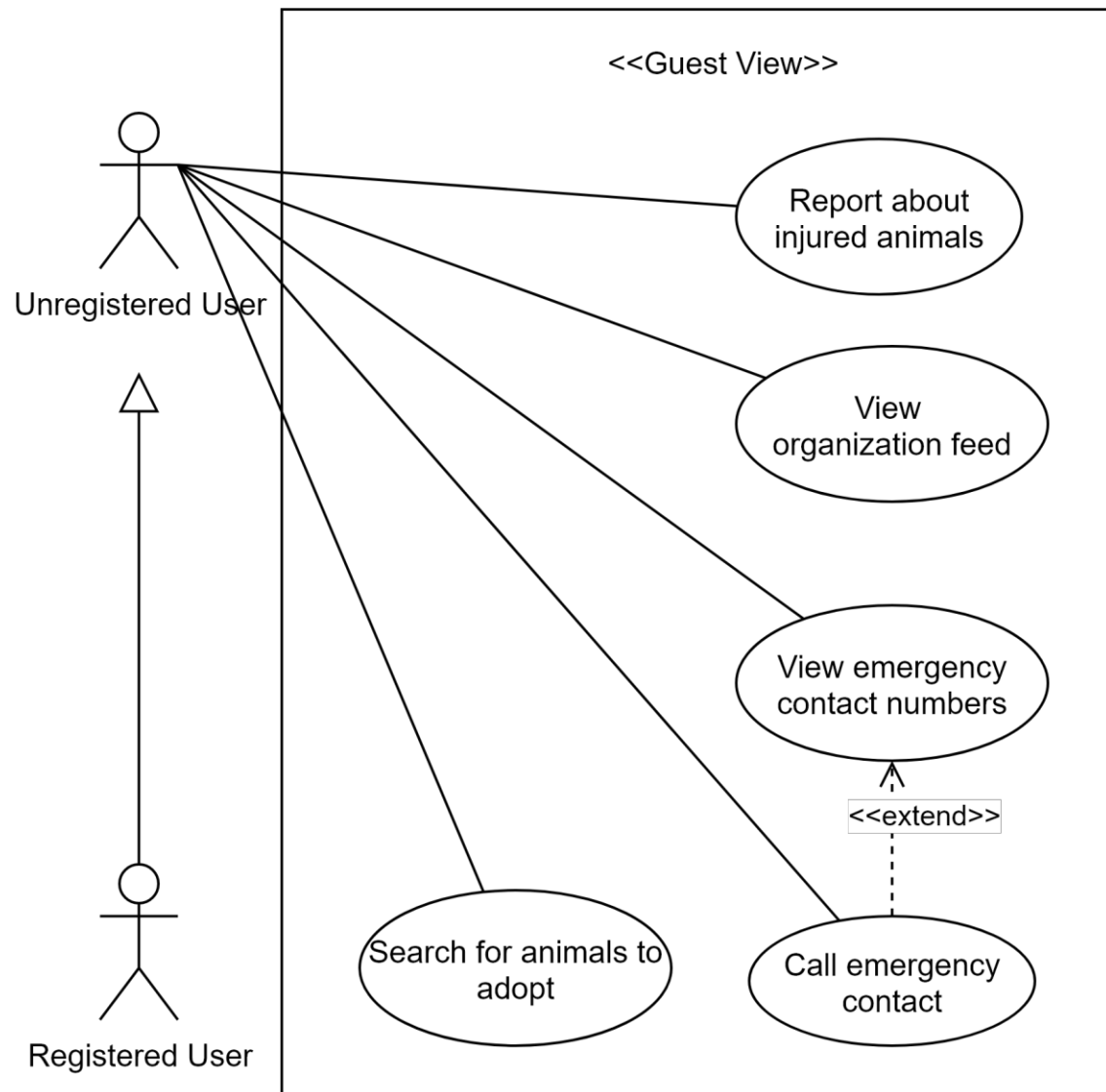


Veterinary Consultations

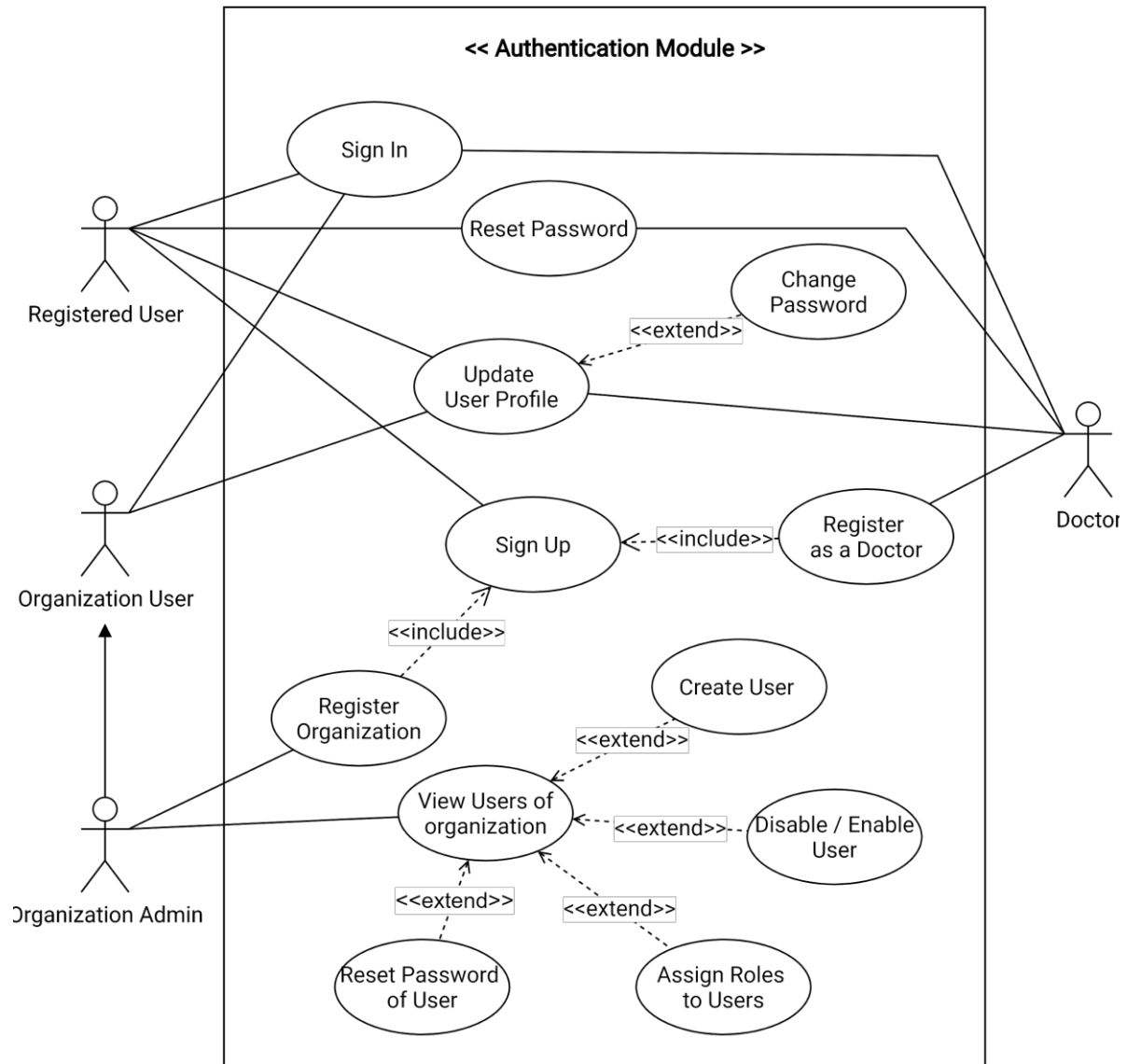


6.3. Use Case Diagrams

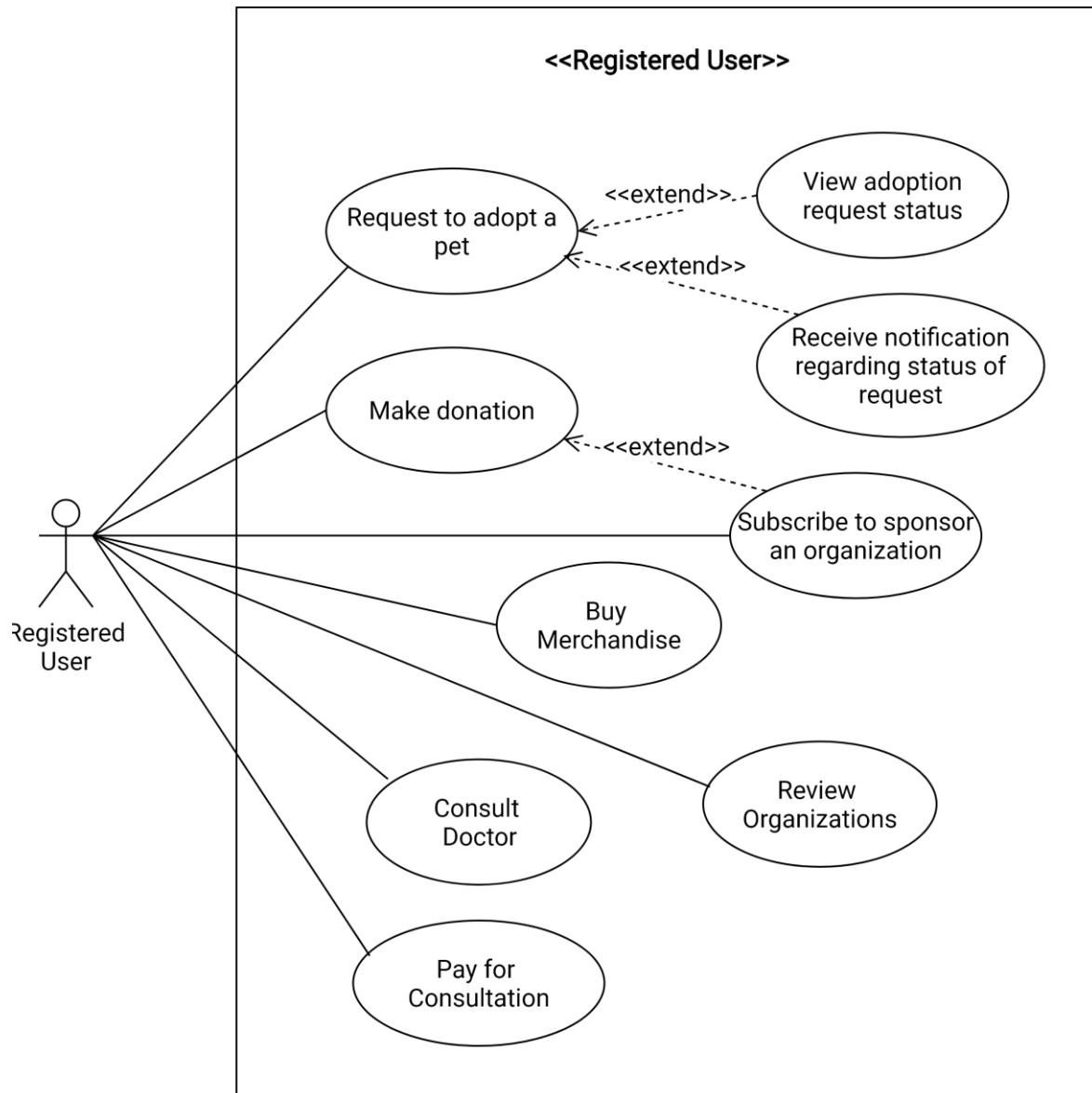
6.3.1. Unregistered / Guest User



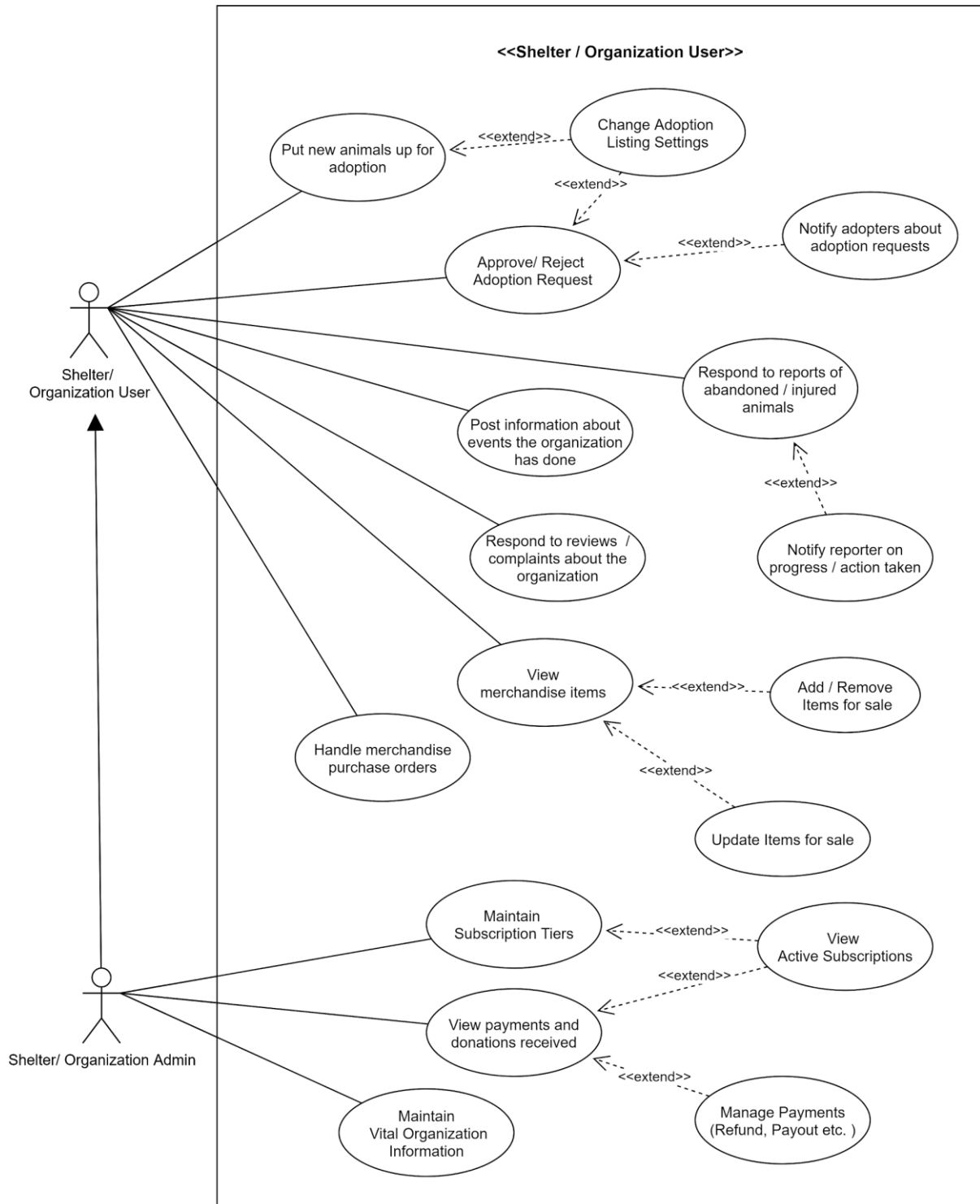
6.3.2. Authentication Module



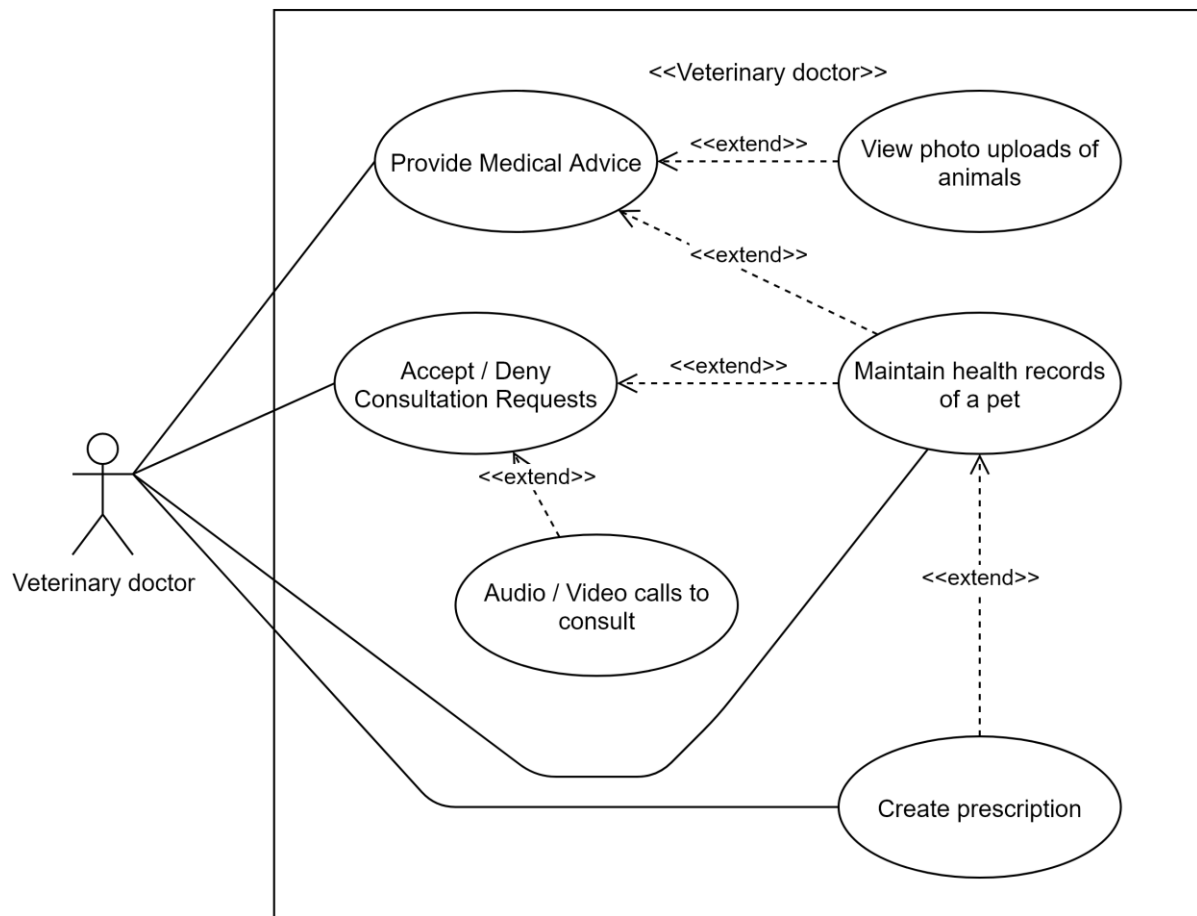
6.3.3. Registered User / Adopter



6.3.4. Shelter / Organization User



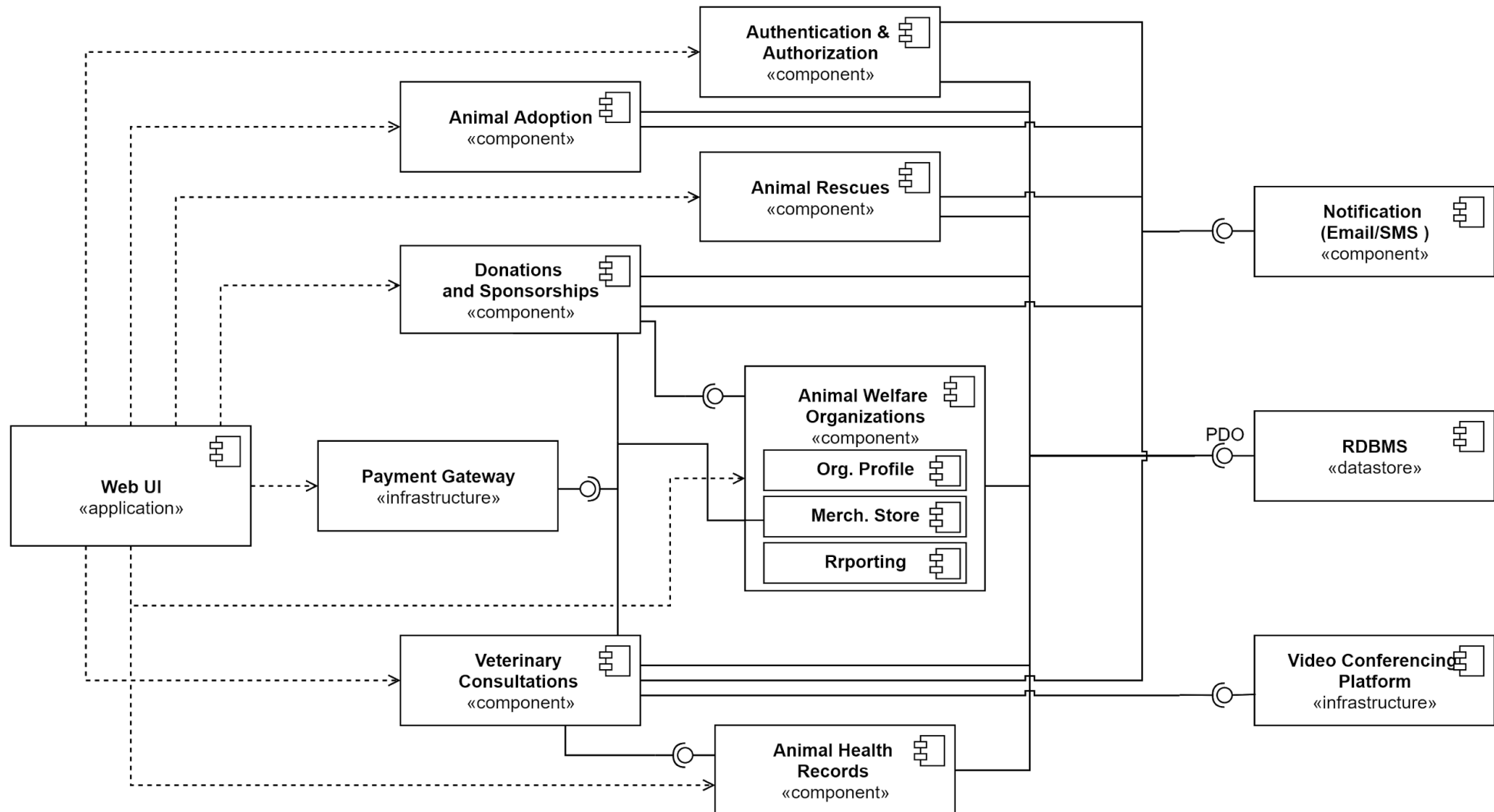
6.3.5. Veterinary Doctor



6.4. Use Case Descriptions and Activity Diagrams

Please refer to the appendices of this document for Use Case descriptions and Activity diagrams.

6.5. Component Diagram



7. Quality Attributes

7.1. Usability

The users of the system from shelters and veterinary clinics currently either do not use a software system or use one with simple, limited functionalities. Most of them use some form of social media to run their operations.

Therefore, the system must be simple and user-friendly as the users are not highly technical people. A simple and uncluttered user interface where it is easy to find the required services should address this issue. A user guide is provided to the users of animal shelters and veterinary clinics since their functionality is more complex than that of adopters.

7.2. Security

Since monetary donations are made through the system, this is made secure by encrypting the customer's card details using SSL. User accounts are secured by hashing passwords when storing in the database.

Also, the system includes countermeasures against SQL injection attacks, CORS based attacks, XSS and RCE (Remote Code Execution) as there is user-generated content in the application.

7.3. Availability

Our main deliverable is a web application and it is available throughout the day. Thus, it is crucial to maintain the maximum availability and uptime of our application.

For that,

- A cloud provider with guaranteed SLAs is used to host our application.
- Application deployment is configured to maintain a 99.5% uptime at a minimum.
- The application is containerized and deployed directly on a container runtime (a Paas) of the cloud provider (which have replicas and failover configured automatically).
- Application and infrastructure configuration is committed to the source repository (for better consistency)

Disaster Recovery

As the application is containerized there won't be a problem recovering the application. However, the database is backed up daily to a location outside the deployment server.

7.4. Performance and Reliability

A computer system must be always performant, reliable and must provide consistent results.

- Response time for any request is 500 ms or less. In situations where an asynchronous task is being performed, there should be a proper progress indicator.
- Every data mutating task utilizes a single database transaction to provide better concurrency and to avoid the database getting into an inconsistent state.
- Proper caching headers are set on the static content of the application.

7.5. Maintainability

System maintenance and future improvements should be straightforward to carry out. Therefore,

- The system is built with good developer documentation and comments.
- Best practices and good coding standards are followed.
- The system is properly modularized with good system architecture.

7.6. Portability / Interoperability

We are building a web application; the client application is always a web browser. Which is platform-independent by itself.

However special attention is required on the server side to maximize portability. For that,

- Usage of proprietary or non-standard APIs / interfaces during development is minimized.
- The best vendor-neutral and platform-neutral methods are utilized in scenarios such as when connecting and using a database.
- Data storage and communication formats are the industry standard. (Like utilizing ISO 8601 for dates)

8. Technologies to be used

Main Technologies

Frontend	HTML, CSS, JavaScript
Backend	PHP 7.3
Database	MySQL 5

These technologies were chosen to develop the application because they provide a good feature set, have a low learning curve and there are more resources to learn from. Because of that development work can be carried out, without heavily relying on frameworks and libraries. Also, all of the technologies are open source and freely available.

Other Technologies

Web Server	Apache httpd
Version Control & Repo. Hosting	Git - GitHub
Testing	Manual Testing
APIs	Google Maps API SMS API - (Notify.lk / Sandbox) Email - SMTP Payment Gateway - Stripe
IDEs & Other tools	VS Code, WAMP, Diagrams.net, Google Workspace, GitHub Projects

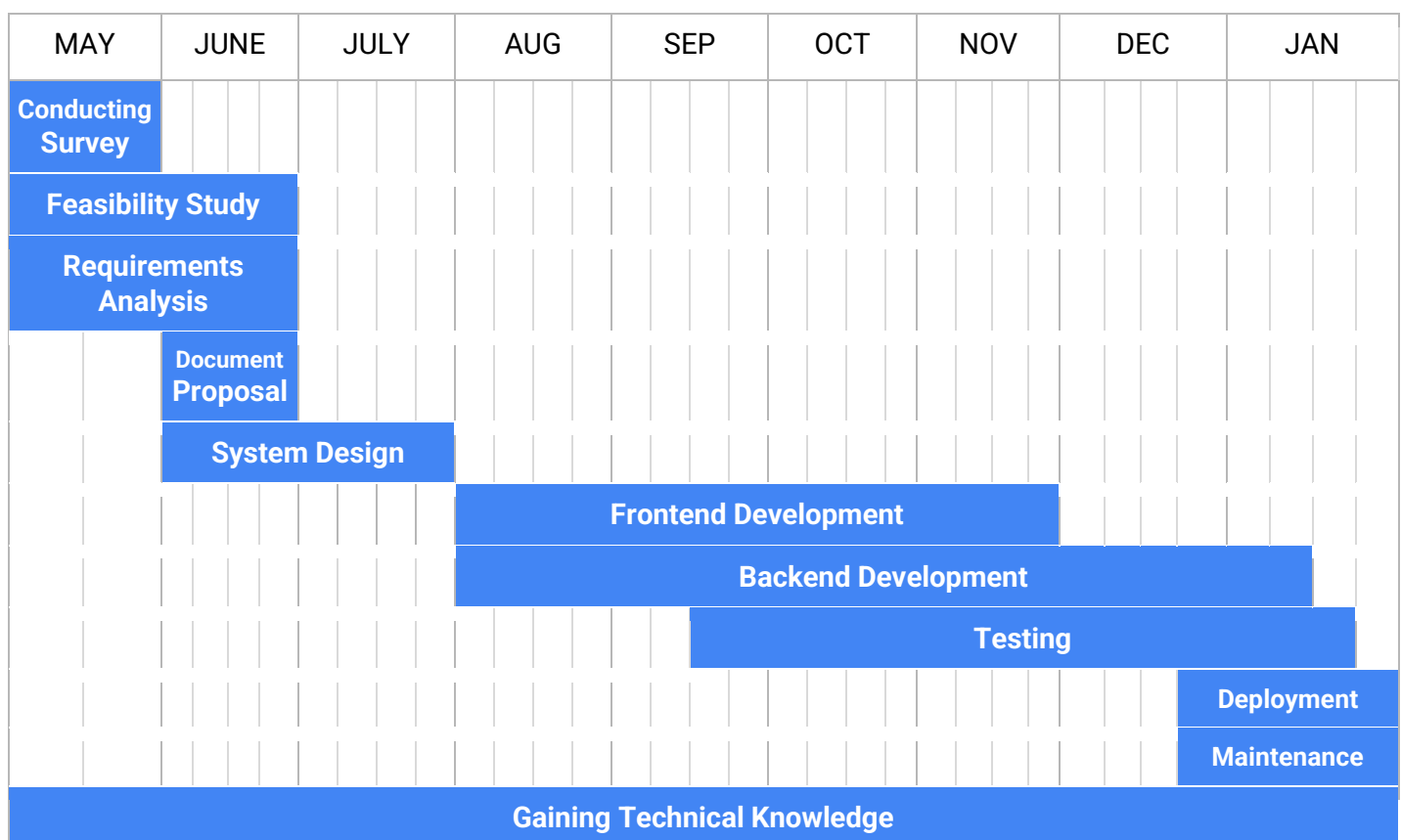
Since most of the project work is to be completed online, we are utilizing multiple online collaboration tools to be in sync with each other's work. Also, integrations with third-party services are required for features such as payments handling, sending SMS, maps.

9. Project Timeline

The project spans a total duration of 9 months - till the completion of the academic year. We are modelling our development process using the Iterative waterfall method. In this method, every phase contains a feedback path to its previous phase. So, with any feedback or insights received we can go back and make changes to be more aligned with the requirements and the goals of the project.

With the requirement analysis and the basic design of the system done, we are confident that the project could be completed on time without any major changes to the schedule.

Project Gantt Chart











10. Declaration

We as members of the project titled "Adoptee - An Application for Pet Adoption and Animal Support", certify that we will carry out this project according to guidelines provided by the coordinators and supervisors of the course as well as we will not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any university.

To the best of our knowledge and belief, the project work will not contain any material previously published or written by another person or ourselves except where due reference is made in the text of appropriate places.

Group Members

Name	Index Number	Signature
DHARMATHILAKE M.D.D.P.	1900 	
DAHANAYAKE H.N.	1900 	
MEDAGEDARA M.M.O.H.	1900 	
PERERA J.A.T.T.	1900 	

11. Appendices

Use Case Descriptions

Use Case ID	1
Use Case Name	Search for animals to adopt
Primary Actor/s	Guest User
Description	Users can filter and shortlist the available animals based on their preferences.
Pre-Conditions	There should be animals available to adopt.
Main Scenario	<ul style="list-style-type: none">• Visit the website• Filter by age, color, location, gender or organization• Search by keywords• View details of an interested animal.
Exceptions	User can select a pet to adopt during the process or even before applying any filters.
Post-Conditions	Filters will reset for subsequent visits.

Use Case ID	2
Use Case Name	View emergency contact numbers
Primary Actor/s	Guest User
Description	User can use emergency contacts which are available
Pre-Conditions	There must be emergency contact numbers added by the organization
Main Scenario	Go to emergency contacts numbers, Select view all emergency numbers
Exceptions	
Post-Conditions	

Use Case ID	3
Use Case Name	Call emergency contact
Primary Actor/s	Guest User

Description	User has access to call the emergency contacts
Pre-Conditions	Each emergency numbers must view with some details of the contact
Main Scenario	Go to emergency contacts, Select and call a preferable contact
Exceptions	Some numbers may be unavailable
Post-Conditions	

Use Case ID	4
Use Case Name	View Organization Profile / Feed
Primary Actor/s	Guest User
Description	Organizations can maintain a profile and a timeline of their events. Users can view these after selecting an organization
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Search and filter organization • Select an organization from the available list • View Profile
Exceptions	<ul style="list-style-type: none"> • User can donate to the organization or subscribe for a sponsorship • Can view merchandise items through the profile page
Post-Conditions	

Use Case ID	5
Use Case Name	Report about injured animals
Primary Actor/s	Guest User
Description	When someone finds an injured/abandoned animal on the road or somewhere else they can report it through the system.
Pre-Conditions	The user should have a photo, the location and other relevant information of the animal
Main Scenario	<ul style="list-style-type: none"> • Input description • Upload a Picture • Provide location data or input location manually • Submit
Exceptions	User can choose to directly call instead of reporting.

Post-Conditions	<ul style="list-style-type: none"> A report is created containing all required data
-----------------	--

Use Case ID	6
Use Case Name	Request to Adopt a pet
Primary Actor/s	Registered User
Description	User submits a request to adopt a pet from the relevant organization
Pre-Conditions	Pet should be one that is available for adoption - not already adopted
Main Scenario	<ul style="list-style-type: none"> Visit website Search for pets Select Request to Adopt for required pet
Exceptions	<ul style="list-style-type: none"> If user has already pending 2 requests, he cannot request more pets If user adopted a pet within the last 7 days, then he cannot request a pet
Post-Conditions	<ul style="list-style-type: none"> Organization user is notified of adoption request Organization user receives contact details of adopter The requested pet will be visible as "Request Pending" for registered user who requested

Use Case ID	7
Use Case Name	View adoption request status
Primary Actor/s	Registered User
Description	User can see if the request is still pending, rejected or approved
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Sign in Visit profile Go to Pending Adoption Requests View request status
Exceptions	Request will not be displayed if the relevant animal has been adopted or is not available for adoption any longer
Post-Conditions	

Use Case ID	8
Use Case Name	Receive notification regarding the status of a request

Primary Actor/s	Registered User
Description	User receives a notification that says if request was rejected or approved
Pre-Conditions	Organization user must check the notification of adoption request
Main Scenario	<ul style="list-style-type: none"> Organization User approves or rejects the registered user's adoption request User receives notification Check if request was accepted or rejected
Exceptions	Organization user does not respond to request at all
Post-Conditions	

Use Case ID	9
Use Case Name	Make donation
Primary Actor/s	Registered User
Description	User donates monetary funds to an organization or a particular pet of an organization
Pre-Conditions	<ul style="list-style-type: none"> Organization must be open for funding Organization must put up a pet in need of funds
Main Scenario	<ul style="list-style-type: none"> User visits an organization's page View donation requests Select a fund Be directed to payment gateway Enter payment details including amount to be donated System credits the amount to the organization's account Updates the user's payment history Generate receipt
Exceptions	User enters invalid payment details
Post-Conditions	Show confirmation of successful payment

Use Case ID	10
Use Case Name	Subscribe to a sponsorship of an organization
Primary Actor/s	Registered User
Description	User agrees to donate periodically to a specific organization or pet
Pre-Conditions	<ul style="list-style-type: none"> Organization must be open for funding

	<ul style="list-style-type: none"> Organization must put up a pet in need of funds
Main Scenario	<ul style="list-style-type: none"> User visits an organization's page View donation requests open for subscription Select Subscribe/ Unsubscribe option Enter payment details System updates user's subscriptions
Exceptions	
Post-Conditions	

Use Case ID	11
Use Case Name	Buy merchandise
Primary Actor/s	Registered User
Description	User buys pet food, toys from an organization
Pre-Conditions	Organizations should have merchandise in stock
Main Scenario	<ul style="list-style-type: none"> User applies filter/ searches by keywords for merchandise Selects required item Be directed to payment gateway Enter payment details System credits organization account Notifies organization Generate receipt
Exceptions	<ul style="list-style-type: none"> There is no merchandise available for sale User enters invalid payment details
Post-Conditions	Show confirmation of successful payment

Use Case ID	12
Use Case Name	Review organizations
Primary Actor/s	Registered User
Description	User comments on the performance of organizations
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> User visits an organization's page Selects "Review organization" option Enters comments
Exceptions	

Post-Conditions	
-----------------	--

Use Case ID	13
Use Case Name	Consult doctor
Primary Actor/s	Registered User
Description	User consults a veterinary doctor about their pet's health conditions
Pre-Conditions	A doctor must be available for online consultation in real time or later
Main Scenario	<ul style="list-style-type: none"> • User searches for doctors • Views available doctors • Take audio/ video call if doctor is online or upload pet's picture • Receives consultation • Doctor create prescription
Exceptions	<ul style="list-style-type: none"> • There are no doctors who are online at the time • An uploaded picture is not viewed by the doctor • An uploaded picture is removed by the user before receiving consultation
Post-Conditions	<ul style="list-style-type: none"> • Prescription is downloaded

Use Case ID	14
Use Case Name	Pay for consultation
Primary Actor/s	Registered User
Description	User pays the veterinary doctor for consulting on their pet's health
Pre-Conditions	Doctor must declare that the consultation is one that requires payment
Main Scenario	<ul style="list-style-type: none"> • User visits the relevant doctor's page • Selects "Payment" option • Enters payment details including doctor's fee • Generate receipt
Exceptions	Invalid payment details entered
Post-Conditions	<ul style="list-style-type: none"> • User receives confirmation of successful payment • Doctor receives confirmation of successful payment

Use Case ID	15
-------------	-----------

Use Case Name	Put new animals up for adoption
Primary Actor/s	Organization User
Description	Organization User adds details about new animals to be adopted to the system
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Organization User navigates to "Animals for Adoption" section • Selects "Add new animal for adoption" • Add relevant details about the animal • Confirm the details
Exceptions	
Post-Conditions	The new opportunity will be displayed in the system. Registered Users receive a notification on the newly added opportunity.

Use Case ID	16
Use Case Name	Change Adoption Listing Settings
Primary Actor/s	Organization User
Description	Organization User can change listing setting of the adoption opportunities to hide or view relevant opportunities
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Organization User navigates to "Settings" section • View's listing settings • Select listing option
Exceptions	
Post-Conditions	Listing settings of relevant adoption opportunities will change accordingly in the UI

Use Case ID	17
Use Case Name	Approve/ Reject Adoption Request
Primary Actor/s	Organization User
Description	Organization User approves or rejects the adoption requests sent by registered users

Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Organization User selects adoption requests Change the status to "Approved/Rejected"
Exceptions	
Post-Conditions	<ul style="list-style-type: none"> Requested user will get a notification on the status change Opportunity status will be changed accordingly

Use Case ID	18
Use Case Name	Notify adopters about adoption requests
Primary Actor/s	Organization User
Description	Once the organization user selects an adoption request from the list and change its status, a notification will be sent to the registered user who requested indicating the status of it.
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Organization User selects adoption requests Change the status to "Approved/Rejected"
Exceptions	Incorrect contact details entered
Post-Conditions	Requested user will get a notification on the status change.

Use Case ID	19
Use Case Name	Respond to reports of abandoned / injured animals
Primary Actor/s	Organization User
Description	Organization will view, respond and handle the cases reported by users
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Organization will view reported cases Select the case to be taken care of Changes its status to 'Allocated'
Exceptions	Case reported being fake
Post-Conditions	<ul style="list-style-type: none"> Reported user will get a notification on the status change Case status will be changed accordingly

Use Case ID	20
Use Case Name	Notify reporter on progress / action taken
Primary Actor/s	Organization User
Description	Organization will add further updates on the process and actions taken regarding the reported case.
Pre-Conditions	The relevant case has to be taken care of by the same organization
Main Scenario	<ul style="list-style-type: none"> • Organization will view reported cases • Select the case to be updated • Adds an update on the process / actions taken • Add photo proof for updates
Exceptions	Case reported being fake
Post-Conditions	Update notification on the case will be sent to the reported user

Use Case ID	21
Use Case Name	Post information about events the organization has done
Primary Actor/s	Organization User
Description	Organization User will post about past events conducted by the organization and upcoming events to be conducted
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Organization user will view existing events • Select an option from modify event / remove event / create event (Past Event / Upcoming Event)
Exceptions	
Post-Conditions	Event information will be posted in the system

Use Case ID	22
Use Case Name	Respond to reviews / complaints about the organization
Primary Actor/s	Organization User
Description	Organization User will view and respond to reviews given by users
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Organization will view reviews • Give responses to reviews

Exceptions	
Post-Conditions	<ul style="list-style-type: none"> • Reviewer will be notifying on the responses • Responses will be displayed in the system

Use Case ID	23
Use Case Name	View merchandise items
Primary Actor/s	Organization User
Description	Organization User will view details about merchandise items that are made available in the web-store for purchase in the store
Pre-Conditions	Merchandise items should belong to the relevant organization
Main Scenario	<ul style="list-style-type: none"> • Organization User will view the list of merchandise item that are made available in the web-store • Select Product • View details about the product
Exceptions	
Post-Conditions	

Use Case ID	24
Use Case Name	Add / Remove Items for sale
Primary Actor/s	Organization User
Description	Organization User will add / remove merchandise items that are made available in the web-store for purchase in the store
Pre-Conditions	Merchandise items should belong to the relevant organization
Main Scenario	<ul style="list-style-type: none"> • Organization User will navigate to web-store • Add new items / remove existing items that are made available in the web-store
Exceptions	
Post-Conditions	

Use Case ID	25
Use Case Name	Update Items for sale
Primary Actor/s	Organization User

Description	Organization will update details about the merchandise items that are made available in the web-store for purchase in the store
Pre-Conditions	Merchandise items should belong to the relevant organization
Main Scenario	<ul style="list-style-type: none"> Organization User will navigate to web-store Update details about existing items that are made available in the web-store
Exceptions	
Post-Conditions	

Use Case ID	26
Use Case Name	Handle merchandise purchase orders
Primary Actor/s	Organization User
Description	Organization user handles the received order requests
Pre-Conditions	Organizations should have merchandise in stock
Main Scenario	<ul style="list-style-type: none"> Organization user views the list of order requests Confirms the order request Sends confirmation notification and invoice Prepares and dispatches the items
Exceptions	
Post-Conditions	

Use Case ID	27
Use Case Name	Maintain Sponsorship Tiers
Primary Actor/s	Organization Admin
Description	Each organization is different and they will have different requirements. So, organizations can decide on the details of sponsorships (prices, benefits) tiers themselves.
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Create new sponsorship tier or modify an existing tier or Remove a Tier from the system
Exceptions	<ul style="list-style-type: none"> Tier modifications (amount changes) will not affect existing subscriptions

	<ul style="list-style-type: none"> When a tier is removed user can migrate existing subscriptions to a lower or equal tier
Post-Conditions	

Use Case ID	28
Use Case Name	View Active Sponsorships
Primary Actor/s	Organization Admin
Description	An organization can have multiple active sponsorships. It is crucial to know the people sponsoring the organization and the amounts.
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Navigate to Organization Dashboard View Sponsorships View Active Sponsorship Details View Summery
Exceptions	
Post-Conditions	

Use Case ID	29
Use Case Name	View payments and donations received
Primary Actor/s	Organization Admin
Description	Being able to view payments and donations is important to planning and other management tasks. this will also provide an analytical view into the donations received.
Pre-Conditions	
Main Scenario	(Date, user, type); View Details of specific a payment / donation <ul style="list-style-type: none"> Navigate to Organization Dashboard View Payments Apply Filters
Exceptions	
Post-Conditions	

Use Case ID	30
Use Case Name	Refund Payment

Primary Actor/s	Organization Admin
Description	Payments received by the organization have to be refunded sometimes this has to be notified to the user with relevant transaction details
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • View Payments & Select a Payment • Select "Refund Payment" • Provide a Reason • View Transaction details
Exceptions	
Post-Conditions	A Notification must be generated and sent to the user who made the payment

Use Case ID	31
Use Case Name	Maintain Vital Organization Information
Primary Actor/s	Organization Admin
Description	Organizations have key vital information such as Names, Addresses contact numbers etc. Admin can modify and update those.
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • Go to Organization Settings • Select "Edit Organization Profile" • Update fields as required. • Save
Exceptions	User can choose to discard the changes without saving
Post-Conditions	<ul style="list-style-type: none"> • Details are updated and presented correctly

Use Case ID	32
Use Case Name	Provide Medical Advice
Primary Actor/s	Veterinary Doctor
Description	A doctor provides medical advice to the pet requested by the user
Pre-Conditions	There must be a call with the relevant accessed user or uploaded a photo of the pet

Main Scenario	The doctor accepts the request, View the uploaded photo of the pet, make audio or video calls, Give consultations
Exceptions	
Post-Conditions	

Use Case ID	33
Use Case Name	View photo uploads of animals
Primary Actor/s	Veterinary Doctor
Description	The doctor views photos of the pet uploaded by users to decide conditions
Pre-Conditions	The doctor must accept the request of the user, User must have the facility to upload a photo
Main Scenario	Go to the relevant user page View the photo of the relevant pet
Exceptions	The doctor may be viewing an unclear photo, The user deletes the photo before the doctor sees the photo
Post-Conditions	Show Marked as viewed

Use Case ID	34
Use Case Name	Accept / Deny Consultation Requests
Primary Actor/s	Veterinary Doctor
Description	The doctor can accept/deny the requests made by the user
Pre-Conditions	The doctor has no other consultations during this time
Main Scenario	Go to the doctor's page Accept /deny the consultation
Exceptions	The doctor maybe gets more than one requests at the same time
Post-Conditions	Confirmation of "Request Accepted"

Use Case ID	35
Use Case Name	Audio / Video calls to consult

Primary Actor/s	Veterinary Doctor
Description	The veterinary doctor can make audio/video calls with the accepted user to give consultation about the pet's health
Pre-Conditions	The user must have a working phone number.
Main Scenario	Go to the user info and make calls Get answered for calls from accepted user
Exceptions	There may be a working phone number. May be face to networks error during the calls
Post-Conditions	

Use Case ID	36
Use Case Name	Maintain health records of a pet
Primary Actor/s	Veterinary Doctor
Description	The doctor should maintain a health record of each consulted pets by updating the records or creating new records
Pre-Conditions	The doctor must check whether each relevant pet has a previous health record
Main Scenario	Go to the health records Update or add new records
Exceptions	It may be incorrect previous records
Post-Conditions	The show health record is updated or created by time

Use Case ID	37
Use Case Name	Create prescription
Primary Actor/s	Veterinary Doctor
Description	Doctor issues a prescription for consulted pets
Pre-Conditions	
Main Scenario	Go to create prescription Create prescription, Send it to the relevant user
Exceptions	
Post-Conditions	Make it available for the user to download

Use Case ID	38
Use Case Name	Sign In
Primary Actor/s	Registered User, Organization User, Organization Admin, Veterinary Doctor
Description	User signs into their profile
Pre-Conditions	Account must already be signed up
Main Scenario	<ul style="list-style-type: none"> • User visits the website • Selects "Sign in" option • Enters username • Enters password
Exceptions	<ul style="list-style-type: none"> • Username is incorrect • Password is incorrect • User is already signed in • User entered the incorrect password more than 5 times
Post-Conditions	User is signed in

Use Case ID	39
Use Case Name	Sign Up
Primary Actor/s	Guest User, Organization Admin, Veterinary Doctor
Description	User creates an account on the platform
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • User visits the website • Selects "Sign Up" option • Creates unique username • Creates password
Exceptions	<ul style="list-style-type: none"> • Username is one that already exists • Password doesn't contain at least one number and one special character • Password is too short
Post-Conditions	New user account is added

Use Case ID	40
Use Case Name	Update User Profile

Primary Actor/s	Registered User, Organization User, Organization Admin, Veterinary Doctor
Description	User edits their personal details on their profile
Pre-Conditions	User must be signed in
Main Scenario	<ul style="list-style-type: none"> • User signs in • Visit's profile • Selects "Edit Profile" • Edits personal information
Exceptions	
Post-Conditions	User data is changed

Use Case ID	41
Use Case Name	Change Password
Primary Actor/s	Registered User, Organization User, Organization Admin, Veterinary Doctor
Description	User changes the existing password to a new one
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • User visits website • Goes to sign in page • Selects "Change Password" option • Enters username • Enters old password • Enters new password
Exceptions	<ul style="list-style-type: none"> • Password doesn't contain at least one number and one special character • Password is too short • Change password link expires 2 hours after generation and will also expire after use
Post-Conditions	Account password is changed

Use Case ID	42
Use Case Name	Reset Password
Primary Actor/s	Registered User, Organization Admin, Veterinary Doctor
Description	Account password is changed to the one that was available when creating the account initially

Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> • User visits website • Goes to sign in page • Selects "Reset Password" option • Enters username • Enters existing password • Confirms password reset
Exceptions	Reset link expires 2 hours after generation and will also expire after use
Post-Conditions	Account password is reset

Use Case ID	43
Use Case Name	Register Organization
Primary Actor/s	Organization Admin
Description	Organizations have to register in the system to list animals, respond to reports and perform other tasks.
Pre-Conditions	<ul style="list-style-type: none"> • The user must have a working phone number and an email address
Main Scenario	<ul style="list-style-type: none"> • Go to Registration Page • Sign Up as a user • Provide Information of organization - organization name, address, telephone • Verify email address and telephone
Exceptions	
Post-Conditions	<ul style="list-style-type: none"> • Organization is created and activated • Admin can sign in with his/her credentials.

Use Case ID	44
Use Case Name	Register as a Doctor
Primary Actor/s	Veterinary Doctor
Description	Doctors should register in this system to do their tasks
Pre-Conditions	The doctor must have valid qualifications and working phone number and email
Main Scenario	Go to Registration Page

	Sign Up as a Doctor, Provide Information name, address, telephone, email address, and qualifications
Exceptions	There may be Incorrect information of the doctor
Post-Conditions	The profile is created and confirmation of successful registration Get access to the tasks

Use Case ID	45
Use Case Name	View users of an organization
Primary Actor/s	Organization Admin
Description	Organization admin can view who are the users in his/her organization and their details such as email, status (Enabled or Disabled) and the assigned role.
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Go to Organization Settings Select "Users & Roles" View users and perform any tasks required.
Exceptions	Admin can choose to perform other tasks from this screen such as password reset and role assignment.
Post-Conditions	

Use Case ID	46
Use Case Name	Create an Organization User
Primary Actor/s	Organization Admin, Organization User
Description	The addition of a new user to an organization can be done only by the admin of that organization.
Pre-Conditions	Admin should have the required information to create a user (an email address, username)
Main Scenario	<ul style="list-style-type: none"> Navigate to "Organization Settings" Select "Users & Roles" -> New User Input User details (Name, email, role, password) Submit
Exceptions	
Post-Conditions	<ul style="list-style-type: none"> User is created successfully A notification email is sent to the created user.

Use Case ID	47
Use Case Name	Disable / Enable User
Primary Actor/s	Organization Admin
Description	Temporarily disabling a user and enabling back can be done only by the admin
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Choose a user from the available users Choose either to enable or disable Submit
Exceptions	User cannot disable his/her self.
Post-Conditions	<ul style="list-style-type: none"> respective user is disabled or enabled as required If the user is disabled and user is currently signed in, he/she should be signed out immediately

Use Case ID	48
Use Case Name	Assign Roles to Users
Primary Actor/s	Organization Admin
Description	Organization admin can decide on which users are admins and which users are normal users
Pre-Conditions	Organization needs to have more than one user
Main Scenario	<ul style="list-style-type: none"> Choose a user from the available users Select the required user role Submit
Exceptions	User can't change his/her assigned role
Post-Conditions	Role change must affect immediately without the related user having to re-authenticate

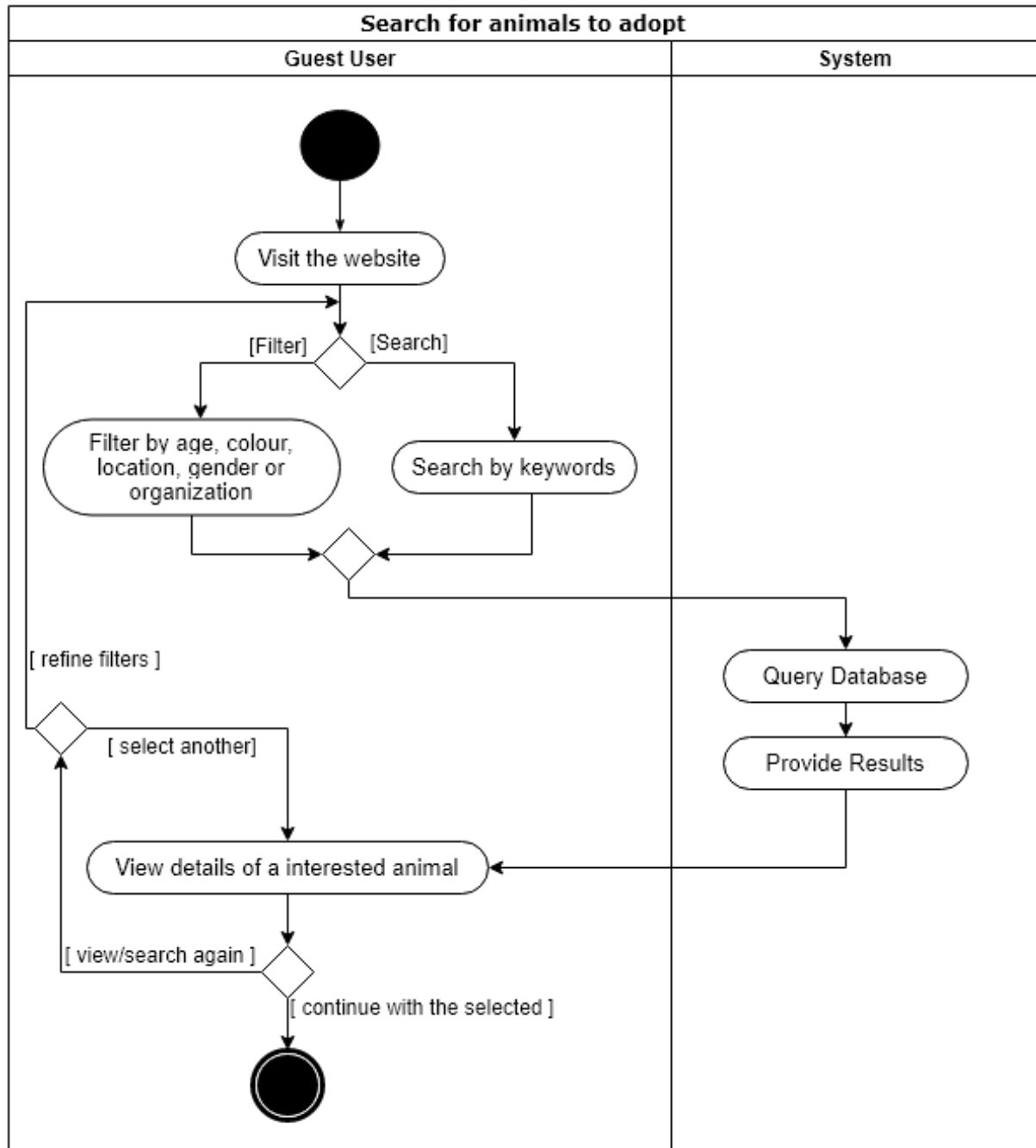
Use Case ID	49
Use Case Name	Reset Password of Organization User
Primary Actor/s	Organization Admin, Organization User

Description	If an organization user needs to reset his/her password they can ask the admin to generate a reset link for them. (They cannot reset the password through normal flow)
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> Choose a user from the available users Generate an email containing a password reset link Organization user navigates to the link Enter a new password (with confirmation) Submit
Exceptions	<ul style="list-style-type: none"> The respective user account has to be active in order to reset the password. Reset link expires 2 hours after generation and will also expire after use. If the user doesn't have access to the email, admin can also directly access the reset link.
Post-Conditions	<ul style="list-style-type: none"> User password is changed User can sign in using the new password

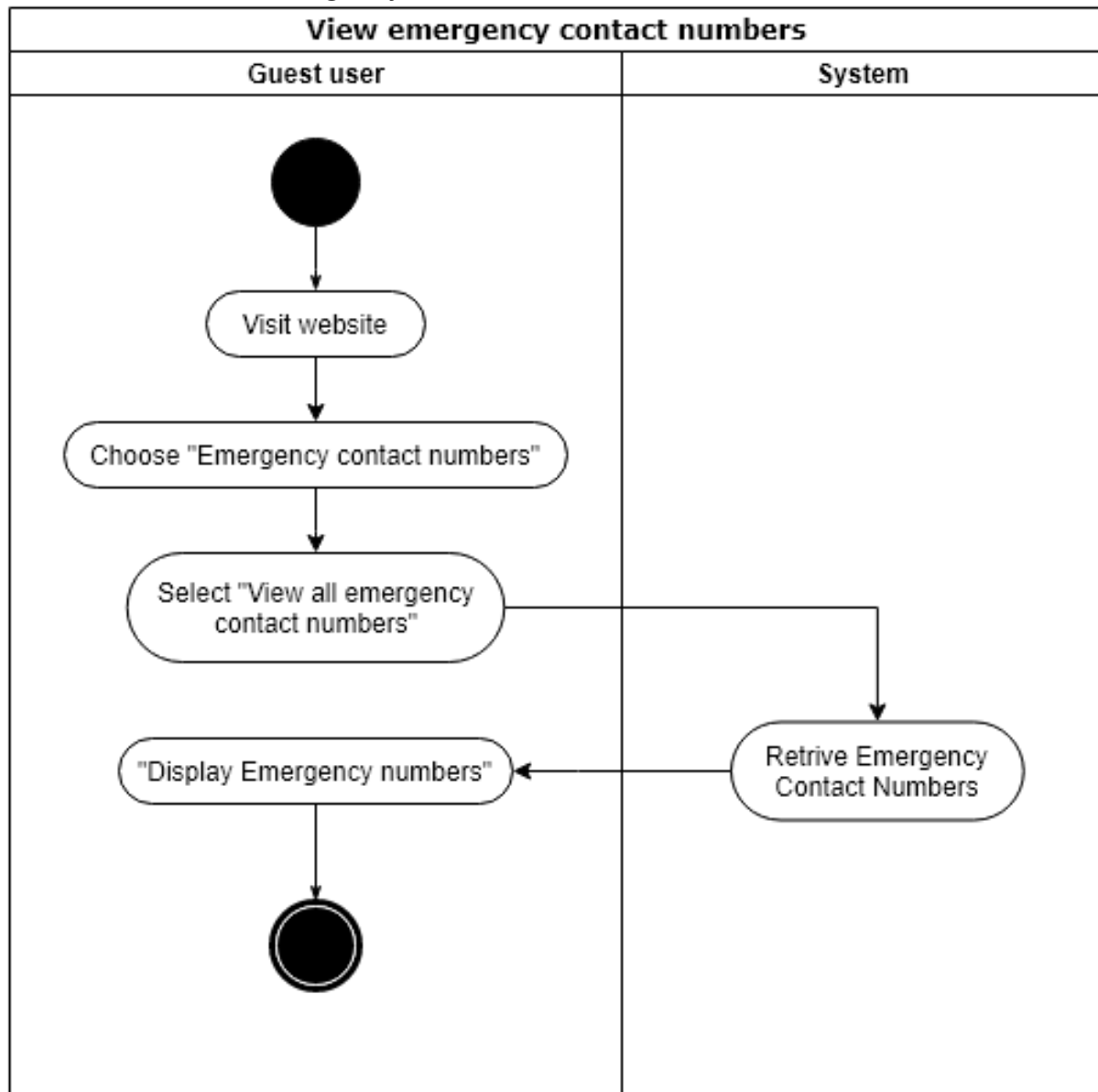
Use Case ID	50
Use Case Name	View Purchase, Donation & Sponsorship History
Primary Actor/s	Registered User
Description	User can view their past purchases and donations
Pre-Conditions	
Main Scenario	<ul style="list-style-type: none"> User visits website Signs in Visit's profile Selects purchase history View past purchases, donations, subscriptions
Exceptions	If there haven't been any transactions, the purchase history content will be empty
Post-Conditions	

Activity Diagrams

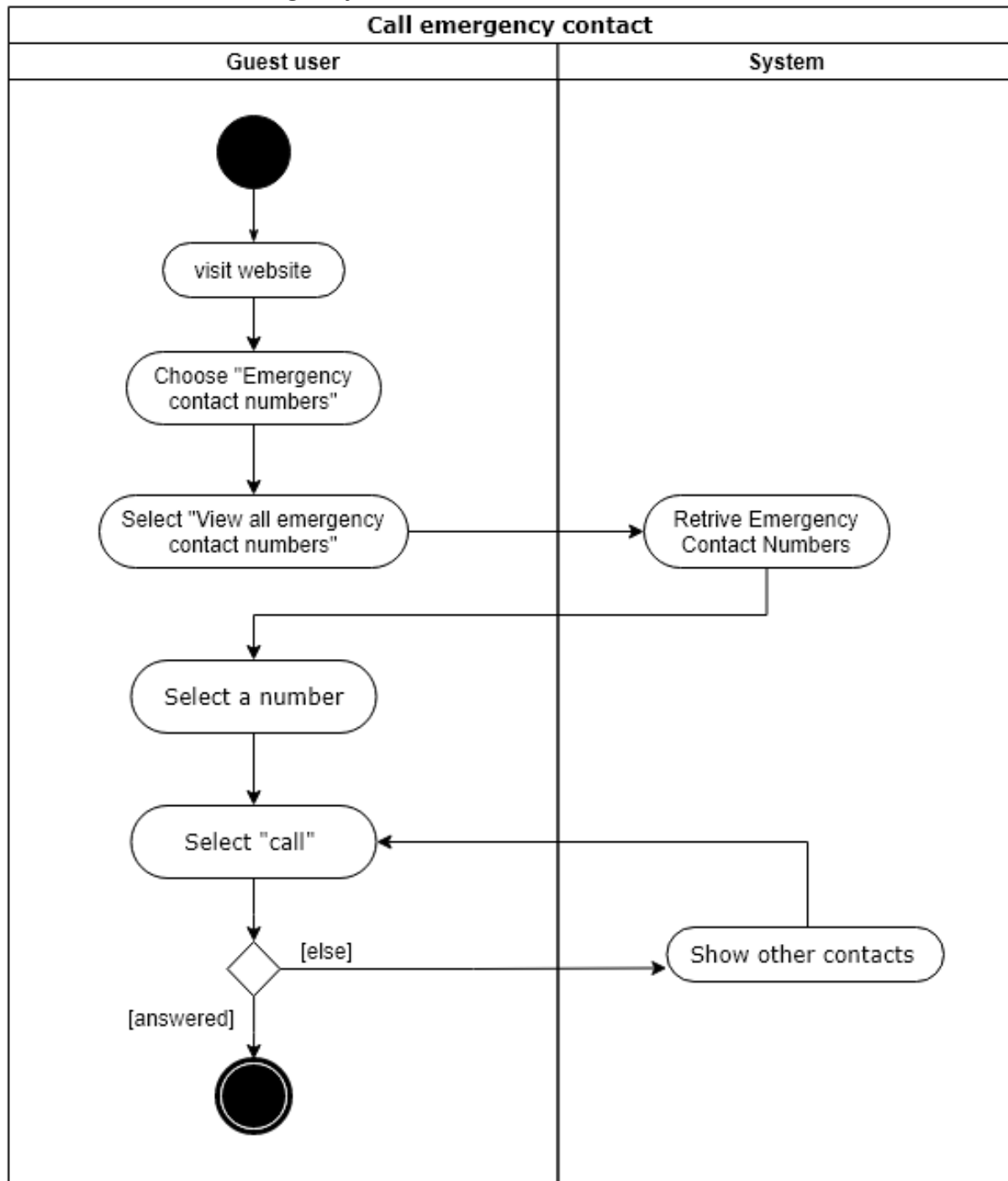
Use Case 1 - Search for animals to adopt



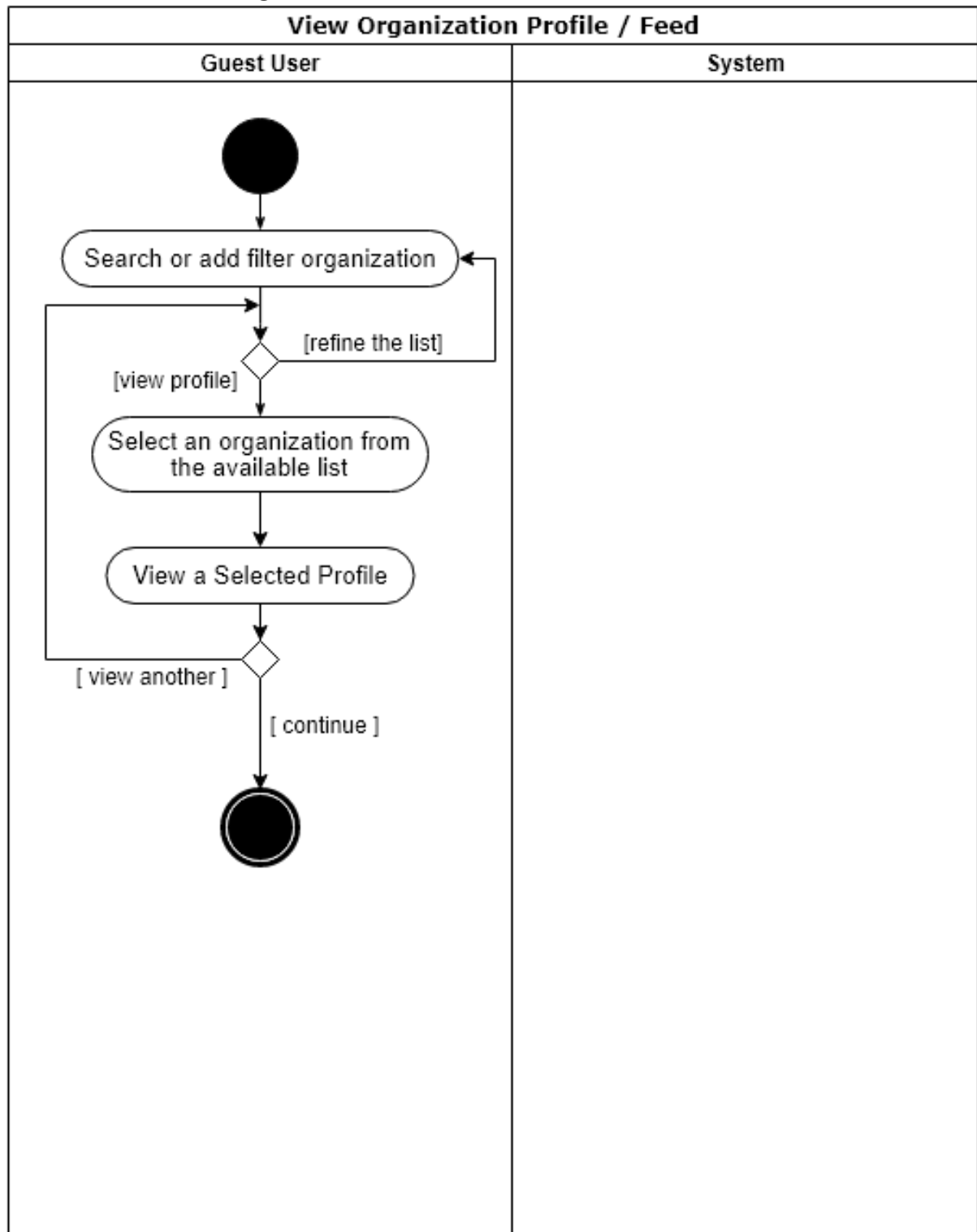
Use Case 2 - View emergency contact numbers



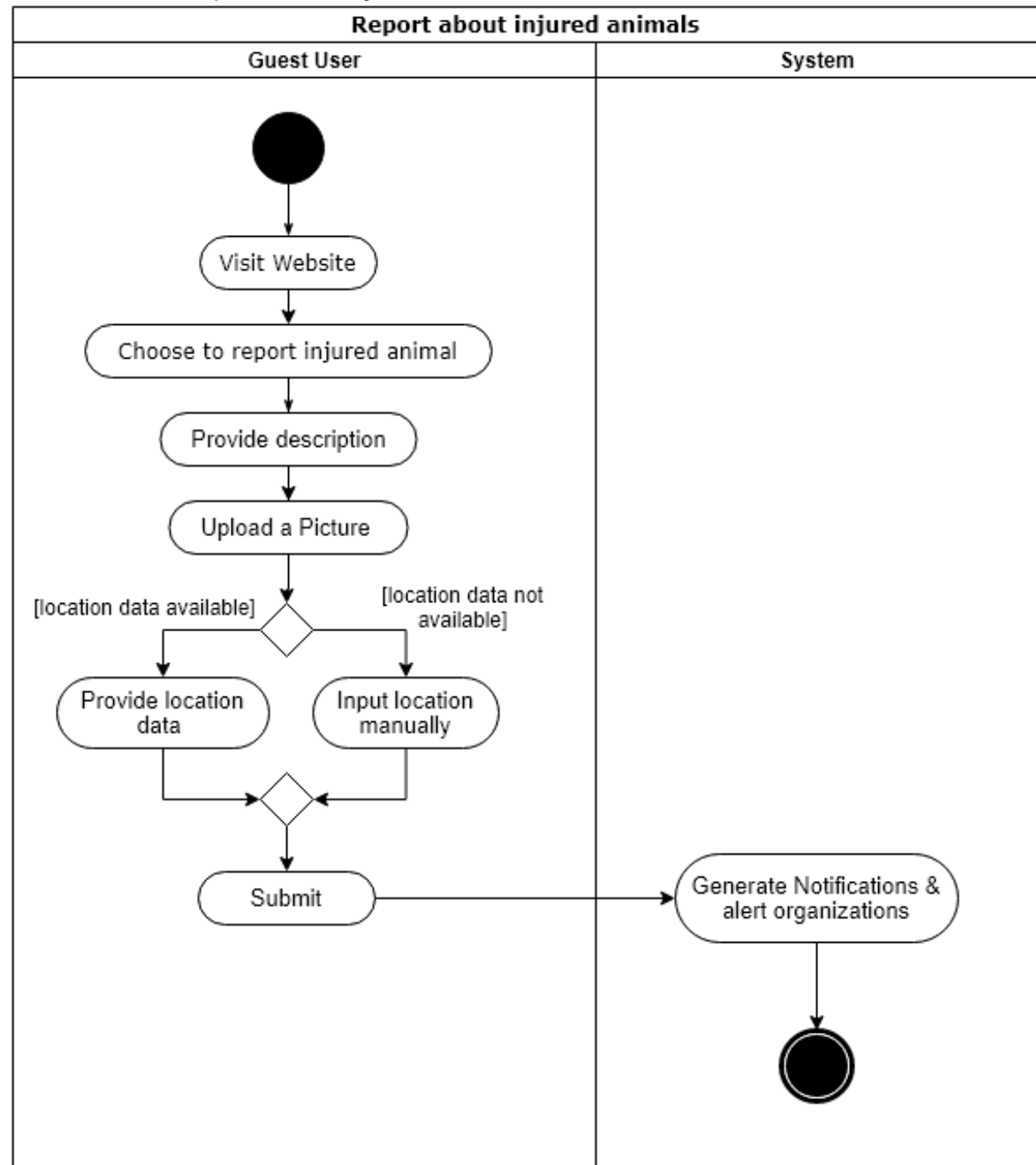
Use Case 3 - Call emergency contact



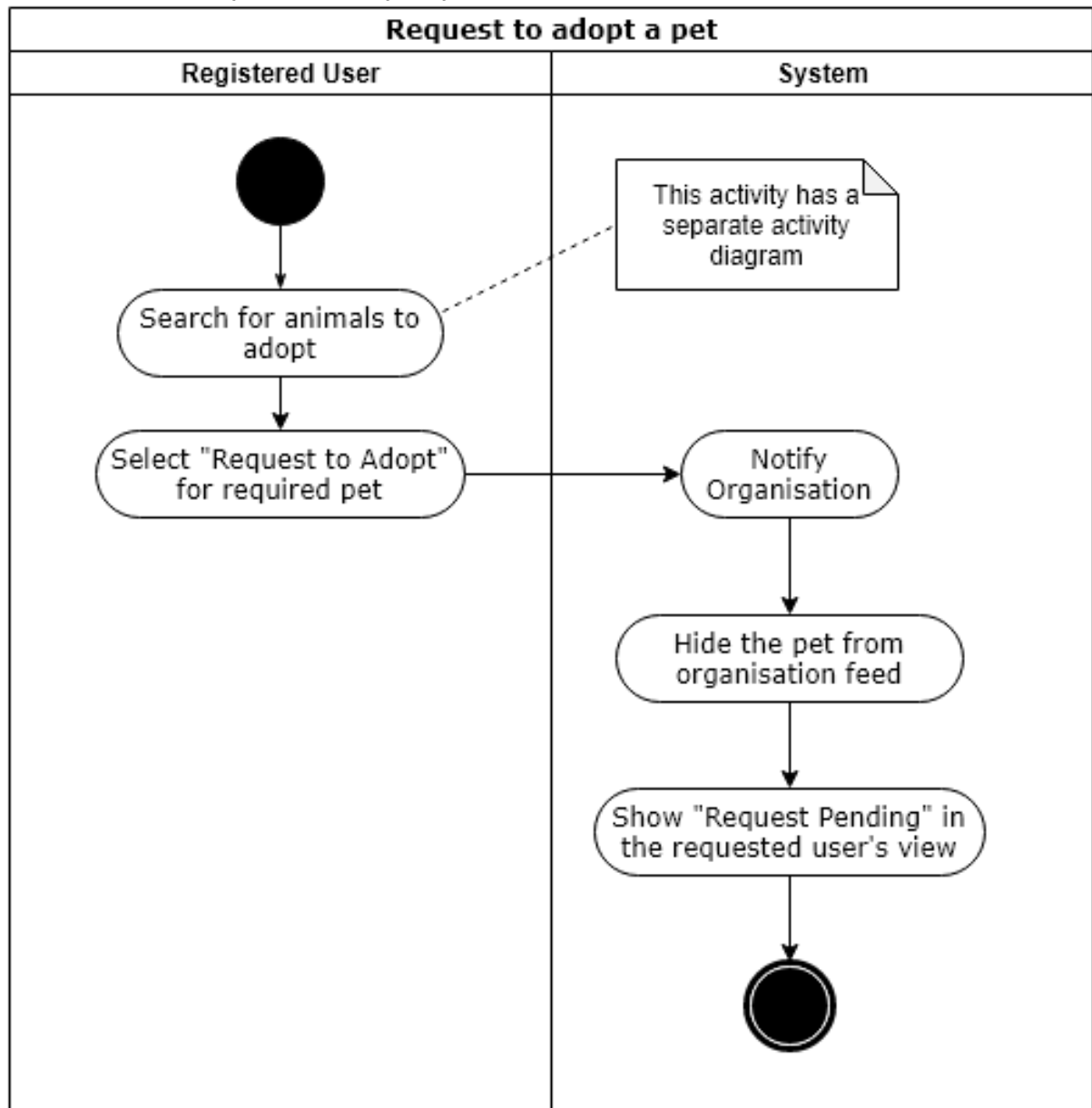
Use Case 4 - View Organization Profile / Feed



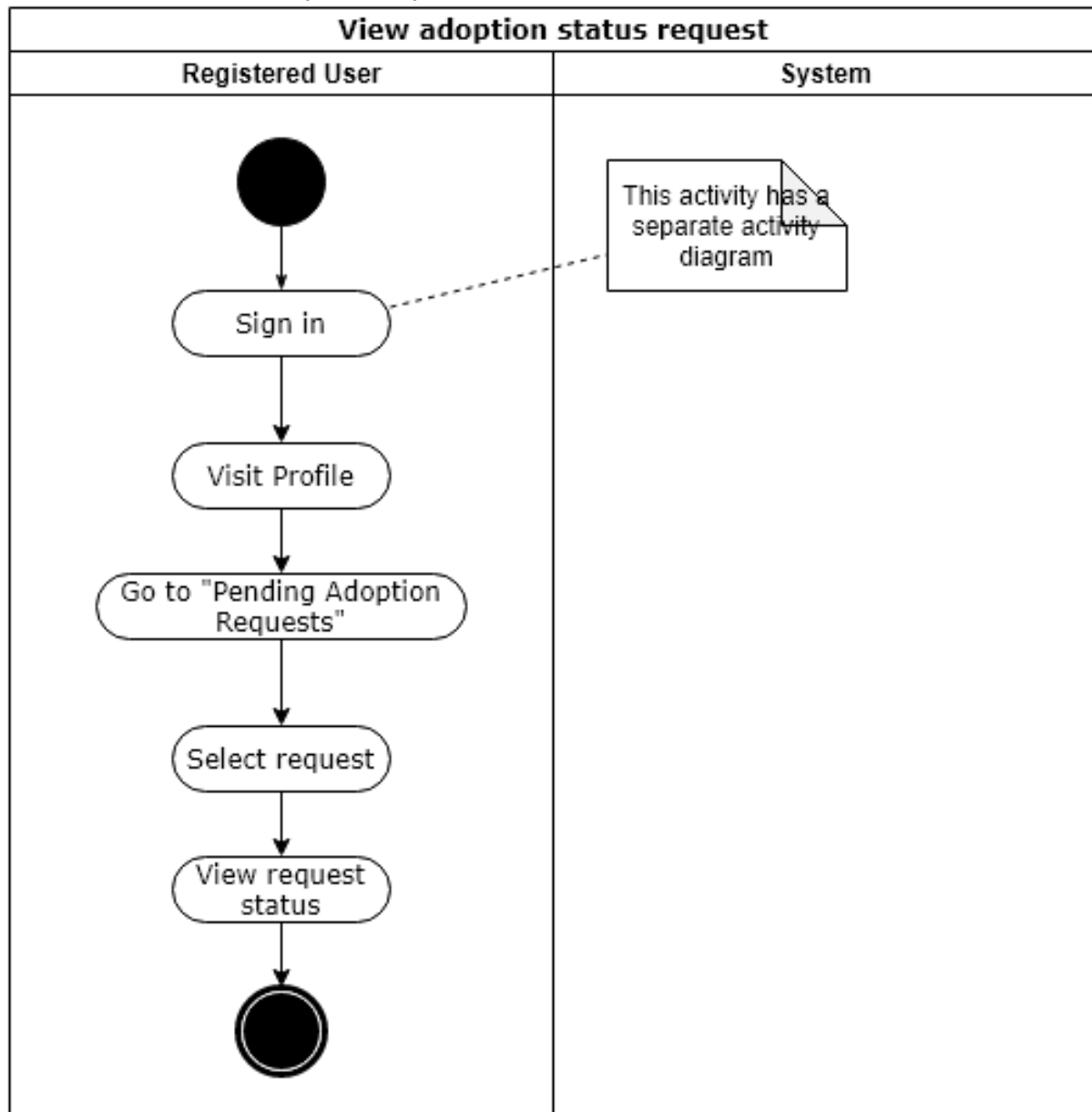
Use Case 5 - Report about injured animals



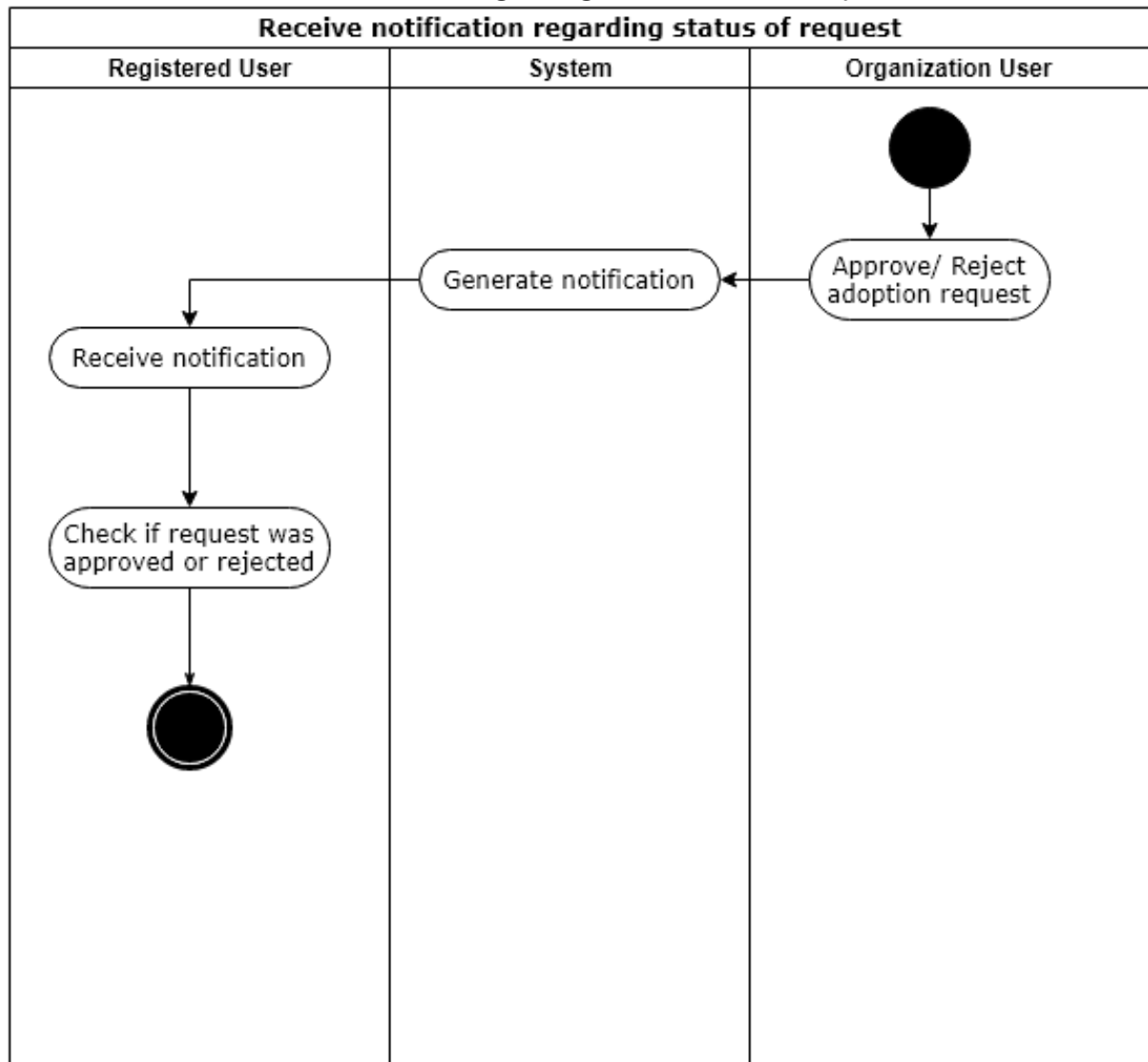
Use Case 6 - Request to Adopt a pet



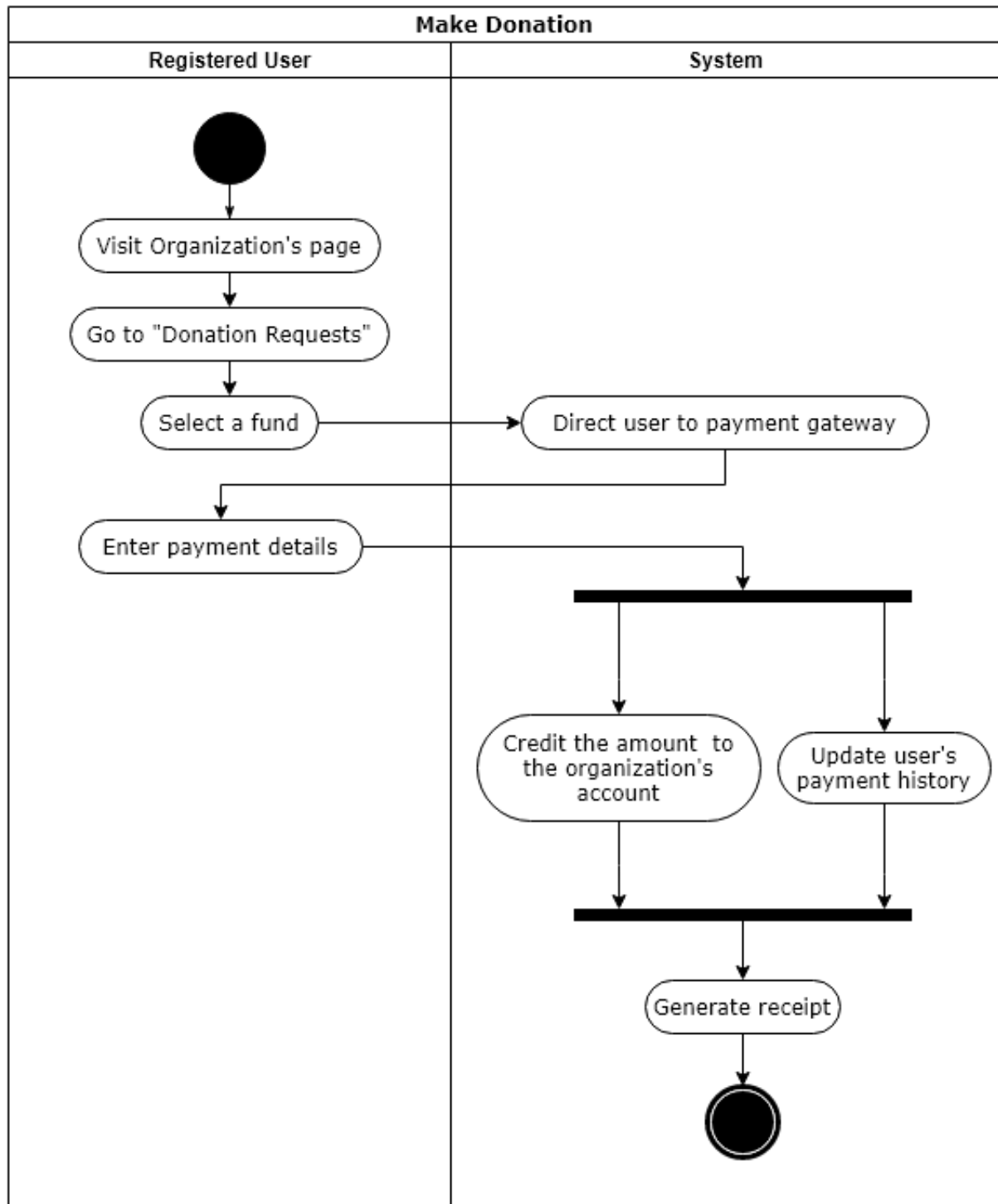
Use Case 7 - View adoption request status



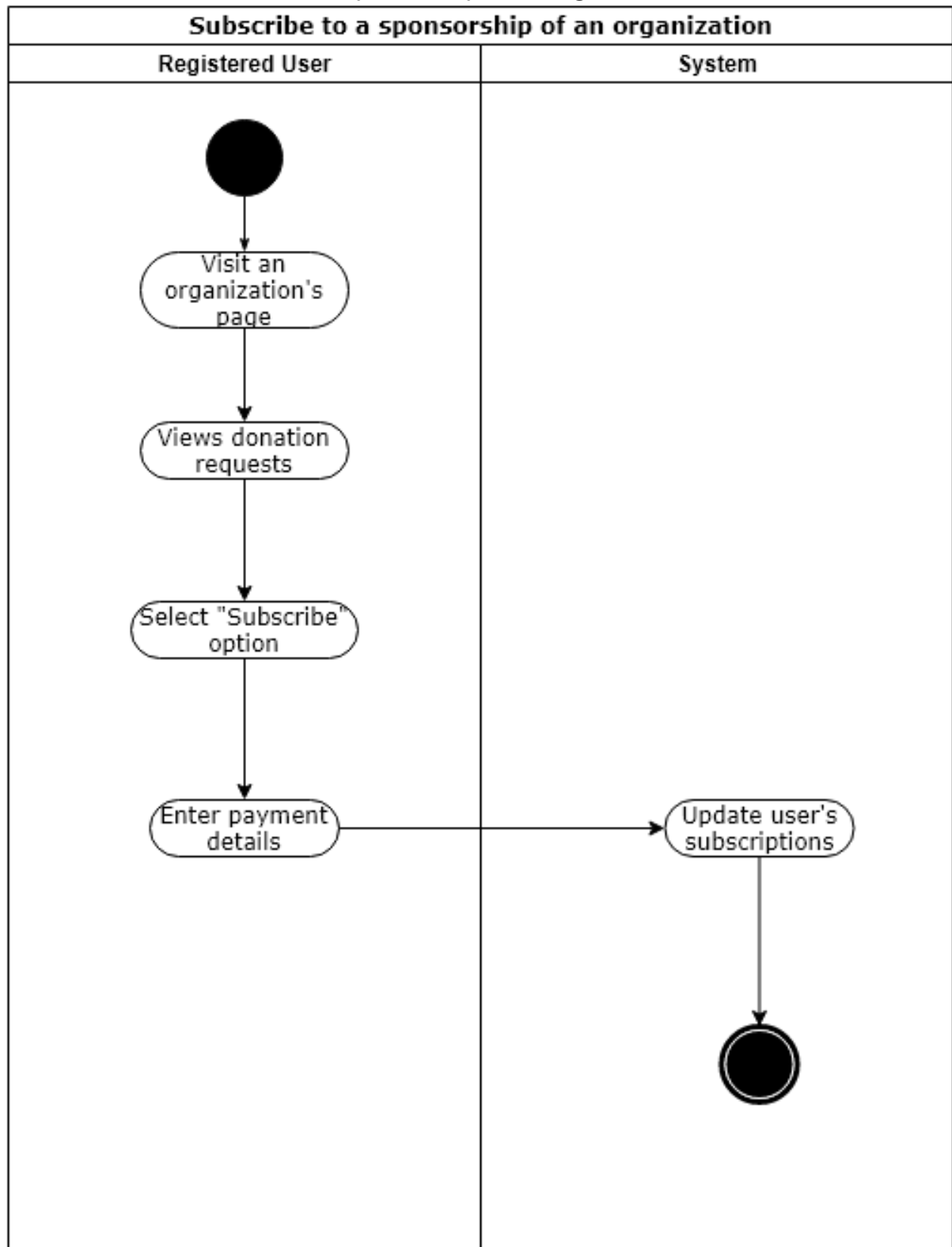
Use Case 8 - Receive notification regarding the status of a request



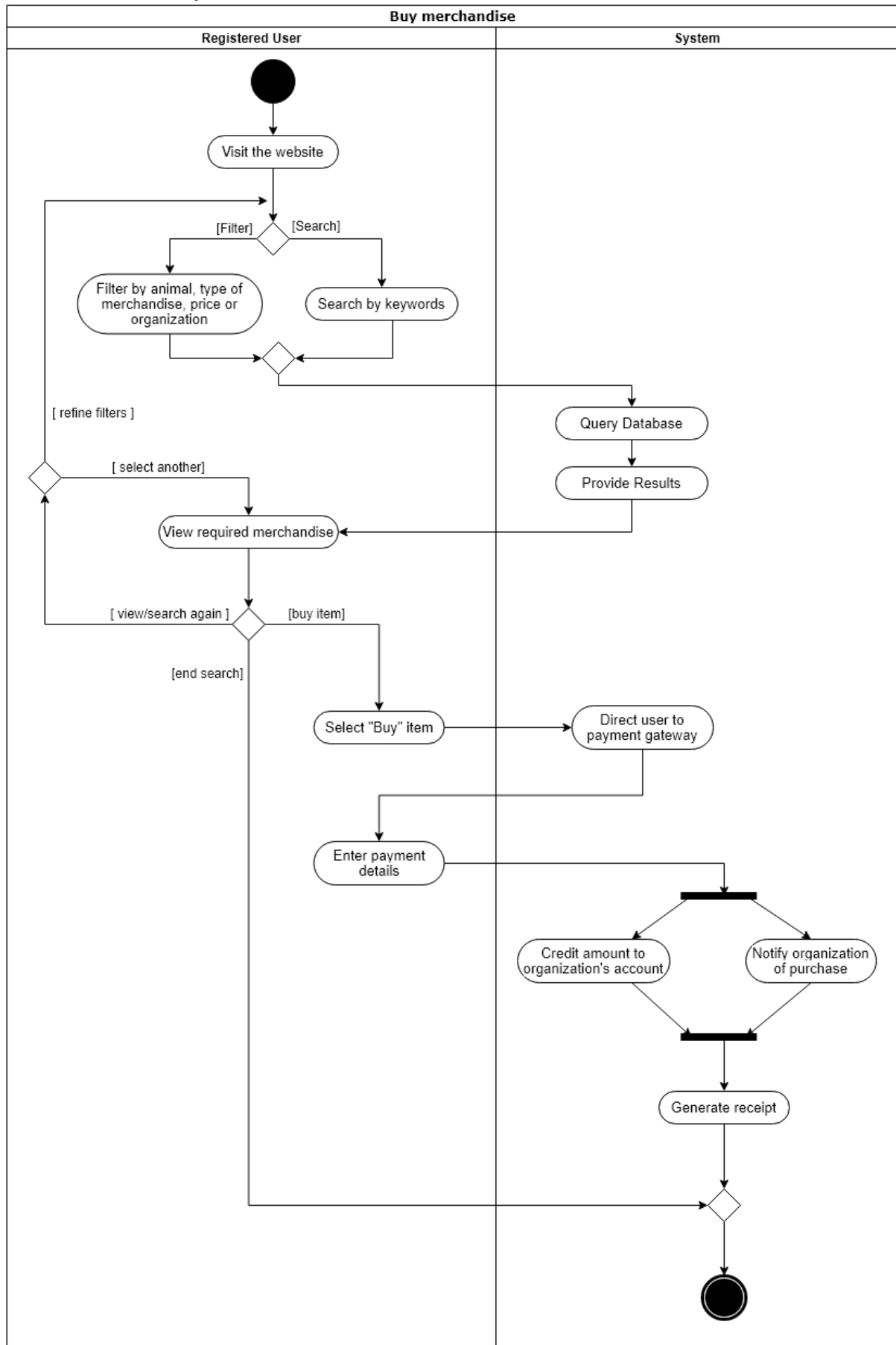
Use Case 9 - Make donation



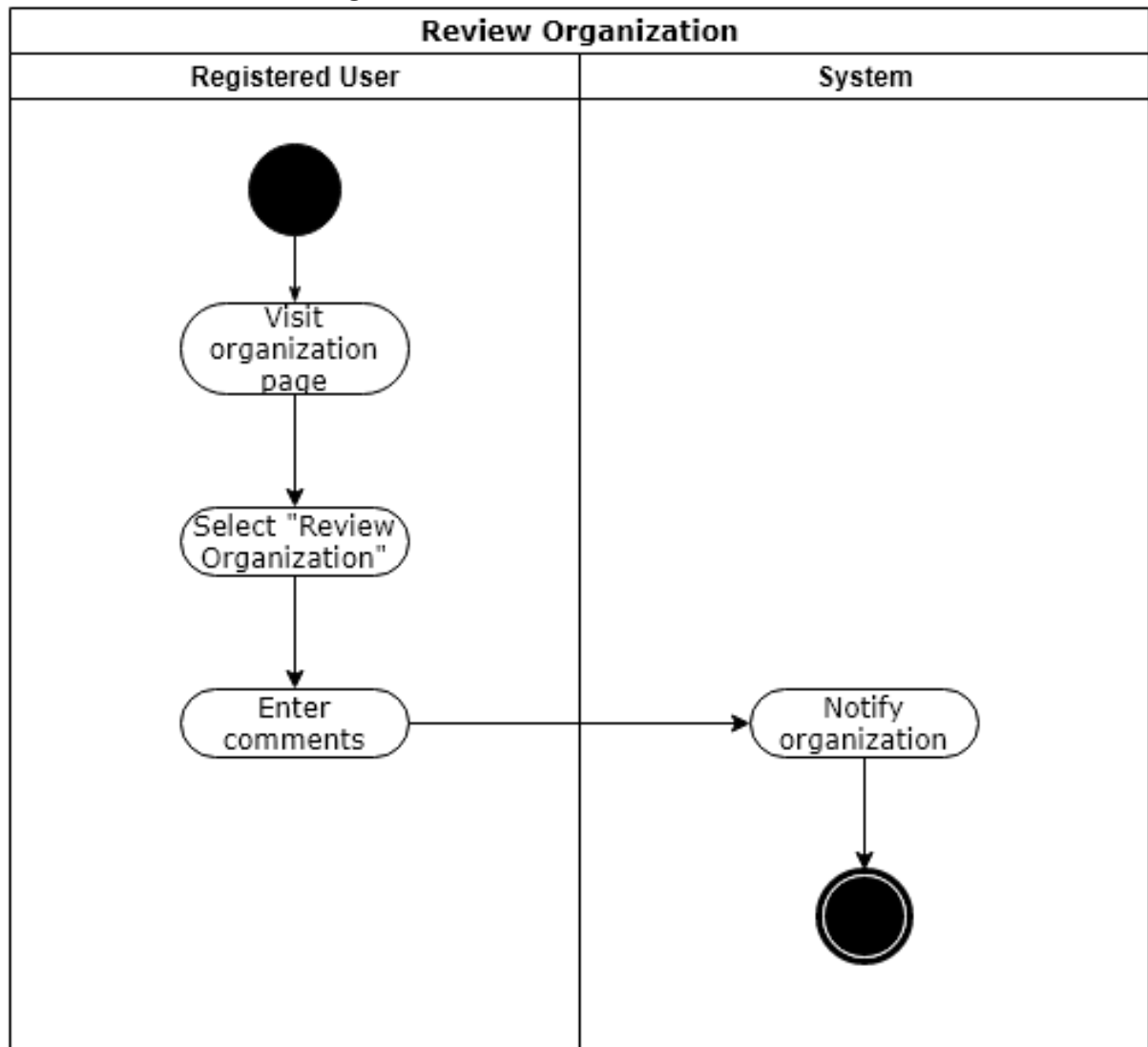
Use Case 10 - Subscribe to a sponsorship of an organization



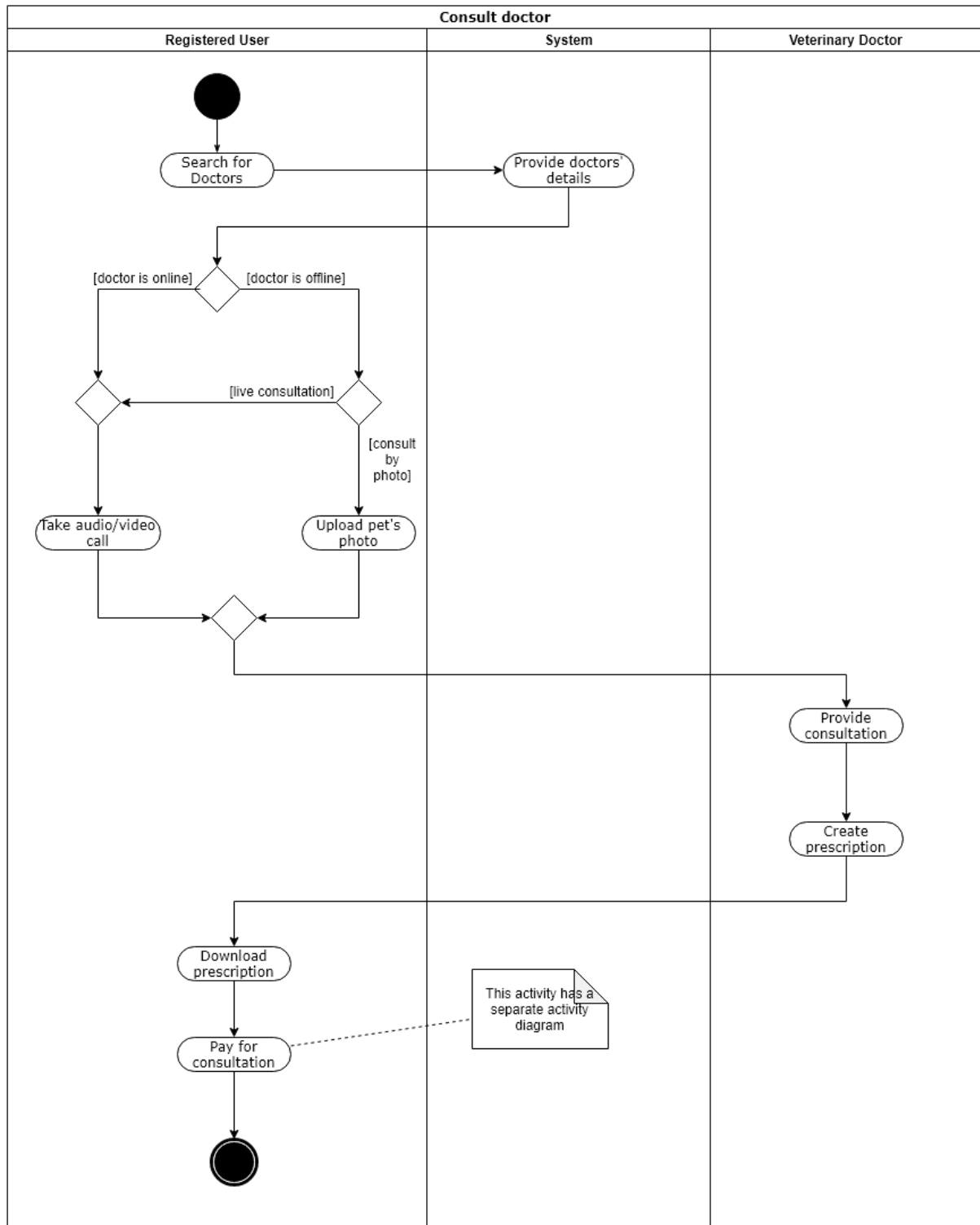
Use Case 11 - Buy merchandise



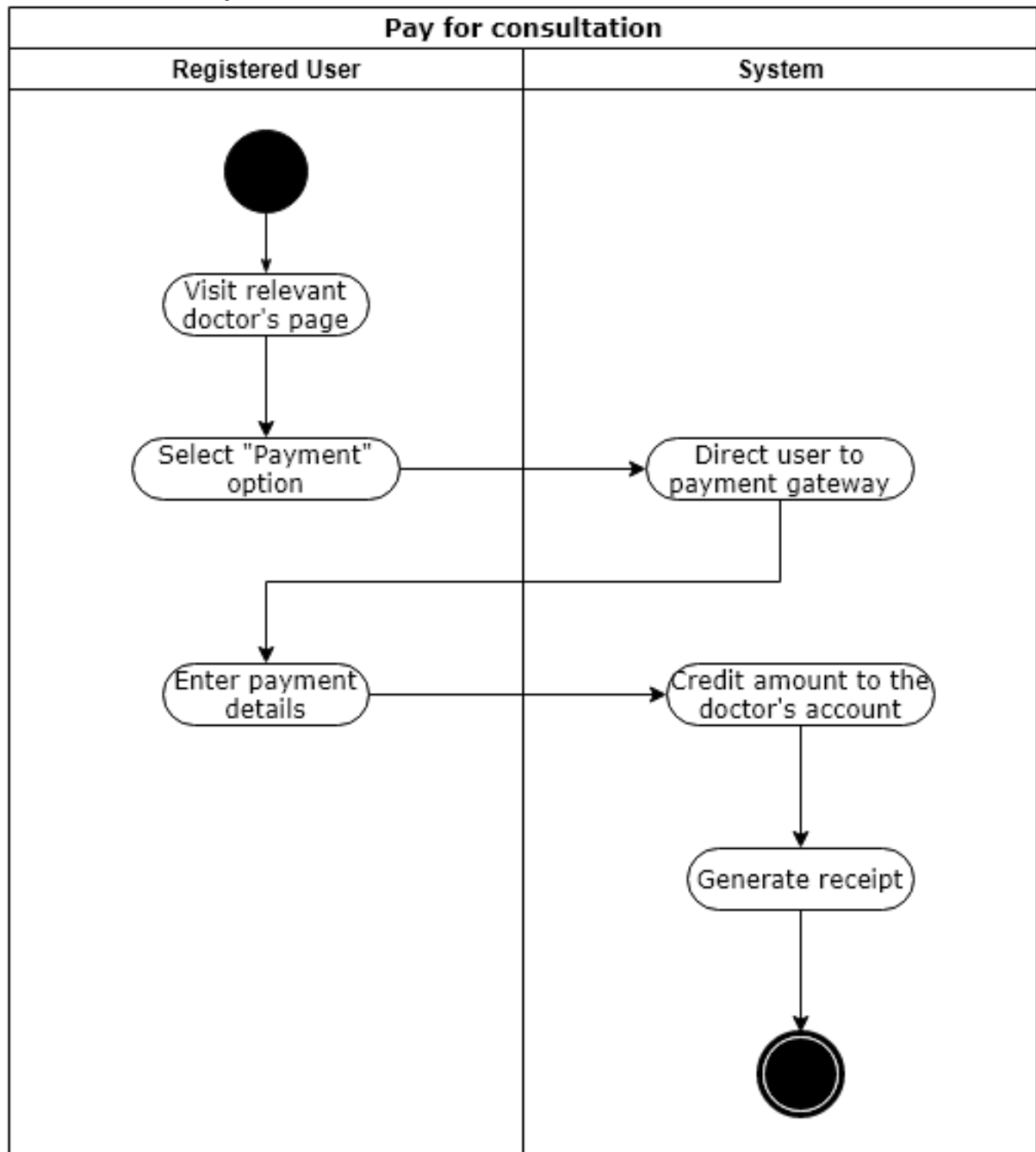
Use Case 12 - Review organizations



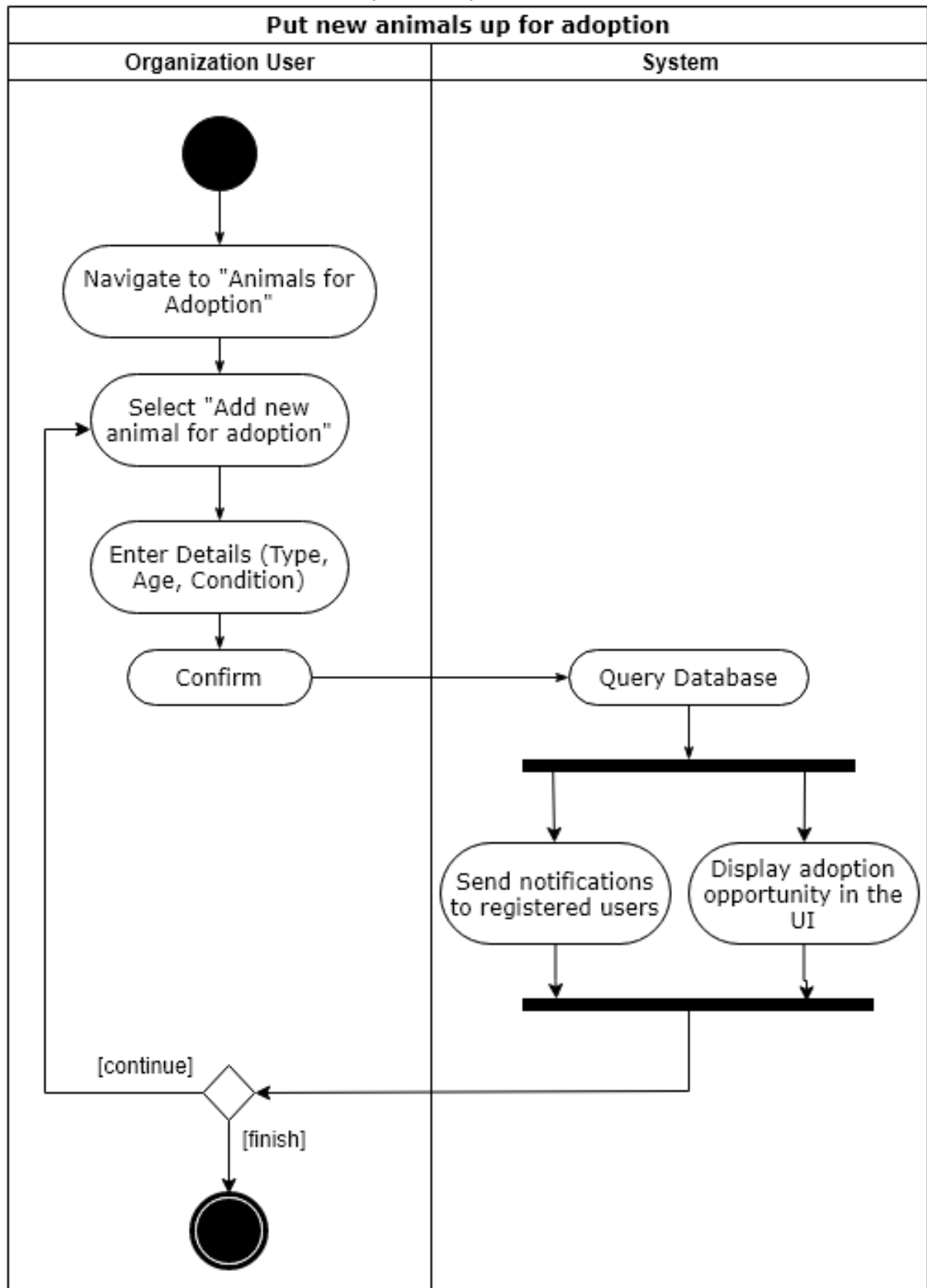
Use Case 13 - Consult doctor



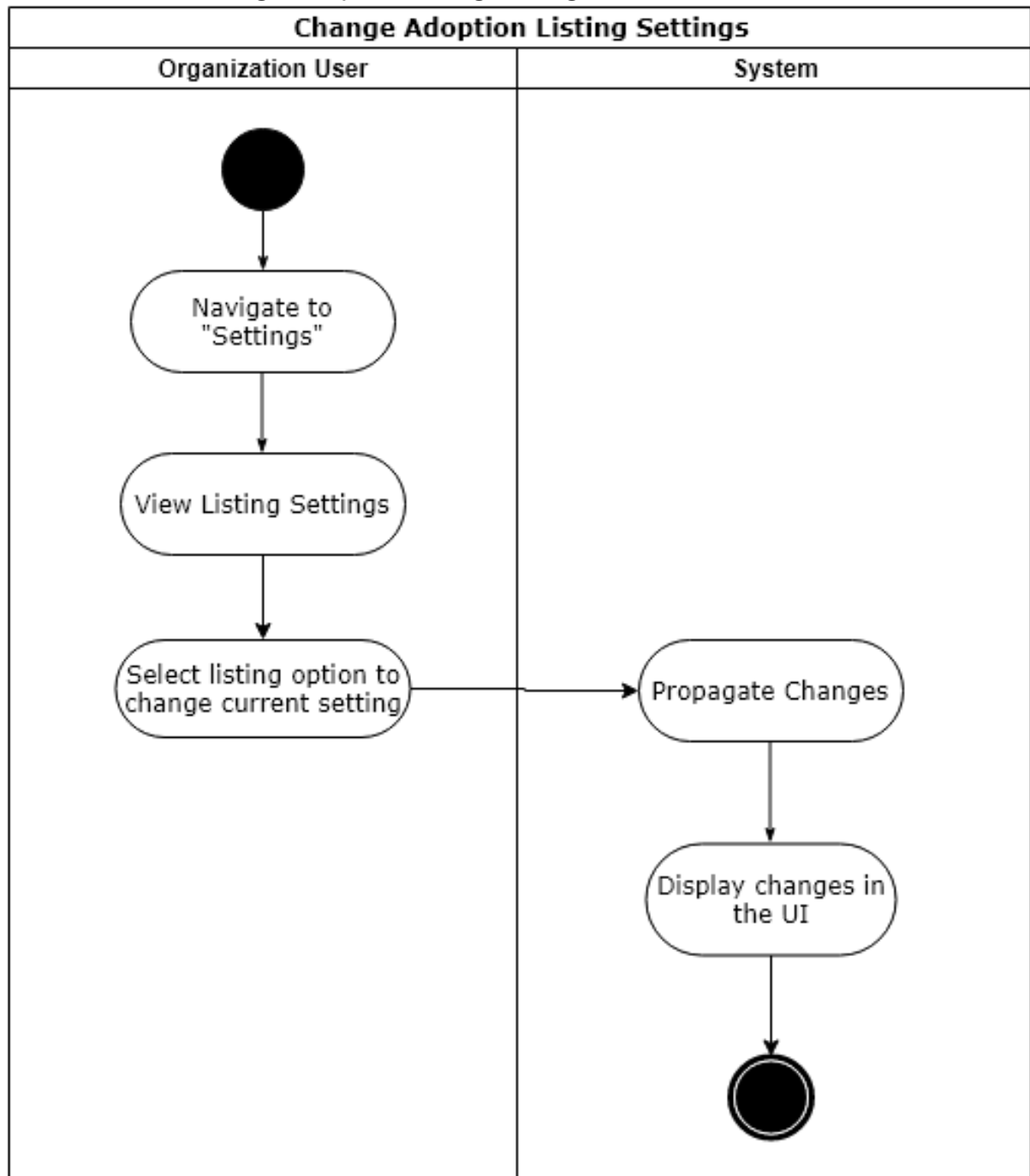
Use Case 14 - Pay for consultation



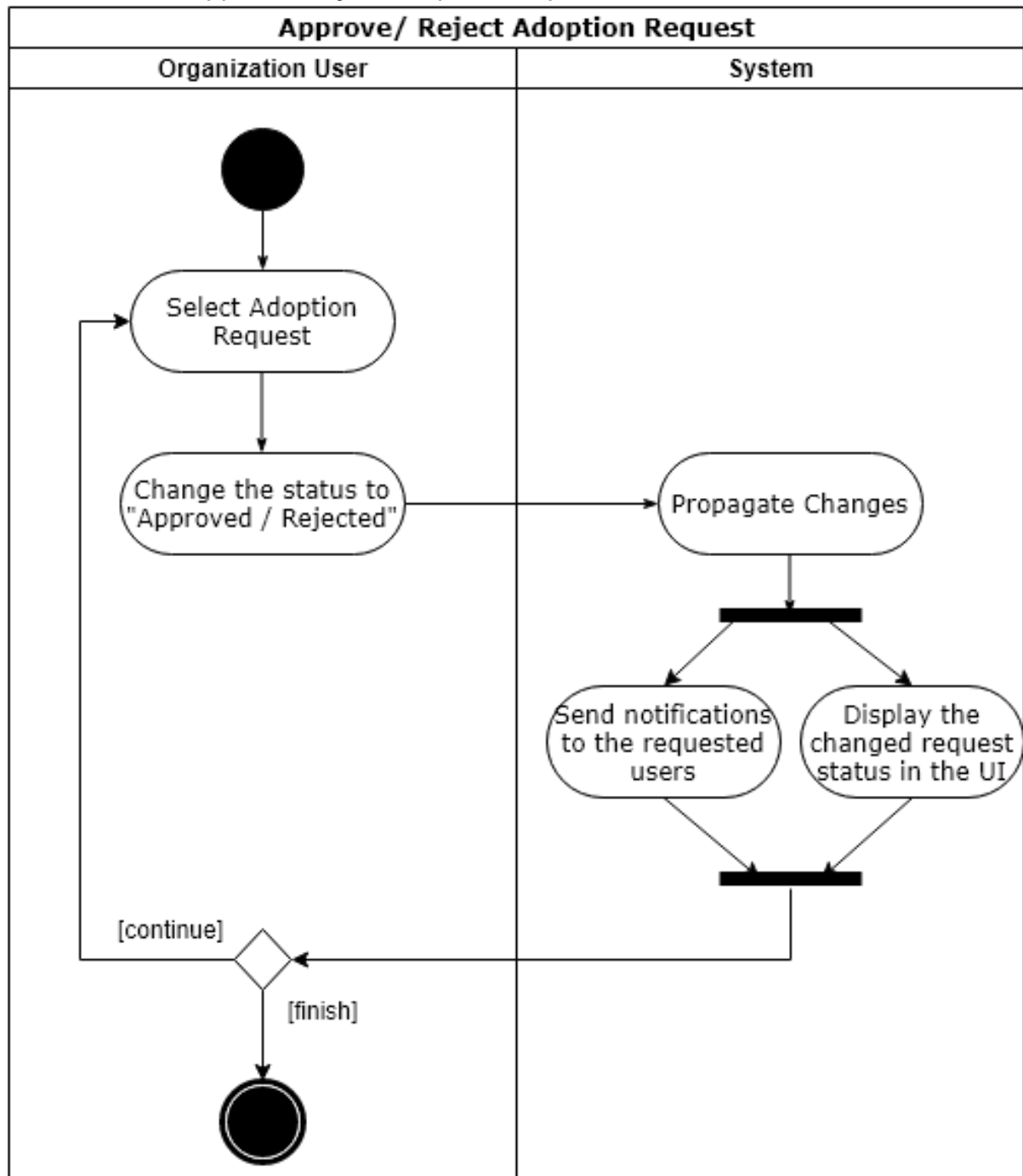
Use Case 15 - Put new animals up for adoption



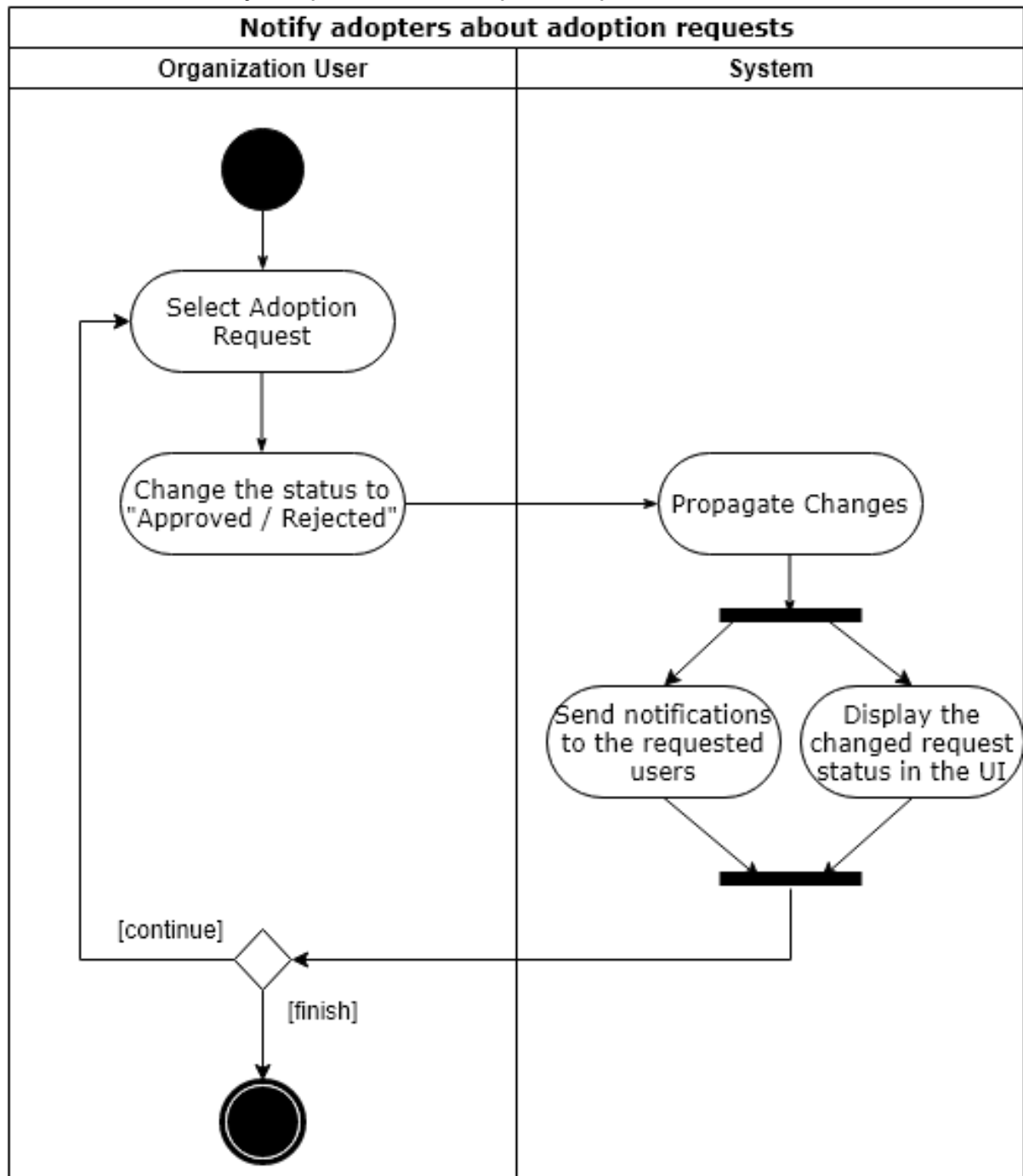
Use Case 16 - Change Adoption Listing Settings



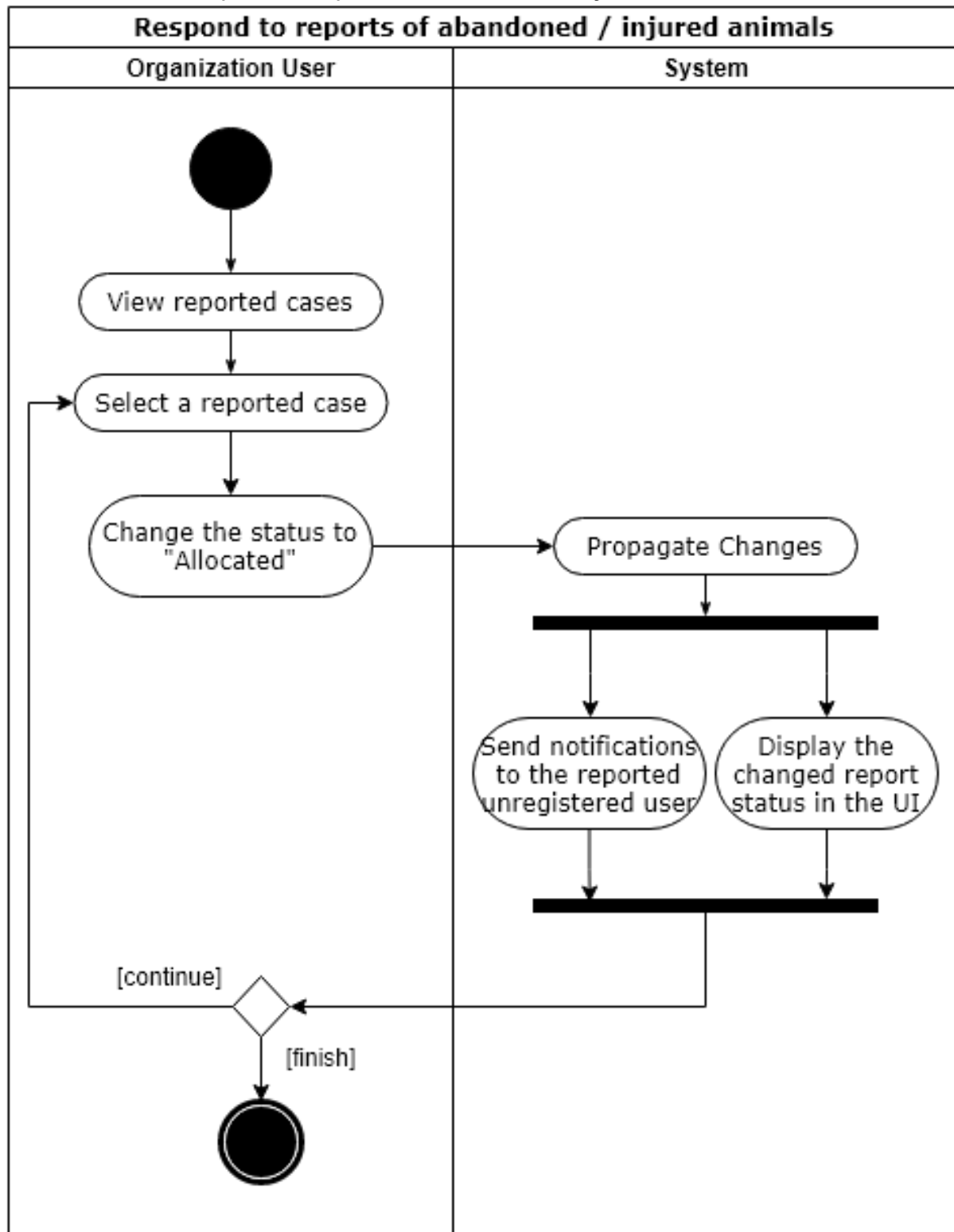
Use Case 17 - Approve/ Reject Adoption Request



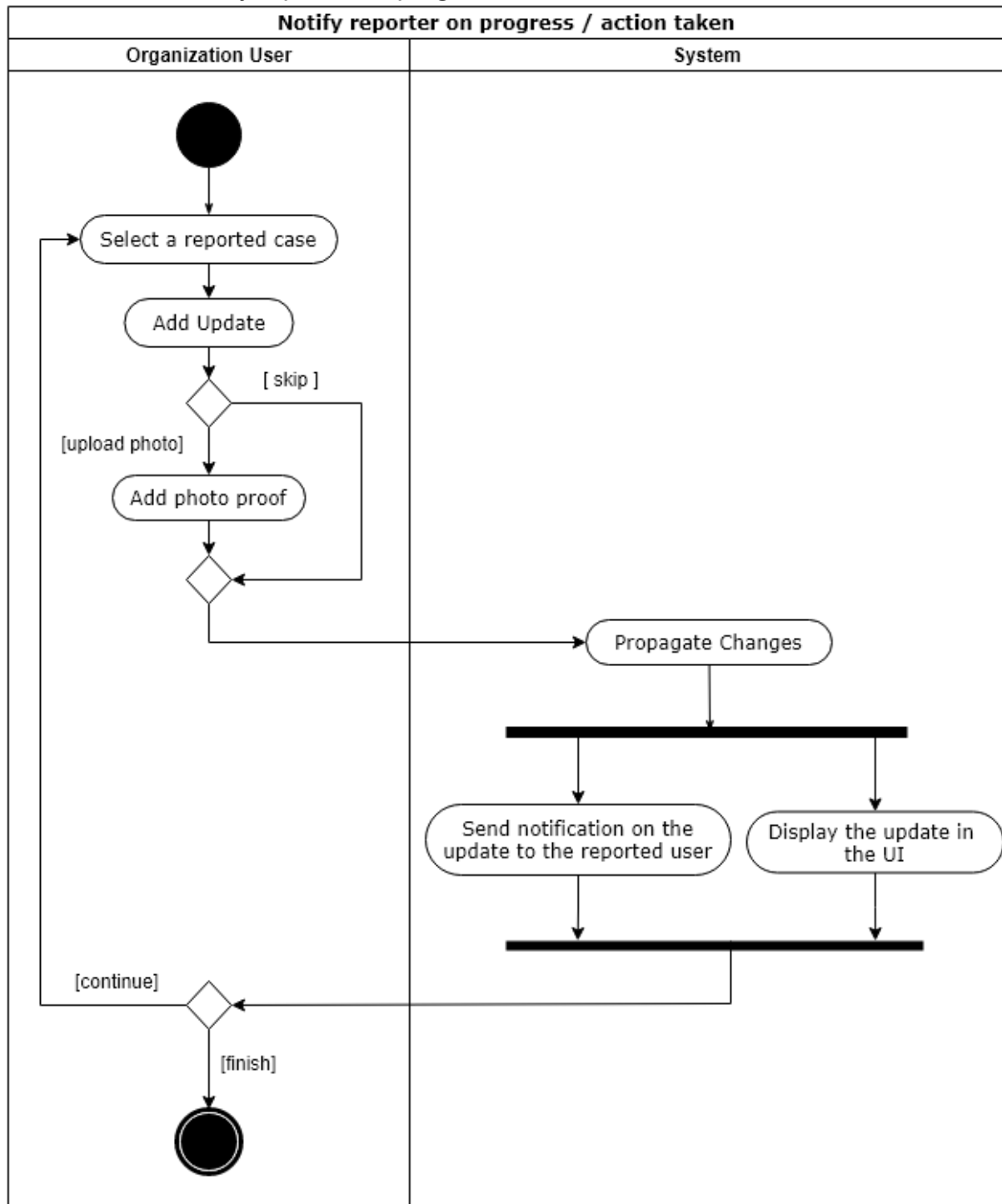
Use Case 18 - Notify adopters about adoption requests



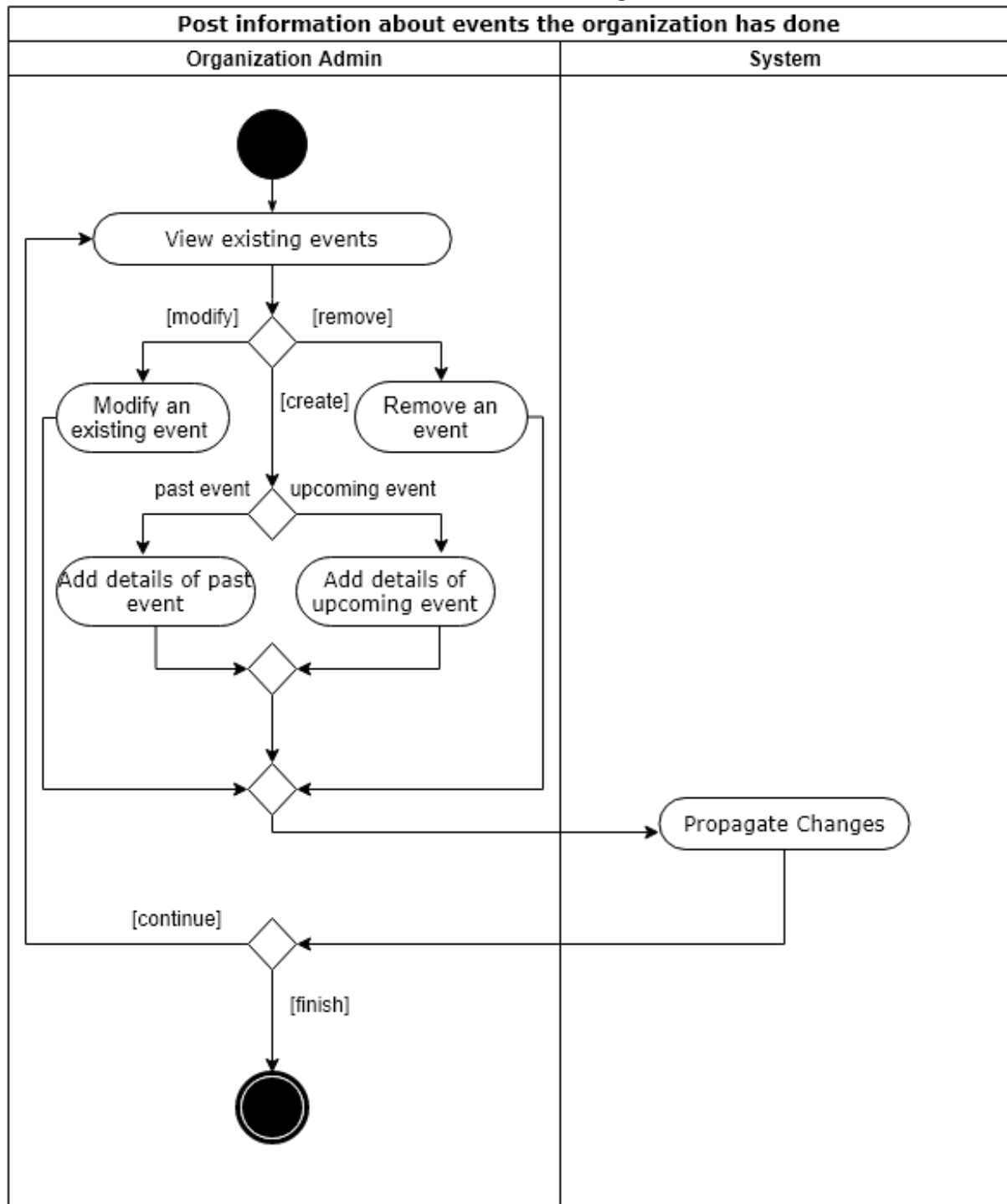
Use Case 19 - Respond to reports of abandoned / injured animals



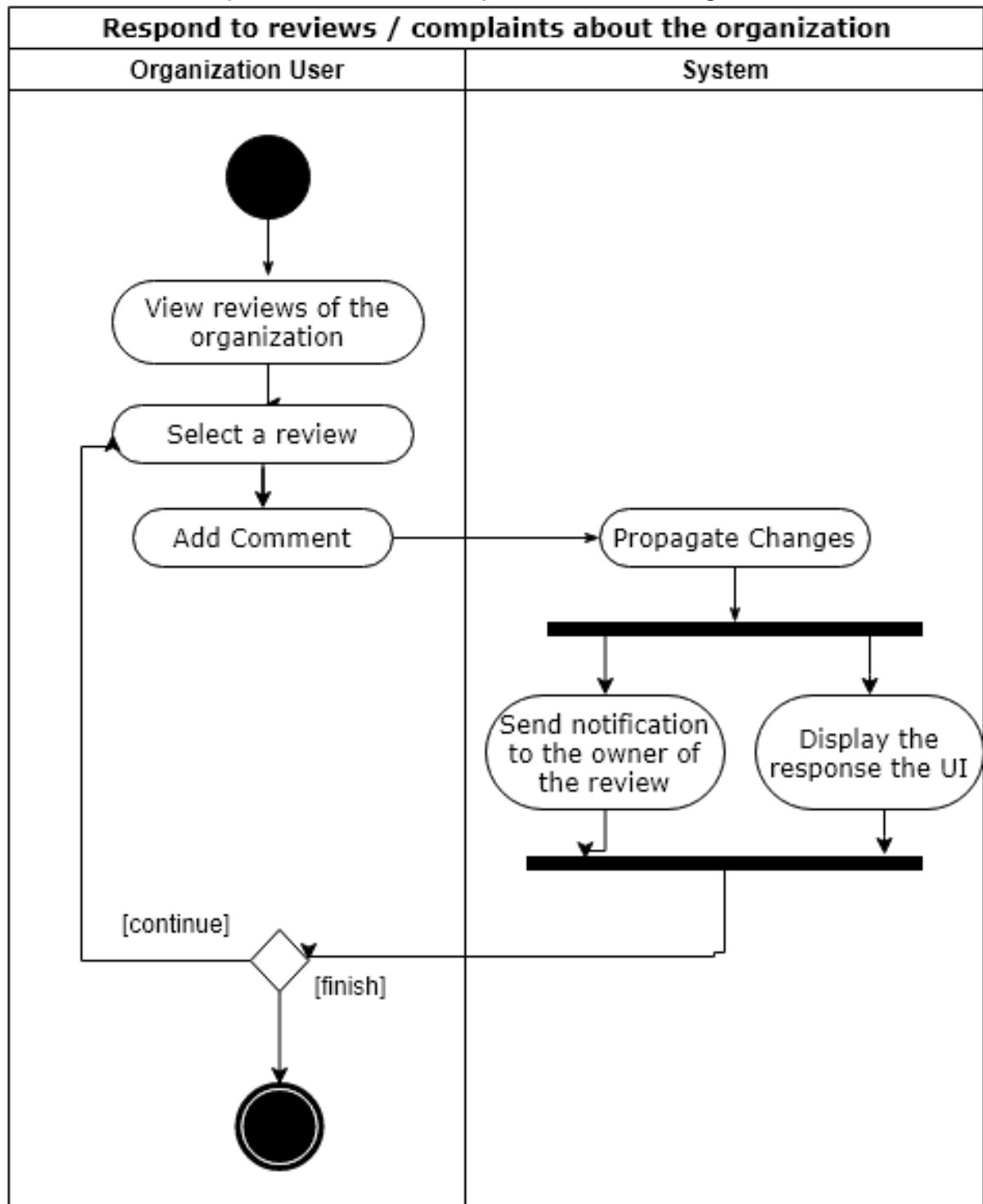
Use Case 20 - Notify reporter on progress / action taken



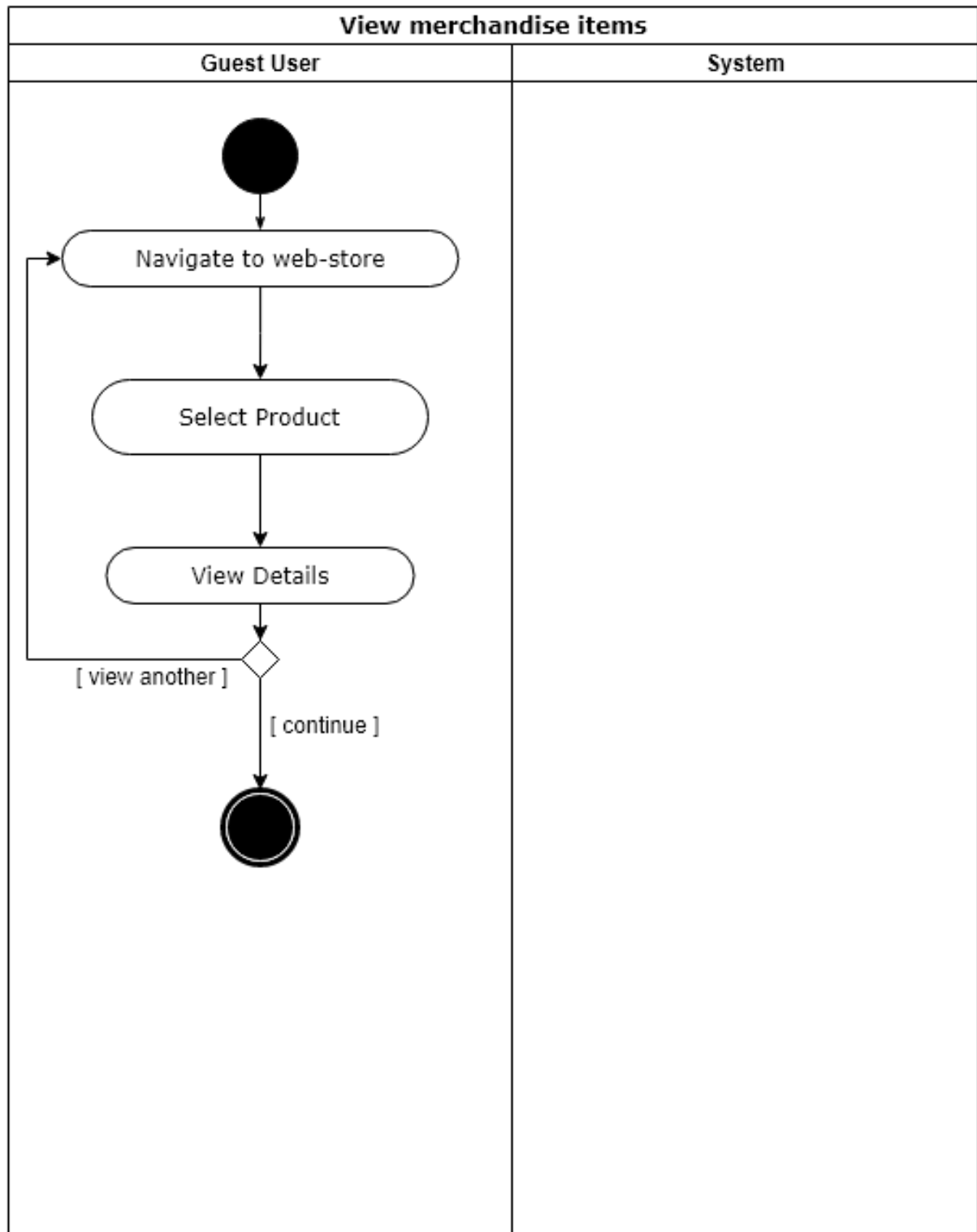
Use Case 21 - Post information about events the organization has done



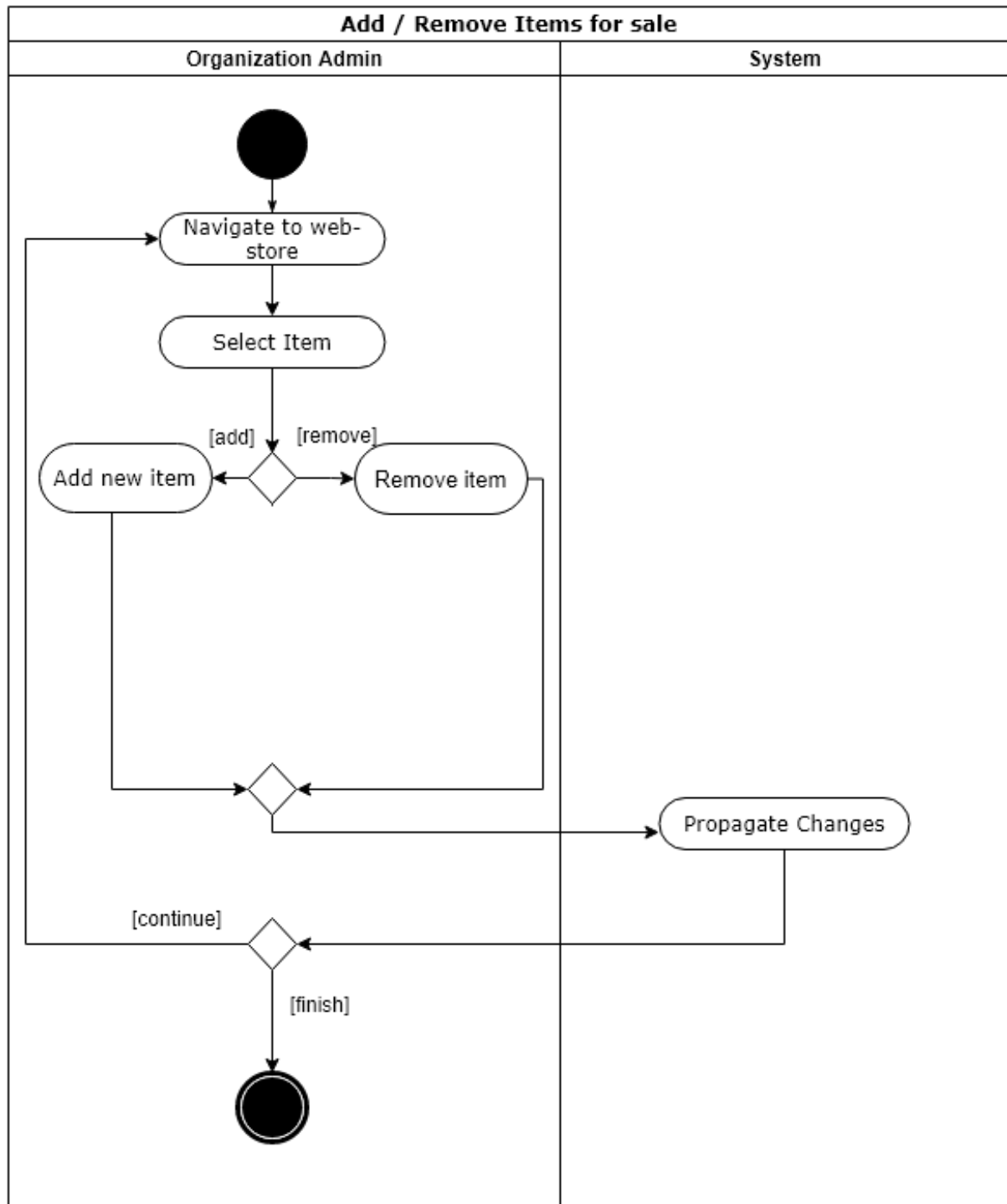
Use Case 22 - Respond to reviews / complaints about the organization



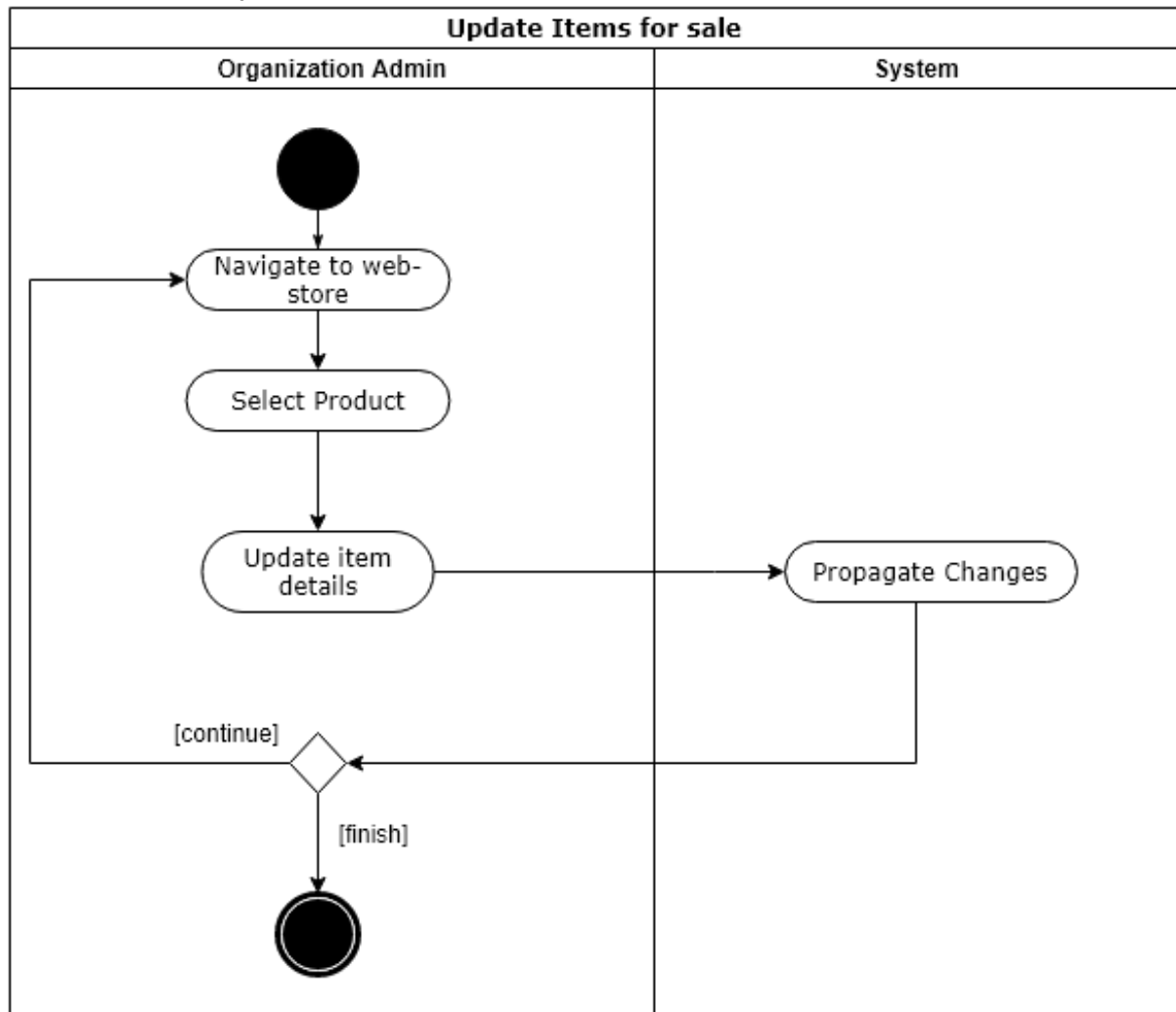
Use Case 23 - View merchandise items



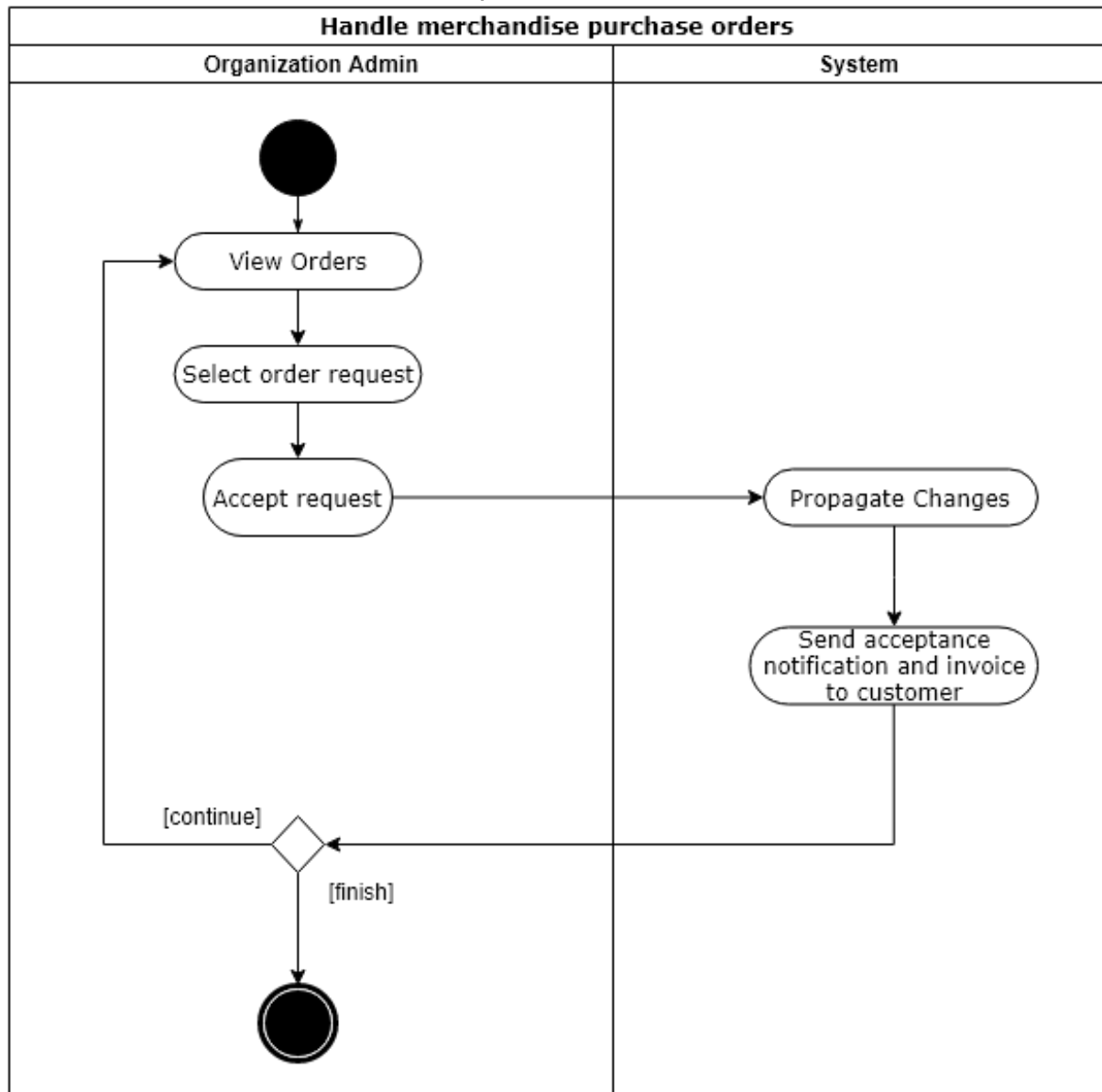
Use Case 24 - Add / Remove Items for sale



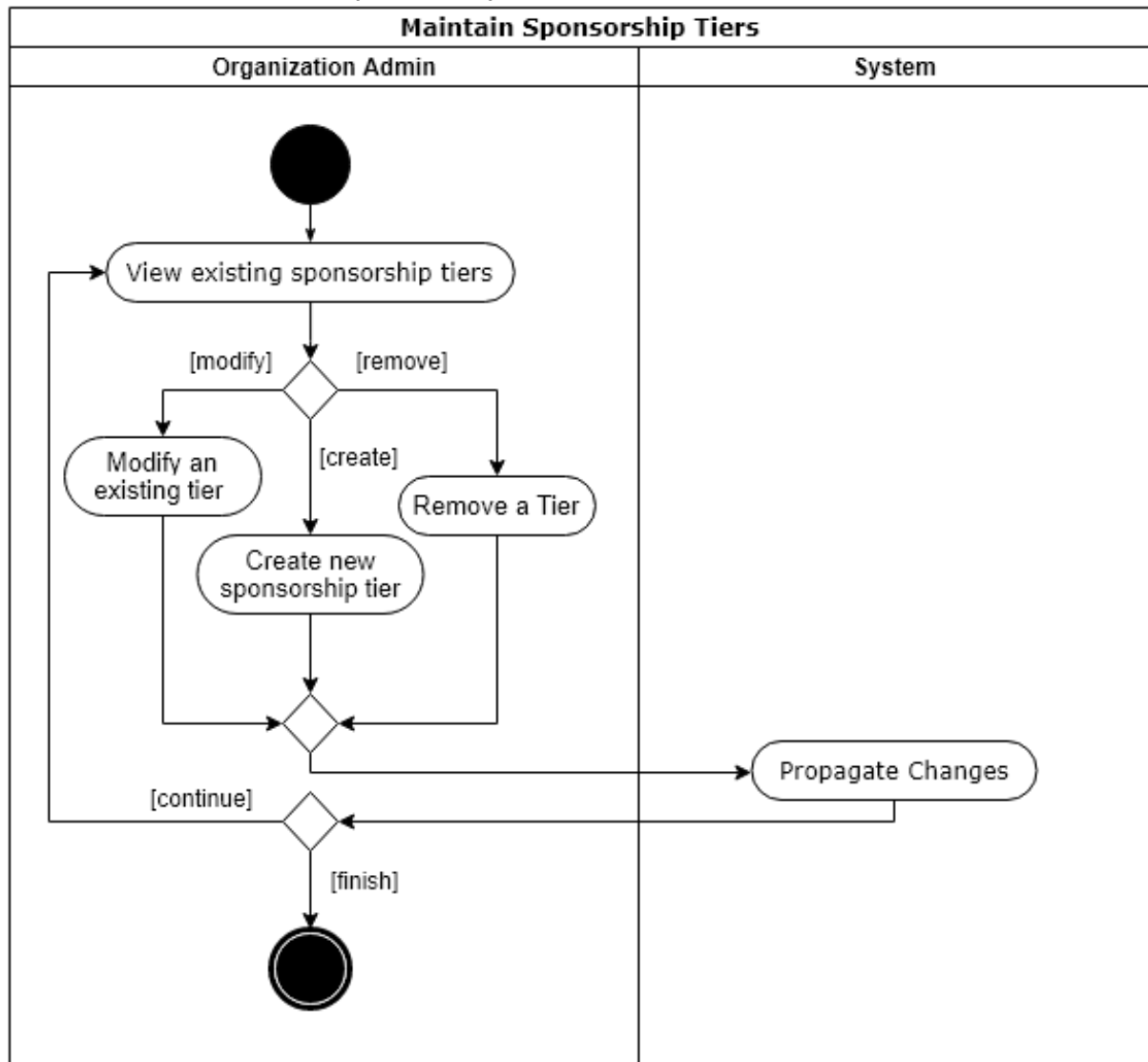
Use Case 25 - Update Items for sale



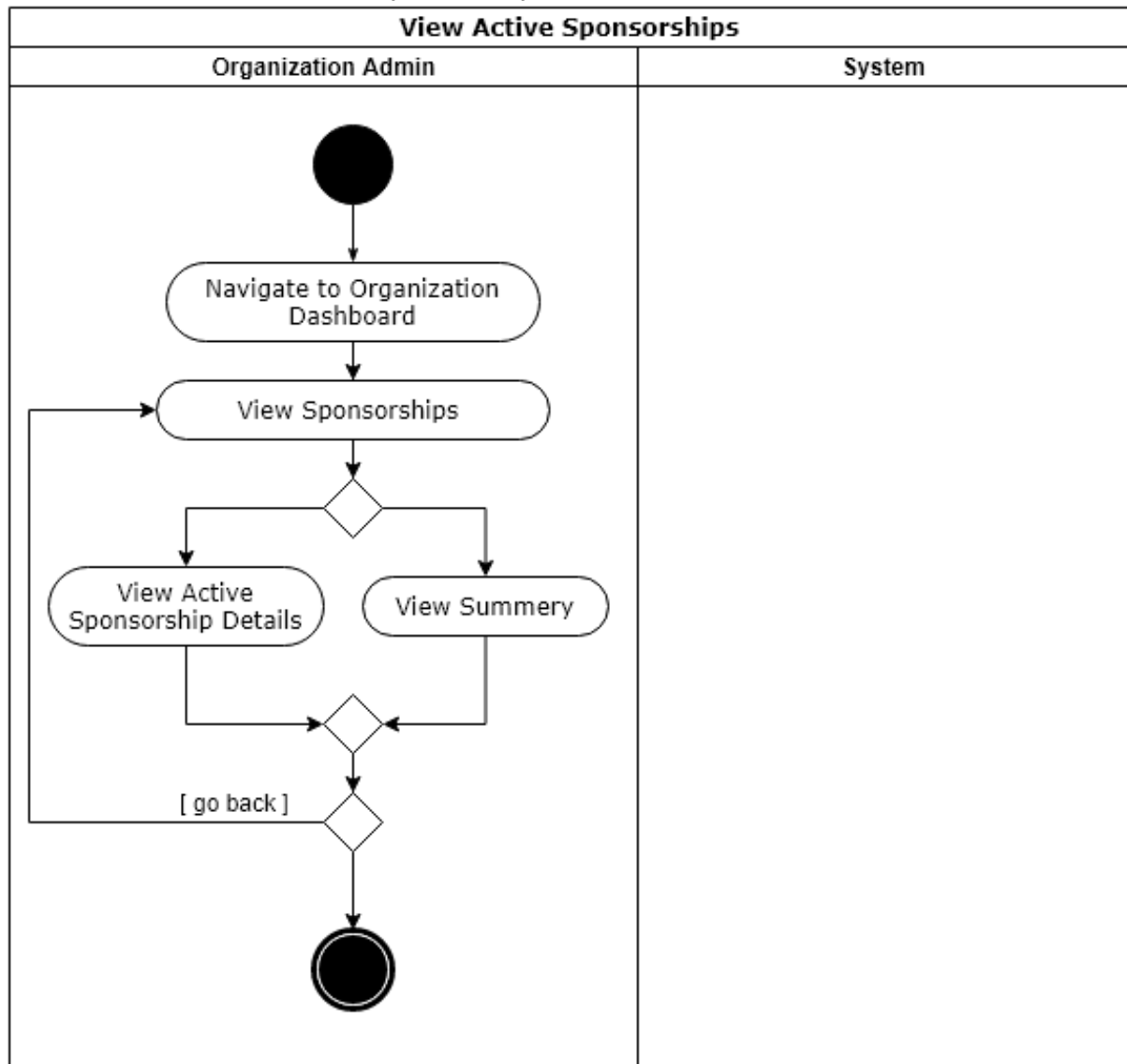
Use Case 26 - Handle merchandise purchase orders



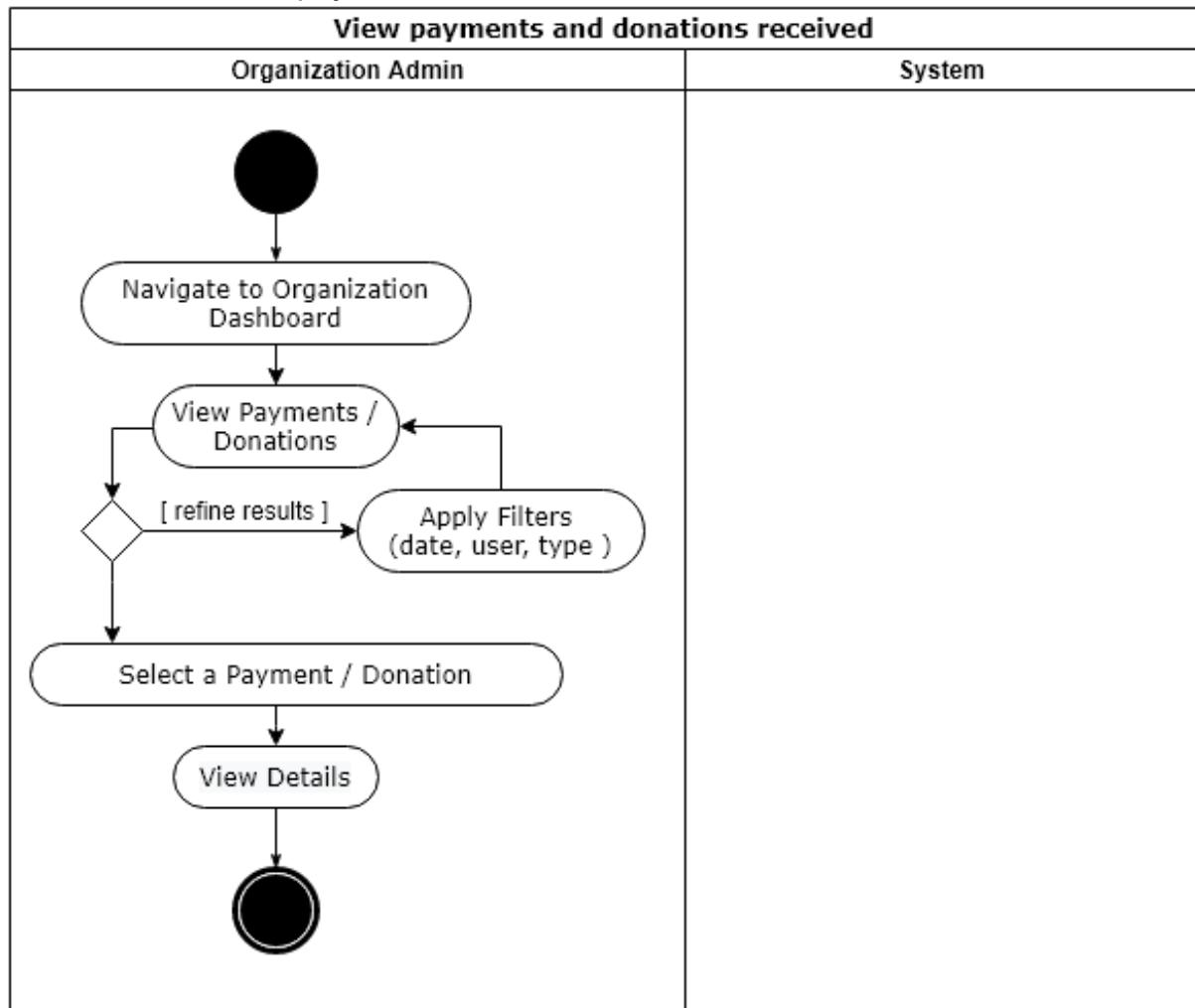
Use Case 27 - Maintain Sponsorship Tiers



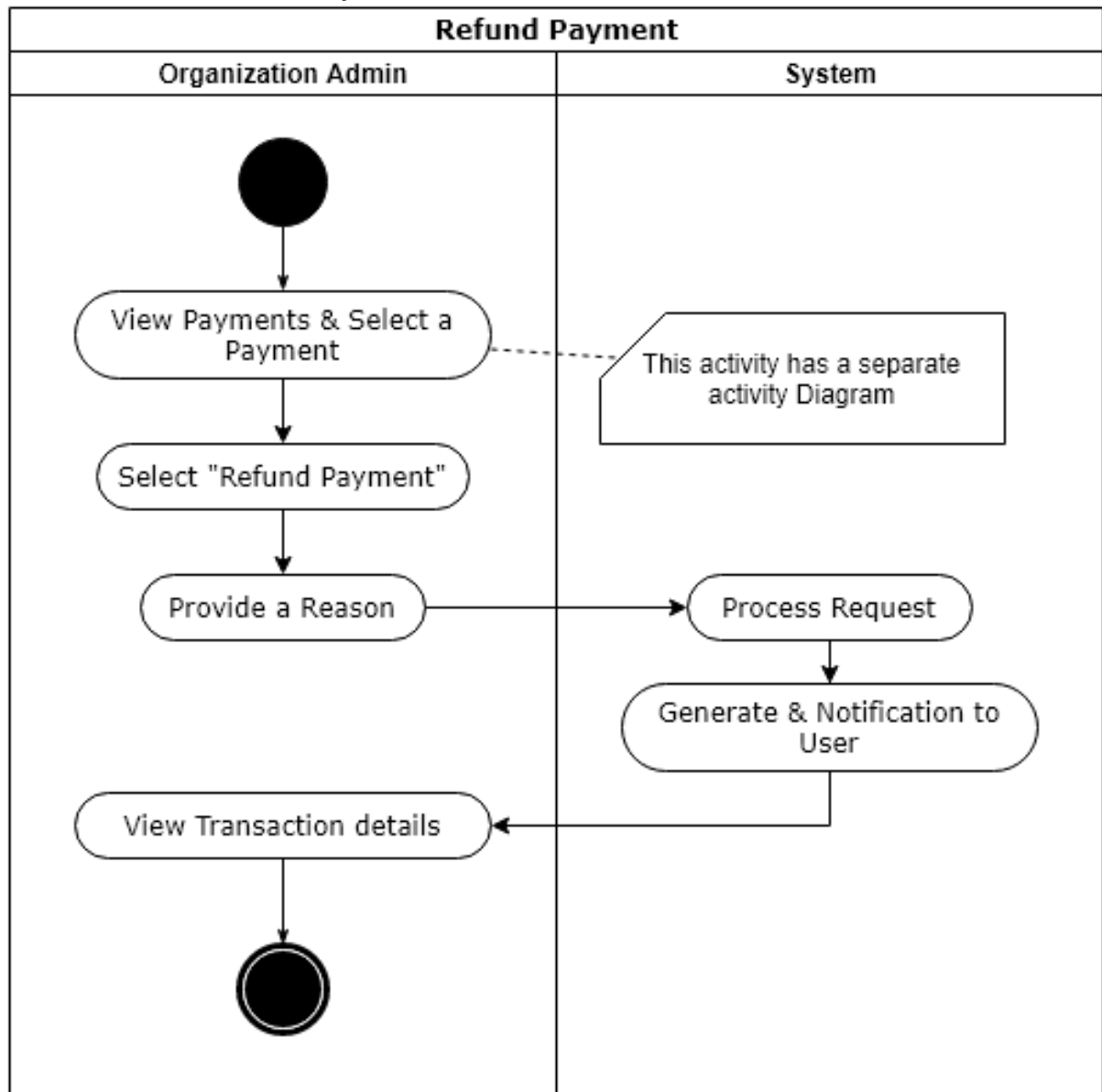
Use Case 28 - View Active Sponsorships



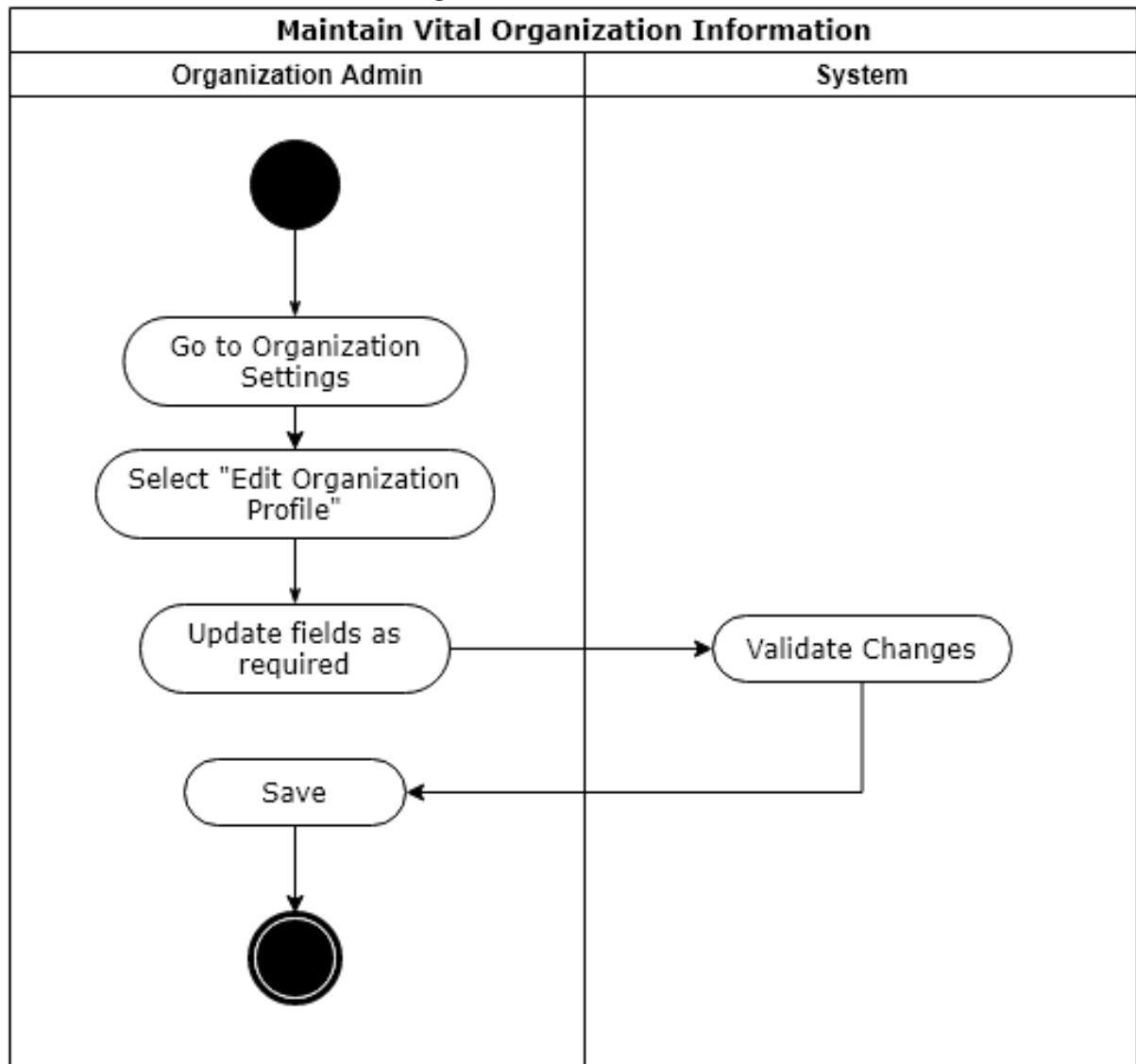
Use Case 29 - View payments and donations received



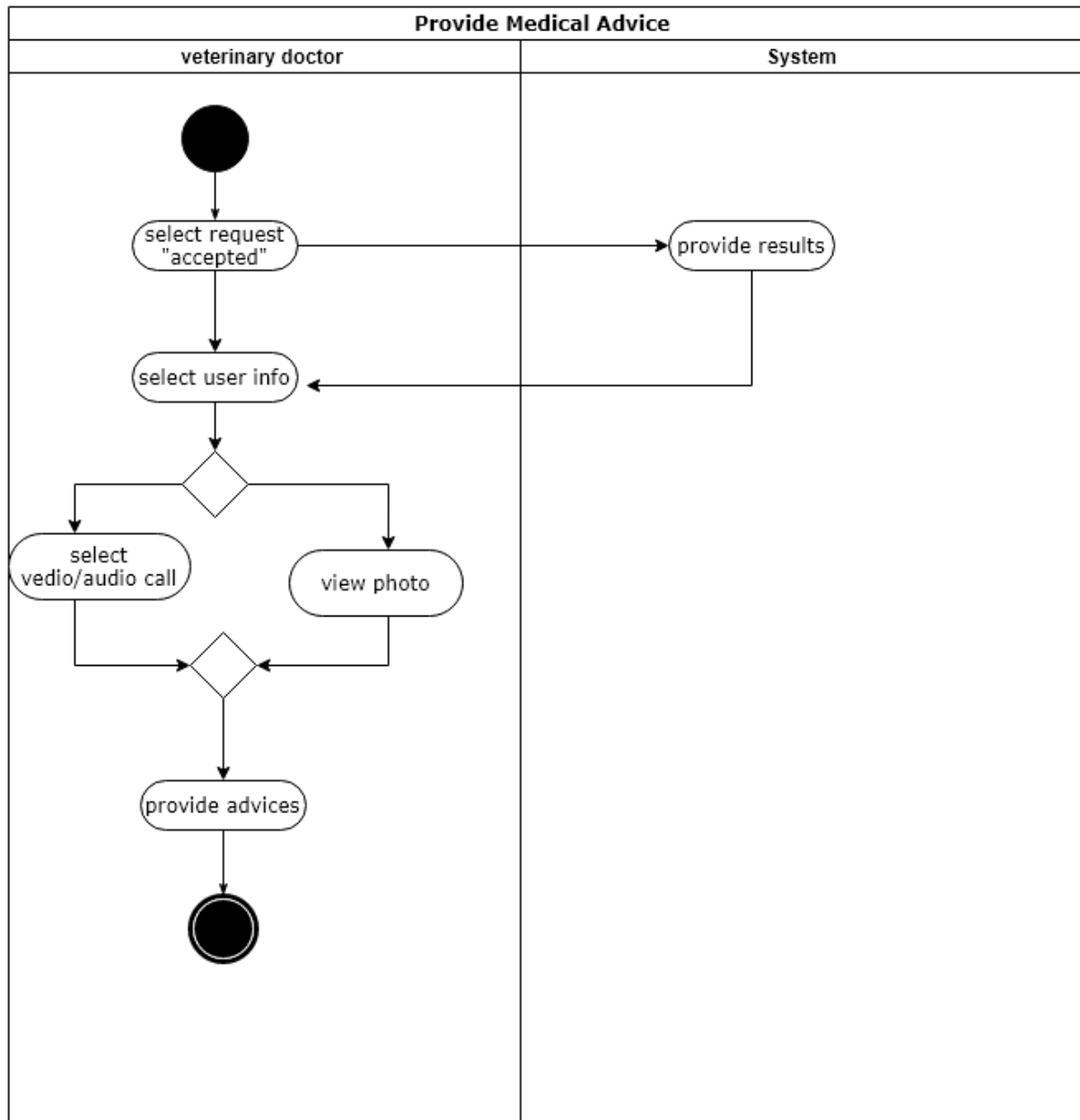
Use Case 30 - Refund Payment



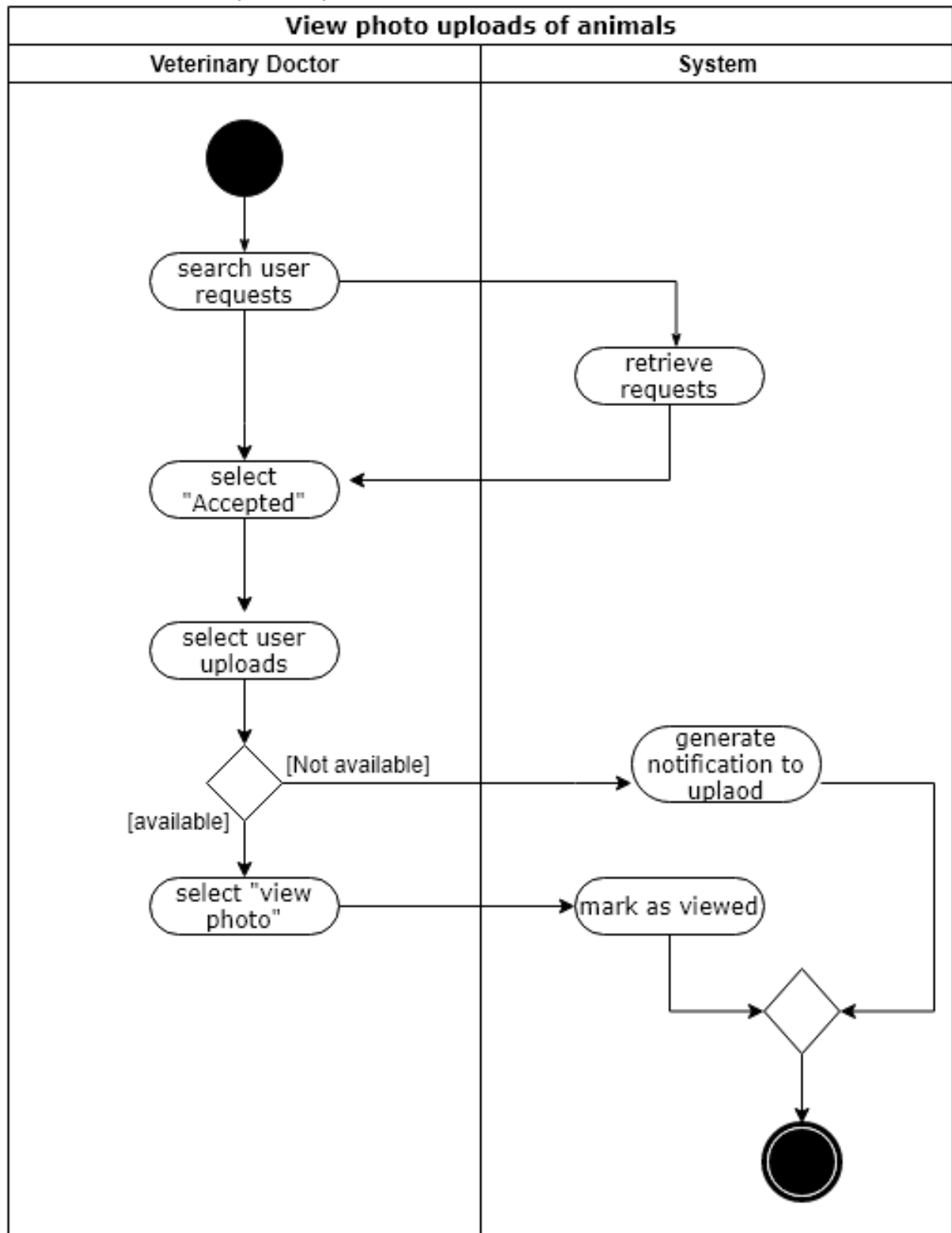
Use Case 31 - Maintain Vital Organization Information



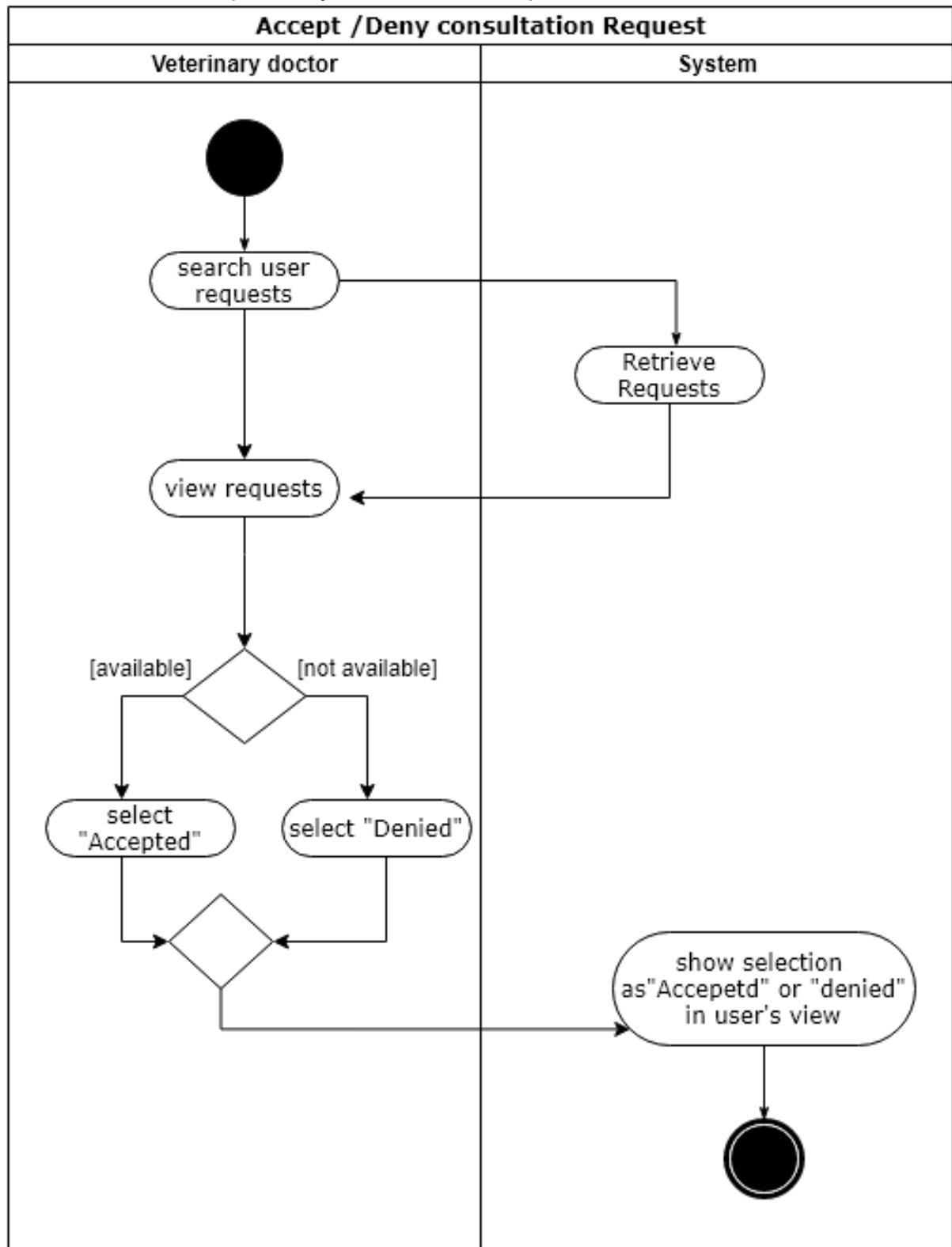
Use Case 32 - Provide Medical Advice



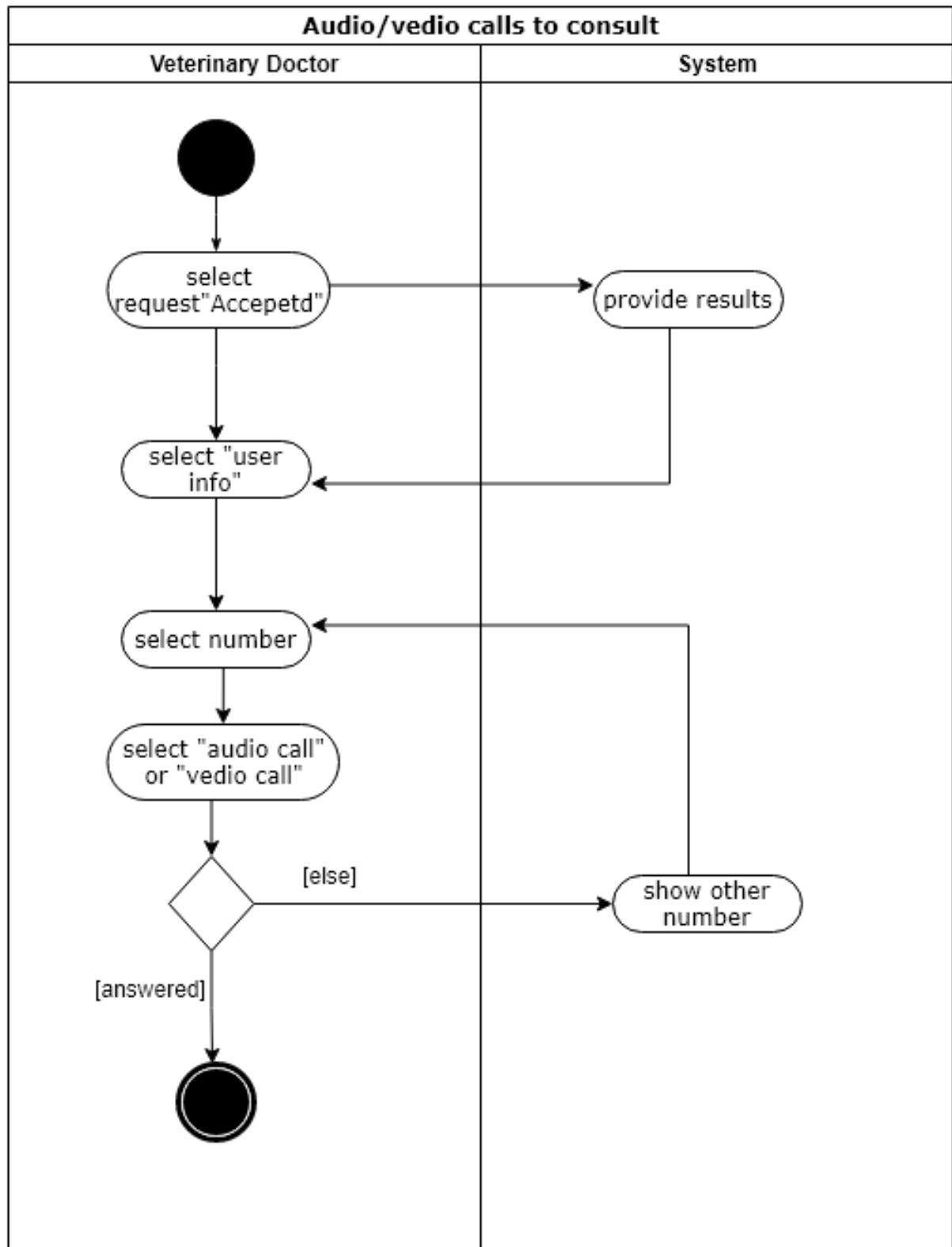
Use Case 33 - View photo uploads of animals



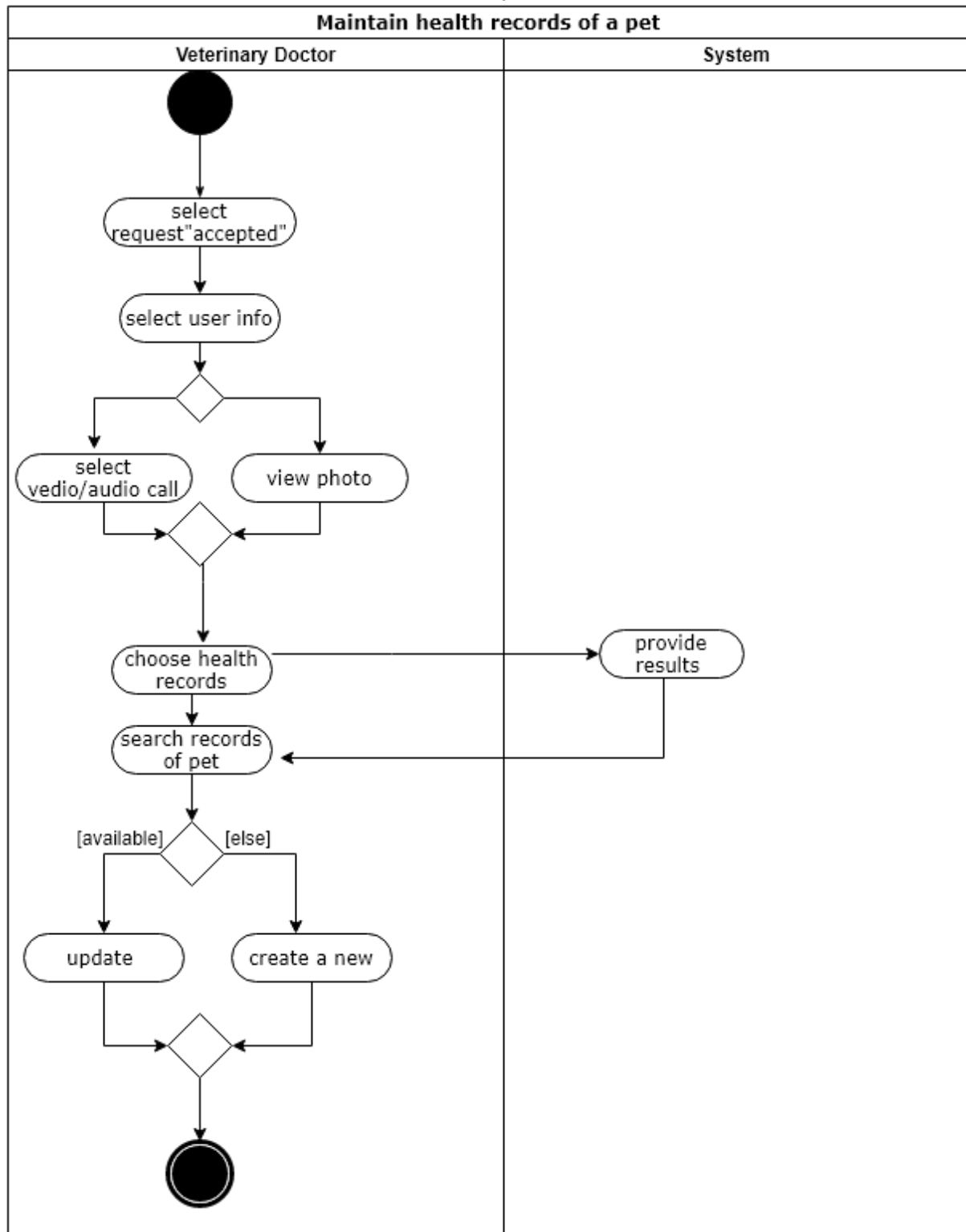
Use Case 34 - Accept / Deny Consultation Requests



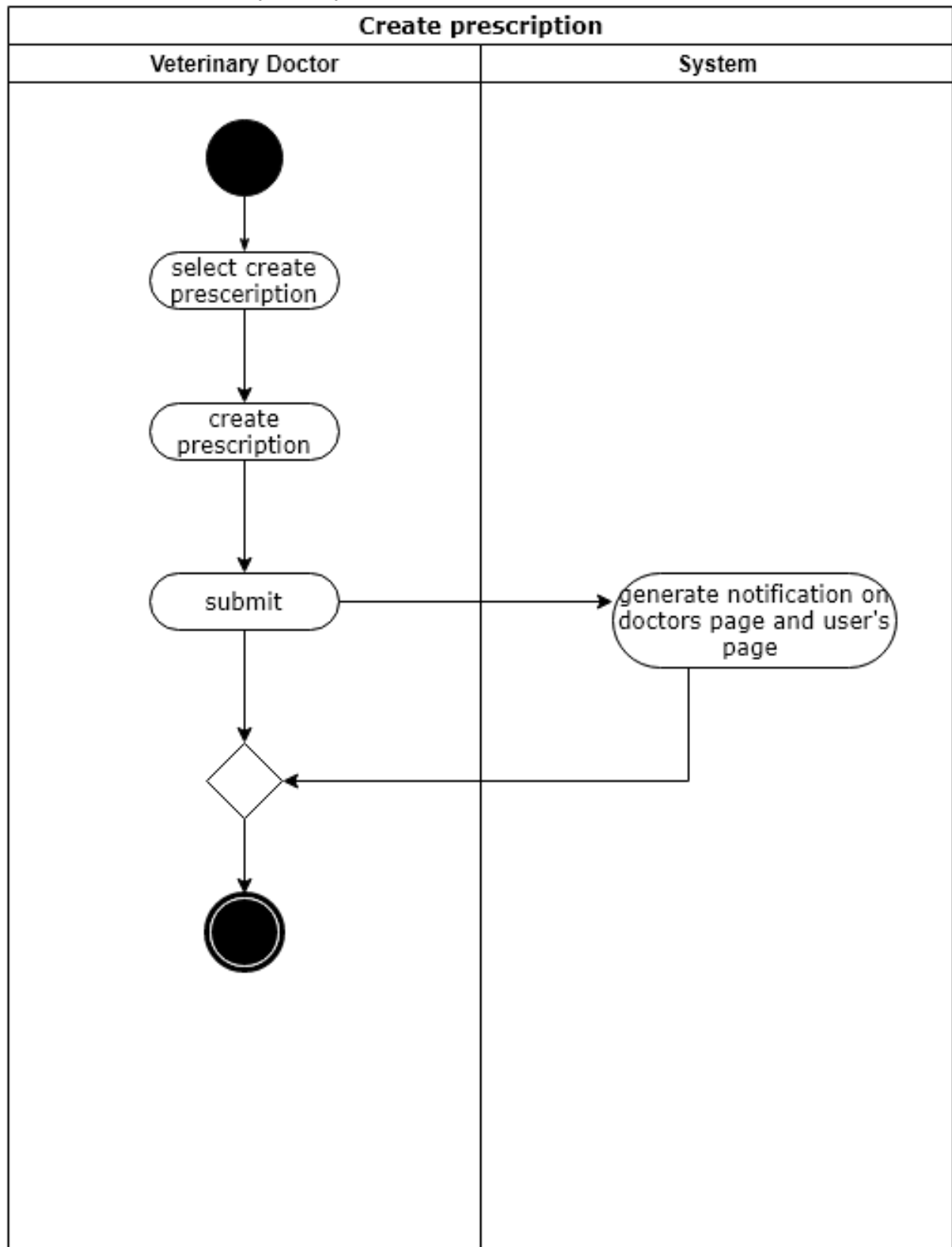
Use Case 35 - Audio / Video calls to consult



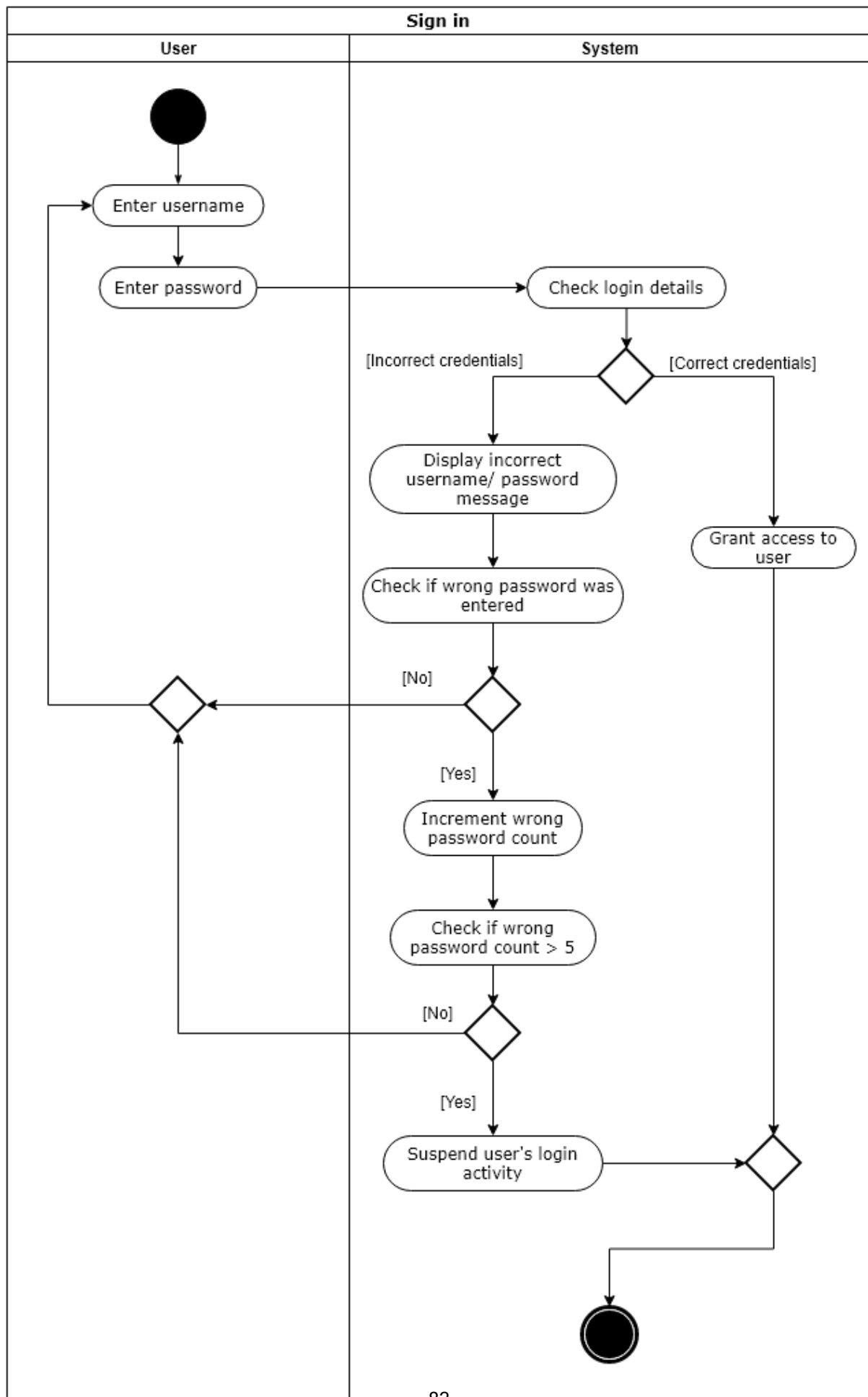
Use Case 36 - Maintain health records of a pet



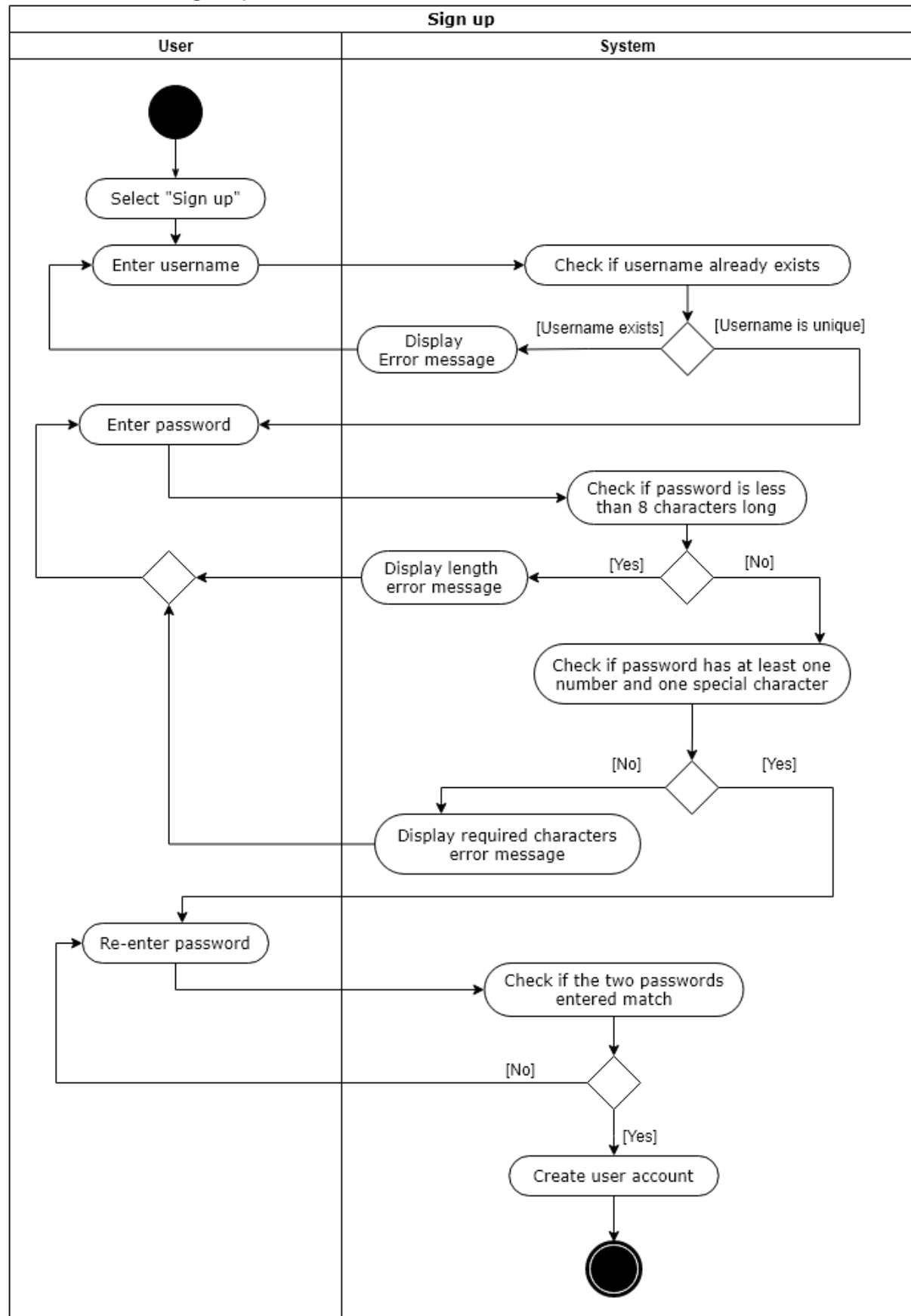
Use Case 37 - Create prescription



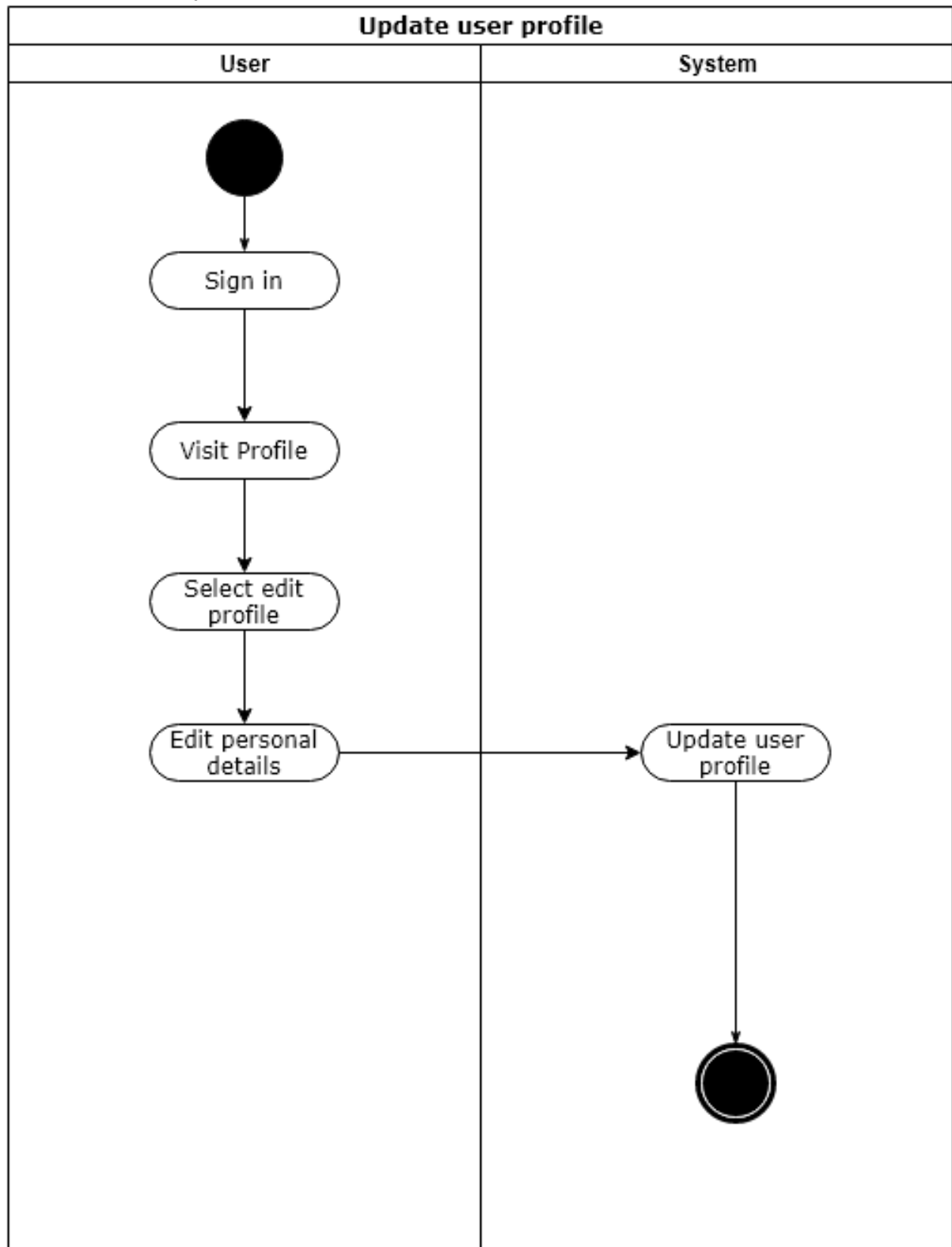
Use Case 38 - Sign In



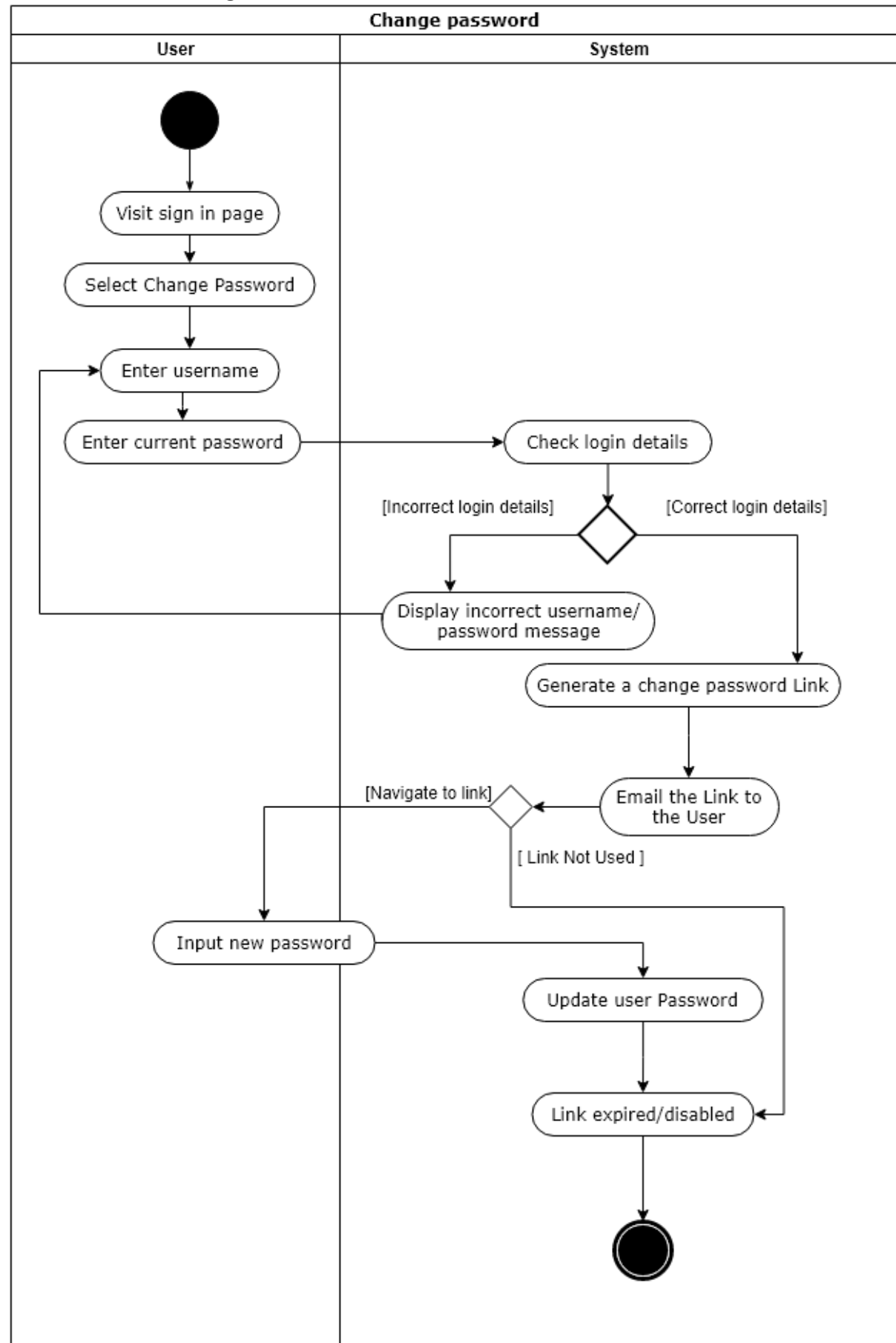
Use Case 39 - Sign Up



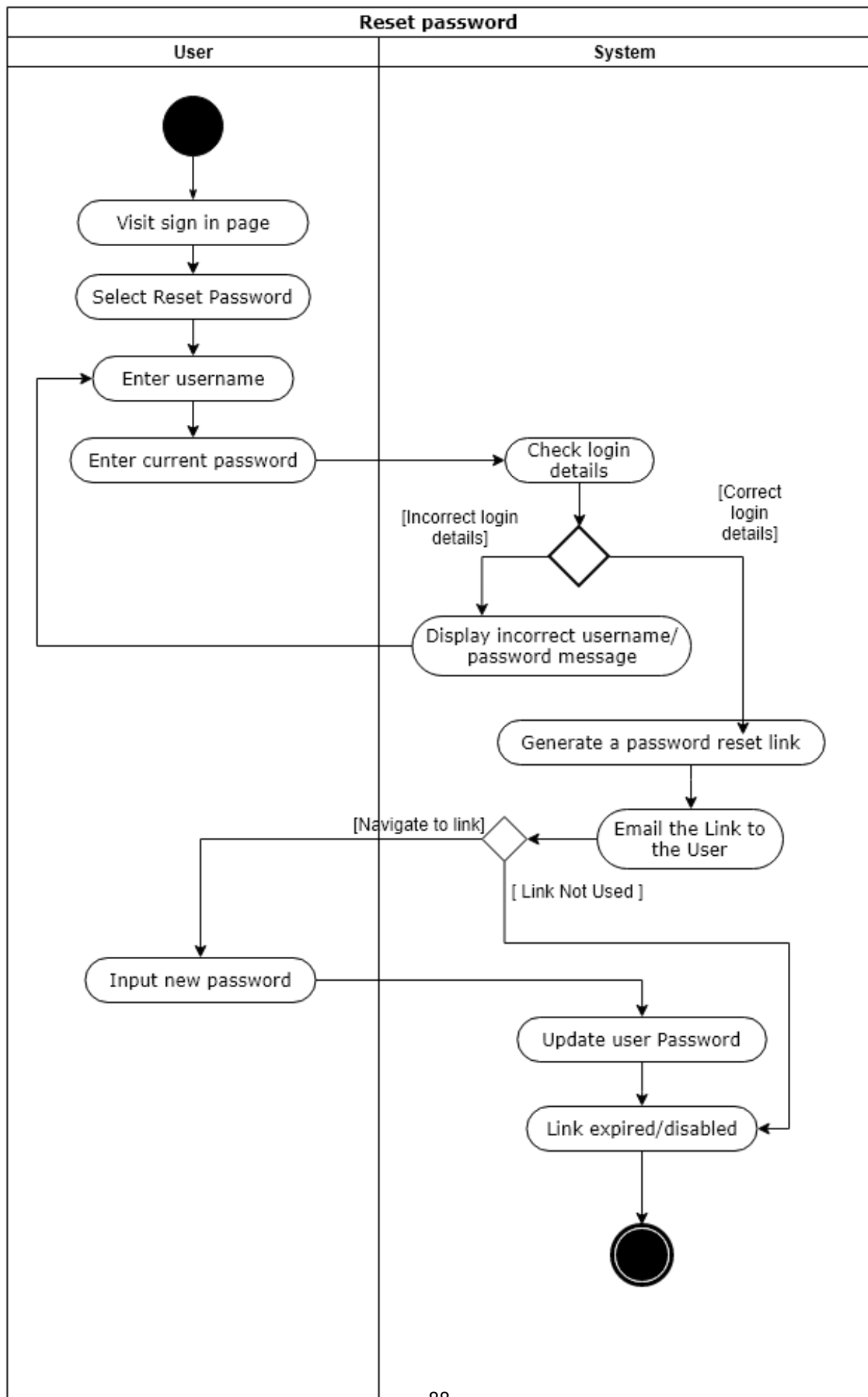
Use Case 40 - Update User Profile



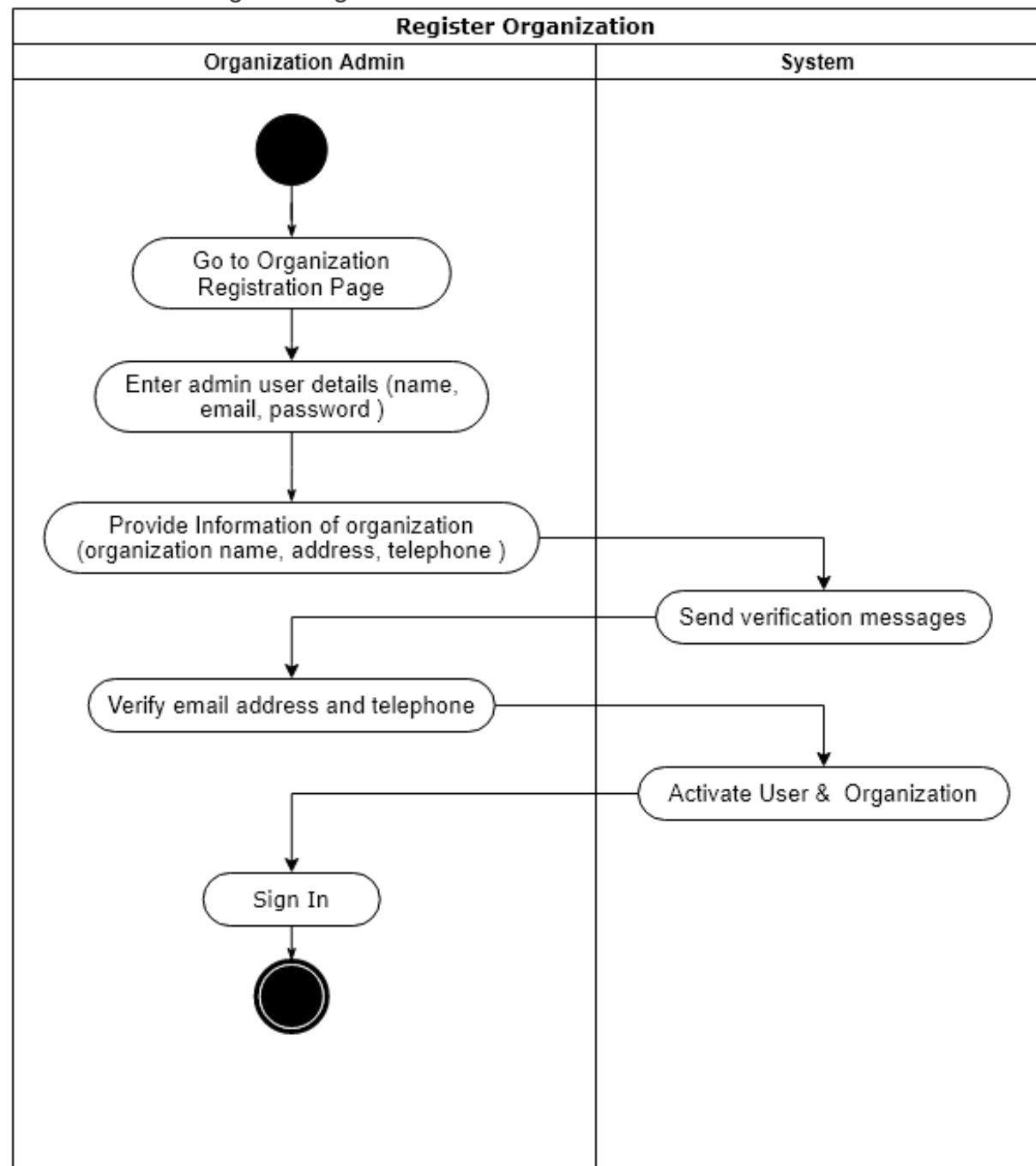
Use Case 41 - Change Password



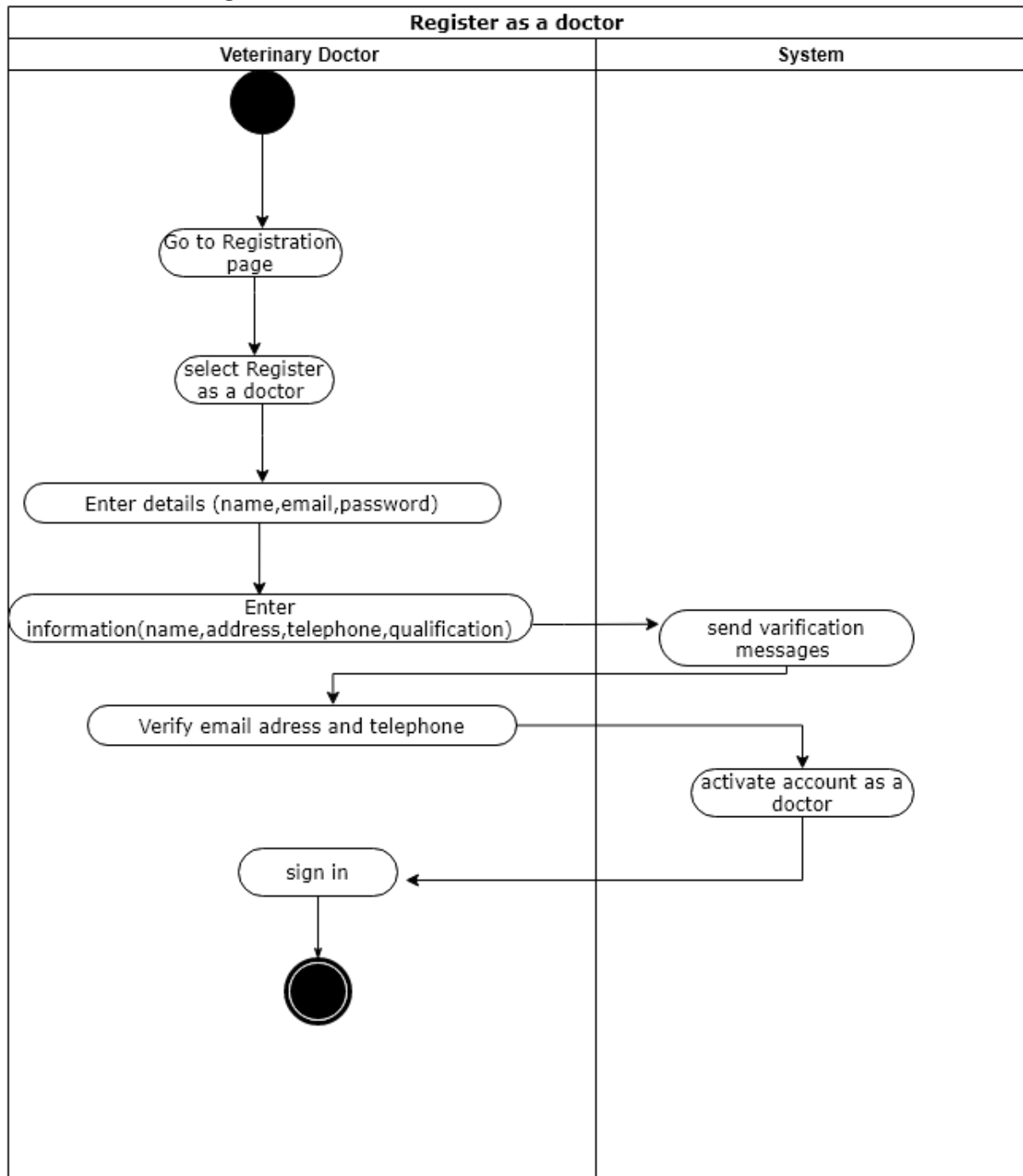
Use Case 42 - Reset Password



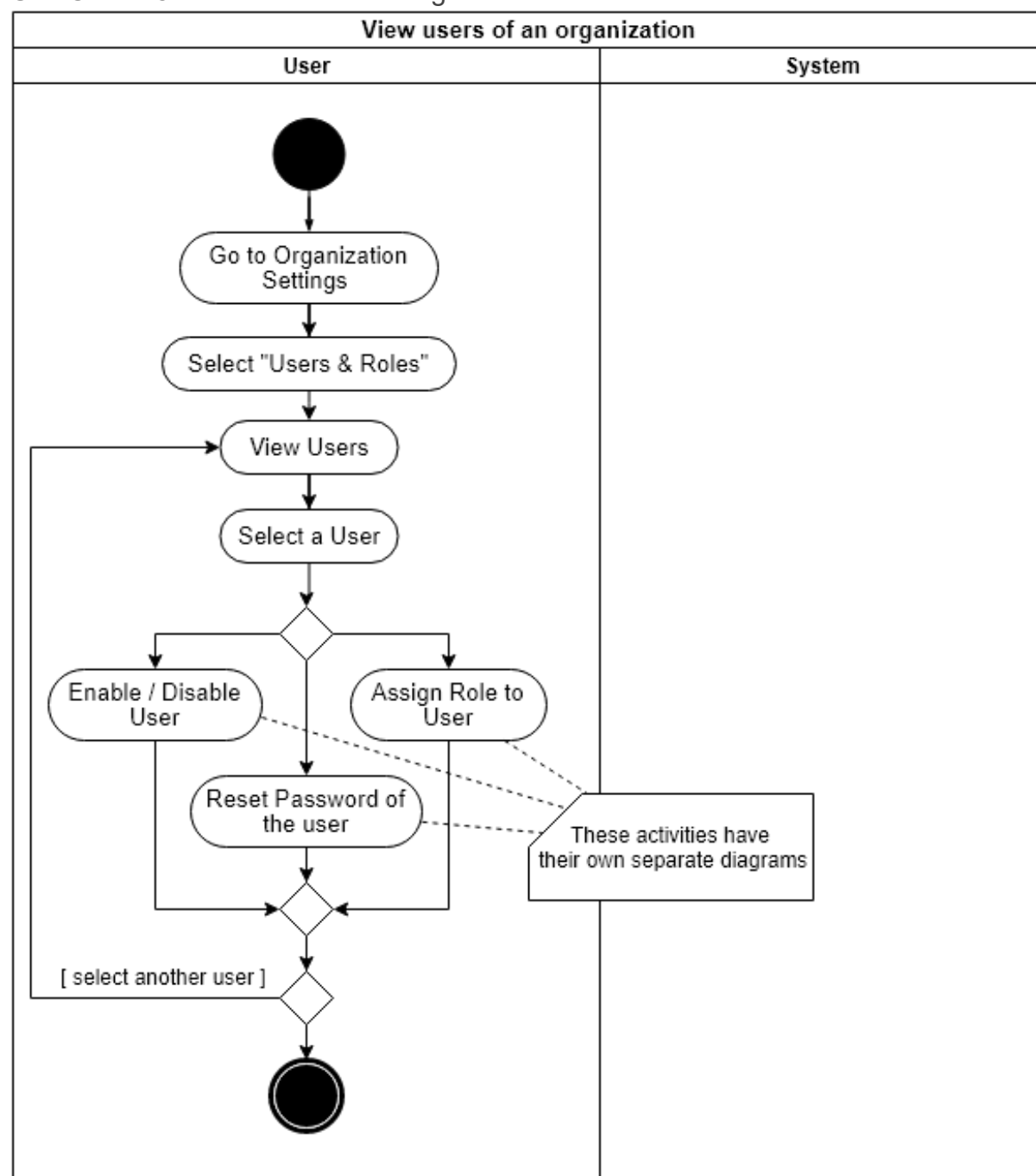
Use Case 43 - Register Organization



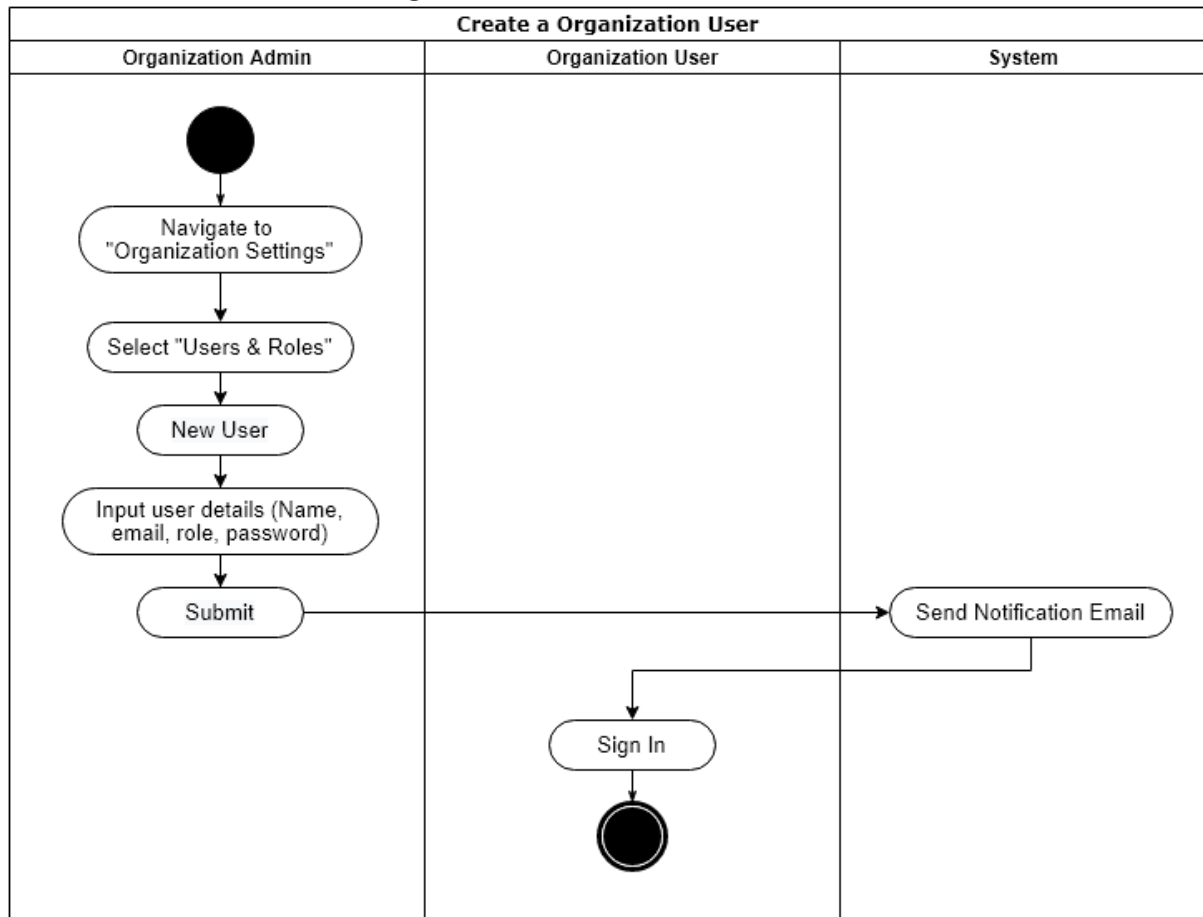
Use Case 44 - Register as a Doctor



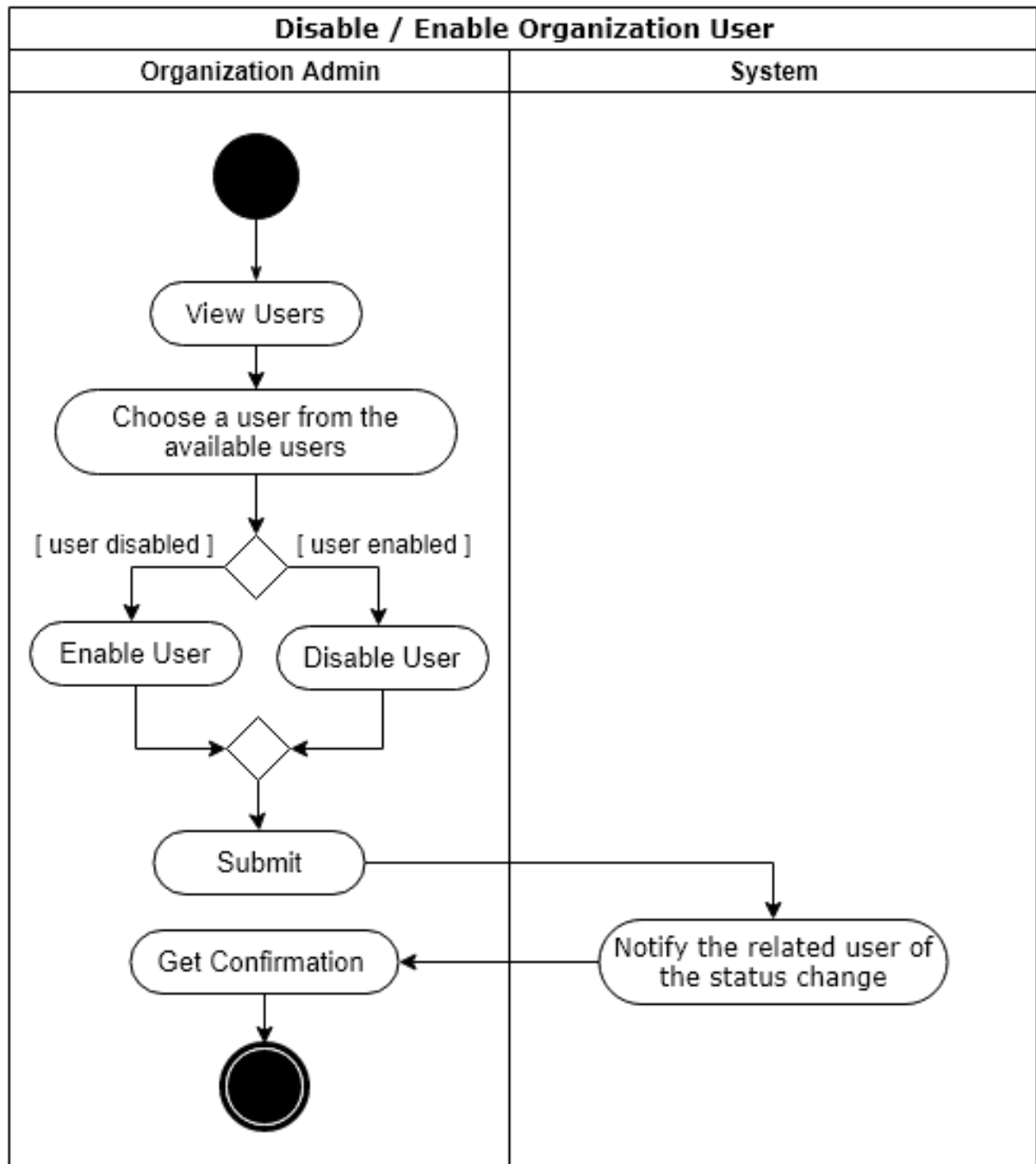
Use Case 45 - View users of an organization



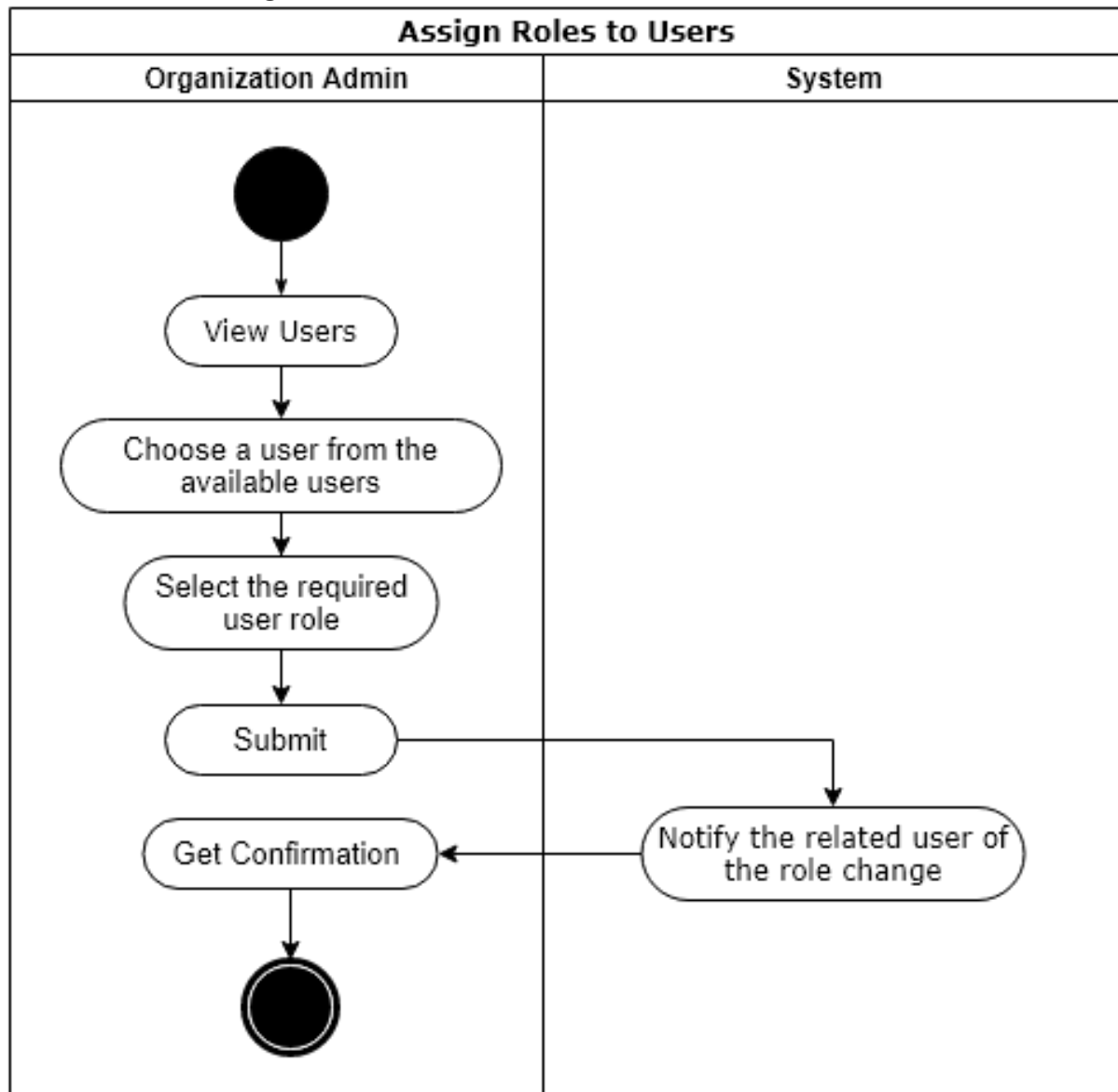
Use Case 46 - Create an Organization User



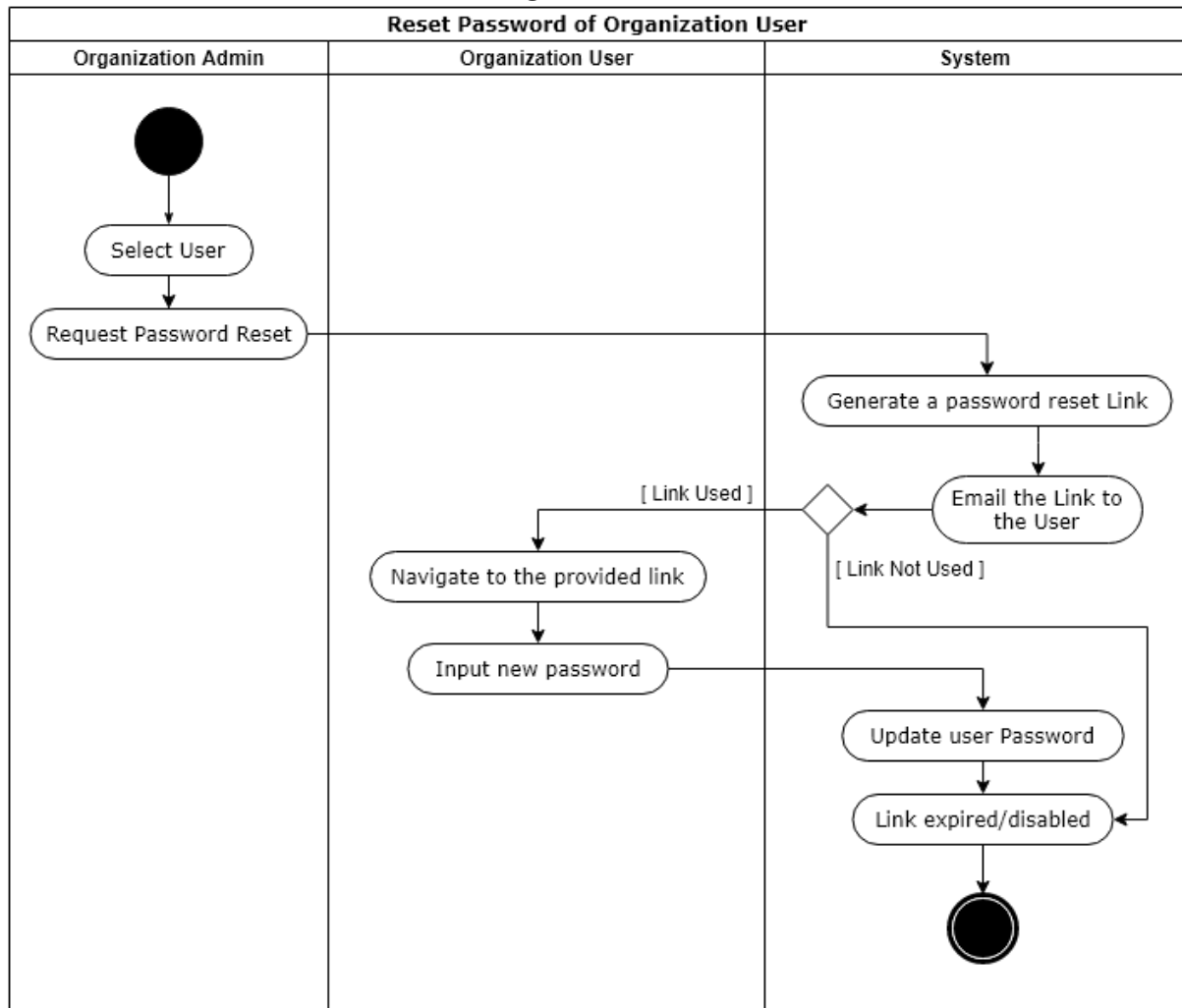
Use Case 47 - Disable / Enable User



Use Case 48 - Assign Roles to Users



Use Case 49 - Reset Password of Organization User



Use Case 50 - View Purchase, Donation & Sponsorship History

