

Sys Anal - Group Project

Group number 8

Studentes:

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ABC Clinic

REQUESTED BY: John Doe

DATE: December 31, 2022

DEPARTMENT: Information Technology

E-mail: john.doe@gmail.com

LOCATION: 10 Yonge Street, Toronto, M1V1C1

Country: Canada

CONTACT NUMBER: (647)-555-5555

Fax: (647)-555-5555

Type of Request

- | | | | |
|----------------------------------|-------------------------------------|---|-------------------------------------|
| 1. New System | <input checked="" type="checkbox"/> | 4. Business losses can be tolerated until new system installed | <input type="checkbox"/> |
| 2. System Enhancement | <input type="checkbox"/> | 5. Problems Exist but can be worked around | <input type="checkbox"/> |
| 3. System Error Correctio | <input type="checkbox"/> | 6. Operations are impaired, or opportunity lost | <input checked="" type="checkbox"/> |

Work Description

ABC Clinic a family medicine and walk-in clinic. ABC would like to store patient related data electronically as there is governmental regulation to store and safeguard patients' information and privacy reasons. So, it is better to be created a clinical management system. ABC clinic is looking for a software system which is object-oriented process. In other words, ABC clinic would prefer to have almost all electronic features be practically paperless.

Service Request

I request an analysis of the new system with the intent to design and build a completely new information system. The new system should be able to serve approximately 1500-2000 patients per week on the average. This new system should keep track of patient's appointment, change status accordingly and records/information and store copies of documents. In addition, the system should keep track of phone calls/messages from patients.

Work order passed to:

Name **Sam Smith**

Email: Sam.Smith@gmail.com

Contact Number: **(647)333-3333**

Address: **100King Street, Toronto, M5B6N6**

Client Approval Name and Title: **John Doe, ABC Clinic**

TO BE COMPLETED BY SYSTEM PRIORITY BOARD

- Request Approved
- Recommend Revision
- Suggest User Development
- Reject for Reason

Assigned to _____

Start Date _____

Signature _____

ABC Clinic System Software Project Charter

GENERAL PROJECT INFORMATION

PROJECT NAME	ABC Clinic System Software
PROJECT SPONSOR	ABC Clinic
PROJECT MANAGER	Jaqueleine Duarte De Oliveira Medeiros
EMAIL ADDRESS	management.abc@abcclinic.ca
PHONE NUMBER	437-111-1234
ORGANIZATIONAL UNIT	Management
PROCESS IMPACTED	Administration, General Management
EXPECTED START DATE	2nd January 2023
EXPECTED COMPLETION DATE	30th September 2023
EXPECTED SAVINGS	\$500,000
ESTIMATED COSTS	\$366,000

PROJECT SCOPE AND MILESTONE

PURPOSE OF PROJECT	To make a patient records system for ABC Clinic's use for day-to-day transactions. To make a booking system for ABC Clinic's use for day-to-day transactions. To make a paperless shifts system for ABC Clinic's use for payroll process. To minimize delay time from transferring data from one end to another.
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PROJECT MILESTONES

KEY MILESTONES	START	COMPLETE
Project initiation and strategy development	02/01/2023	27/01/2023
PHASE 1 - Manage Patient Info	30/01/2023	02/06/2023
Planning and Designing	30/01/2023	14/04/2023
Execution and testing	20/01/2023	12/05/2023
UAT & Sign-off	15/05/2023	26/05/2023
Project launch and training	29/05/2023	02/06/2023
PHASE 2 - Book appointment	05/06/2023	28/07/2023
Planning and Designing	17/04/2023	09/06/2023
Execution and testing	15/05/2023	30/06/2023
UAT & Sign-off	03/07/2023	14/07/2023
Project launch and training	17/07/2023	28/07/2023
PHASE 3 - Manage Shifts	31/07/2023	15/09/2023
Planning and Designing	12/06/2023	21/07/2023
Execution and testing	03/07/2023	18/08/2023
UAT & Sign-off	21/08/2023	01/09/2023
Project launch and training	04/09/2023	15/09/2023
Project Summary Report and Close Out	18/09/2023	22/09/2023
EXPECTED DELIVERABLES	Product Design, Project Plan, Patient Information Management System, Appointment Management System, Shift Management System	

RESOURCES AND COSTS

STAKEHOLDER NAME	STAKEHOLDER ROLE	RESPONSIBILITIES
Mr. ABC	Customer / Regulator Clinic Manager / Clinic Owner Sponsor / Domain Subject Matter Expert / End User	Define business requirement
Dr. D	Customer Physician Operational Support / End User	Patient diagnosis and treatment Issue prescriptions
Miss E	Customer Nurse Operational Support / End User	Assist Physicians Input symptoms and problems
Mrs. F	Customer Receptionist Operational Support / End User	Manage bookings
Jaqueline Duarte De Oliveira Medeiros	Project Manager	Managing the work required to deliver a solution that meets business requirements
Valunchanut Simaroj	Business Analyst	Define solution requirements
Igor Felipe De Melo Oliveira	System Designer Implementation Subject Matter Expert	Design solution
Mashad Elinou	Tester Implementation Subject Matter Expert	Software Testing
Nam Quoc Nguyen	Tech Lead Implementation Subject Matter Expert	Implement solution
Negin Heidari	Senior Developer Implementation Subject Matter Expert / Operational Support	Implement solution Maintainance

COST TYPE	VENDOR	RATE	QTY	AMOUNT
Labor	Huskies Solution Inc.	\$56,000.00	6	\$336,000
Licensing	Huskies Solution Inc.	\$4,500.00	1	\$4,500
Maintainance	Huskies Solution Inc.	\$500.00	5	\$2,500
Server Setup Fee	Rogers Server Service PLC.	\$3,000.00	1	\$3,000
Consultation Fee	Huskies Solution Inc.	\$100.00	20	\$2,000
Training Fee	Huskies Solution Inc.	\$50.00	40	\$2,000
Equipment Fee	Bestest Buy PLC.	\$800.00	20	\$16,000
		TOTAL COSTS		\$366,000

PROJECT RISKS, CONSTRAINTS, AND ASSUMPTIONS

RISKS	RISK MANAGEMENT APPROACH
Some equipments are unable to operate without electricity	Risk Avoidance Assign portable equipment devices to end user Develop portable version of solution software
Delay in designing and planning phase might affect overall delay	Risk Acceptance Transfer some finished parts to the next phase while members who are responsible for designing and planning continue the process
End users may have operational problems while using the software in the first few months	Risk Retention Provide real time support and software manuals
CONSTRAINTS	Estimated benefits may varies due to certain yearly circumstances

ASSUMPTIONS	All business stakeholders are available for elicitation and review activities. All technology stakeholders are available for elicitation and review activities.		
Prepared by:	Valunchanut Simaroj	Date:	09/01/2023

Question 3 - Feasibility

1. Economic

1.1. Benefits

TANGIBLE BENEFITS WORKSHEET	
Clinical Management System	
	Year 1 through 5
A. Cost reduction or avoidance	45,000
B. Error reduction	25,000
C. Increased flexibility	75,000
D. Increased speed of activity	105,000
E. Improvement in management planning or control	250,000
F. Other	-
TOTAL tangible benefits	500,000

Intangible benefits	
Competitive necessity	More confidence in decision quality
More timely information	Improved processing efficiency
Improved organizational planning	Improved asset utilization
Increased organizational flexibility	Improved resource control
Promotion of organizational learning and understanding	Increased accuracy in clerical operations
Availability of new, better, or more information	Improved work process that can improve employee moral or customer satisfaction
Ability to investigate more alternatives	
Faster decision making	Positive impacts on society
Better usage of resources ("greener")	Improved social responsibility

1.2. Costs

ONE-TIME COSTS WORKSHEET

Clinical Management System

	Year 0
A. Development costs	550,000
B. New hardware	20,000
C. New (purchased) software, if any	
1. Packaged applications software	10,000
2. Other	
D. User training	10,000
E. Site preparation	
F. Other	
TOTAL one-time costs	590,000

RECURRING COSTS WORKSHEET

Clinical Management System

	Year 1 through 5
A. Application software maintainance	98,000
B. Incremental data storage required: 20GB \$50 (estimated cost/GB = \$50)	1,000
C. Incremental communications (lines, messages,...)	500
D. New software or hardware leases	-
E. Supplies	500
F. Other	-
TOTAL recurring costs	100,000

1.3. Present Value Calculations of All Benefits and Costs for the Clinical Management System

	Year of Project						
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	TOTALS
Net Economic benefit	0	500,000	500,000	500,000	500,000	500,000	500,000
Discount Rate (12%)	1.0000	0.8929	0.7972	0.7118	0.6355	0.5674	
PV of Benefits	-	446,429	398,597	355,890	317,759	283,713	
NPV of all BENEFITS	-	446,429	845,026	1,200,916	1,518,675	1,802,388	1,802,388
One-time COSTS	-590000						
Recurring Costs	0	-100000	-100000	-100000	-100000	-100000	-100000
Discount Rate (12%)	1.0000	0.8929	0.7972	0.7118	0.6355	0.5674	
PV of Recurring Costs	-	(89,286)	(79,719)	(71,178)	(63,552)	(56,743)	
NPV of all COSTS	(590,000)	(679,286)	(759,005)	(830,183)	(893,735)	(950,478)	(950,478)
Overall NPV							851,910
Overall ROI							0.90
Break-Even Analysis							
Yearly NPV Cash Flow	(590,000)	357,143	318,878	284,712	254,207	226,971	
Overall NPV Cash Flow	(590,000)	(232,857)	86,020	370,733	624,940	851,910	
Break-Even Ratio	-	1.652	0.730	(0.302)	(1.458)	(2.753)	
Project break-even occurs between years 1 and 2							
Actual break-even occurred at 1.7 years							

2. Technical feasibility

Technical Feasibility	Labor	1 project manager 2 system analystS 2 programmers 2 software engineers
	Transportation	After developing the software, hardwares such as computer desktop will be delivered and software will be installed on the machine at the clinic to run the management system
	Technology	To develop the Clinical Management System, our team will use Java language combined with database server to operate and store all the records (patients' information, medical history, employees' information)
	Communication Devices	The offical communication will be via email such as constract reviews, meeting minutes, approvals. However, the individual phones are going to be utilized for most of the tasks

3. Operational feasibility

Operational Feasibility	Performance	The proposed clinical management system allows the clinic administration to reduce the working time on tasks and increase the productivity significantly. Besides, it helps to cut off the paper work and replace by a professional system, which store data permanantly in a database server. Then it is faster for the admistration to index the data in the future
	Information	This new system provides the clinic and the end-users (patients, customers) precision and efficiency in managing the data and better services. In terms of security, the new system also allow the data to be store safely in the encrypted database server, which also gurantee that the information will not be lost like paper documents.
	Economics	The proposed system permits the management team of the clinic to record all the costs and cashflows much better. Thanks to that, the clinic's shareholders can make better decision in reaching the short-term and long-term financial goals
	Control	The system helps the admistration to create a new business process which avoids cybersecurity issues such as phising attacks, IoT attacks, ransomware attacks, etc. Specifically, the system has the function which allows the database adminstration to grant access to users and give certification for the records of dta
	Efficiency	The new system maintains a strategic distance from excess and therefore it is quicker and effective efficient system.
	Services	The proposed system eliminates all paper works' constraints especially the long-time service in registration and booking in person. The new system enables the patients to do everything online and book reasonable timeslots. Generally, the new system decreases the difussion of time and will be more adaptable, dependable and simpler.

4. Scheduling Feasibility

The ABC Clinic system software is expected to take nine (9) months from project approval to the launch of their system. However, many of the foundations for this platform, such as high-speed internet and web server capability are not already available. We have measured our ability to finish the tasks on the time provided to us, as long as ABC Clinic is able to get the foundations needed for this project up and running with the correct time-frame. The system development process will meet the delivery deadline of nine (9) months provided by the clinic manager. The following is a break down the activities anticipated to be carried out by our team:

ID	Task Name	Start	Finish	Duration
1	Determine Requirements	2023-01-02	2023-01-10	7.0 d.
2	Determine profile requirements	2023-01-02	2023-01-10	7.0 d.
3	Determine inventory requirements	2023-01-02	2023-01-10	7.0 d.
4	Logical Design	2023-01-10	2023-02-27	35.0 d.
5	Clinical Management System Layout	2023-01-10	2023-01-30	15.0 d.
6	Design User Interface	2023-01-30	2023-02-13	11.0 d.
7	Plan User Tracking Intergration	2023-02-13	2023-02-27	11.0 d.
8	Physical Design	2023-02-27	2023-04-06	29.0 d.
9	Design Clinical Management System Modules	2023-02-27	2023-04-06	29.0 d.
10	Implementation	2023-04-07	2023-08-29	103.0 d.
11	Implement and Test Core Clinical Management System Modules	2023-04-07	2023-05-02	18.0 d.
12	Implement External System Integration	2023-05-03	2023-06-13	30.0 d.
13	Full System Testing & Debugging	2023-06-13	2023-06-23	9.0 d.
14	Stress Testing	2023-06-23	2023-06-30	6.0 d.
15	Integrate Site Design	2023-06-30	2023-07-27	20.0 d.
16	Usability Testing	2023-07-27	2023-08-09	10.0 d.
17	Set-up Production Environment	2023-08-09	2023-08-14	4.0 d.
18	Stage Site (Pre-Production Beta)	2023-08-14	2023-08-17	4.0 d.
19	Documentation and Post Development Assessment	2023-08-17	2023-08-29	9.0 d.
20	System Operation	2023-08-29	2023-09-18	15.0 d.
21	Production Roll-out	2023-08-29	2023-09-18	15.0 d.

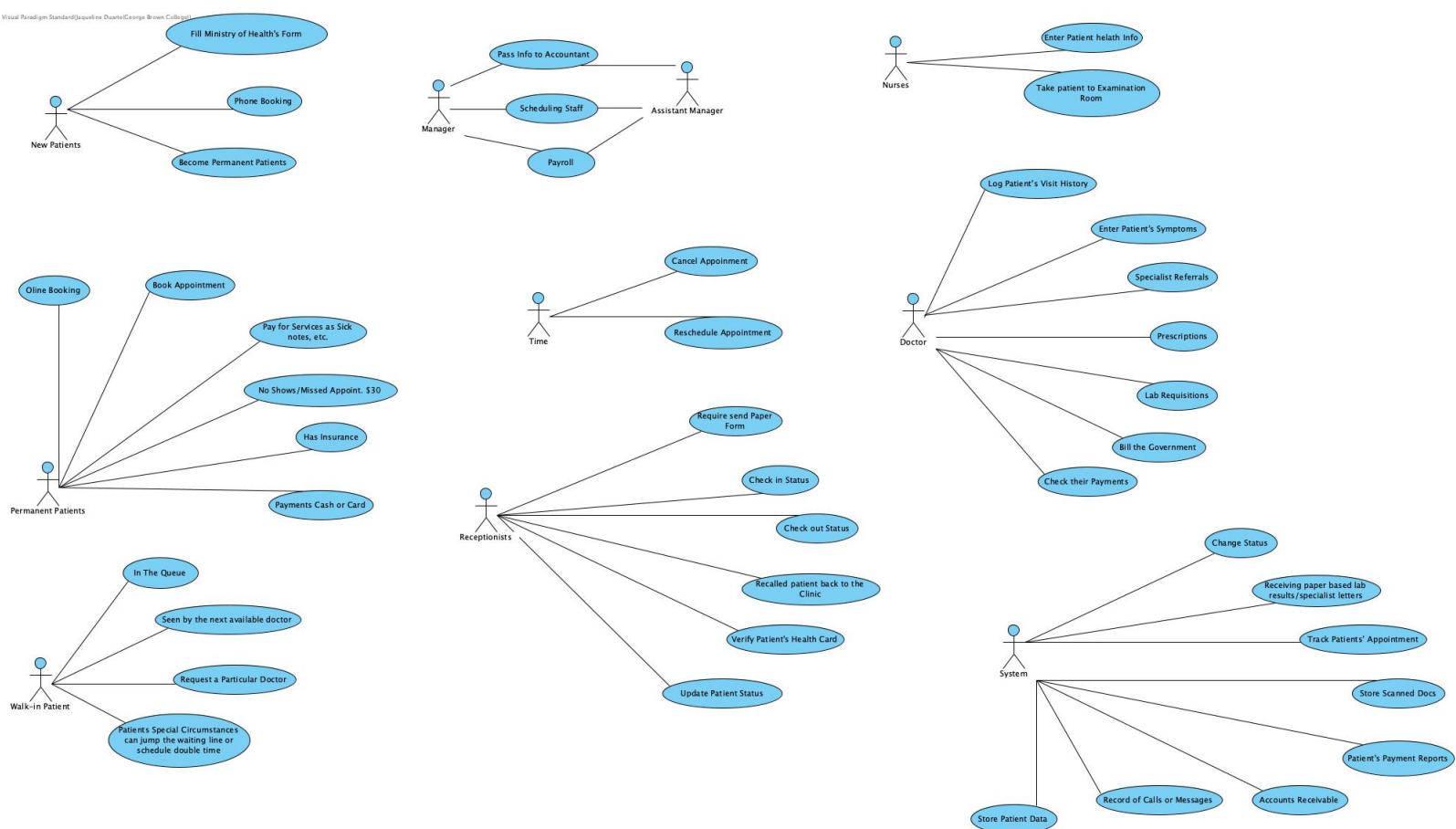
5. Technological & Legal Feasibility

Technological capability will be required for ABC clinic to move toward offering an online automated and integrated system. While ABC will have a web site with the ability to make appointments, it does not currently allow for this to be done online when it comes to new clients. This functionality must be integrated with the web site to allow clients a simple and easy way to book their appointments. As there is a governmental regulation when it comes to storing and safeguarding a patients' information, it is imperative that all information is stored in a secure manner. As such, ABC clinic will need to maintain a web server and database that is secure and only accessible by those with the proper authorization.

ABC clinic will maintain a small staff to run their day-to-day activities, but it is not clear if they will possess an information technology (IT) group, and as such, their expertise might not exist in using such systems. While this technology exists and is in use throughout the marketplace, we do not have access to their hiring pool and the knowledge of what software each individual staff member will have experience in. As such, it is of utmost importance that a walkthrough be provided to all staff before it becomes operational.

ABC clinic will need to maintain a high-speed internet connection, web server, and the latest software. This requirement comes with the request to have automated systems in place that will update information and also send information automatically when certain criteria are met. For example, ABC clinic requires that when a nurse is checking-in a patient, that their health card is verified in real-time as the system is linked directly with the ministry's system. A slow internet connection could cause for delays during a busy day, and as such, could cause a loss of revenue. Another possible scenario would be if the latest version of the software is required due to updated regulations on storing data, ABC clinic would run the risk of not complying with governmental regulations. ABC clinic also requires that patients be able to book, cancel, or reschedule their appointment. This would require the addition of an e-commerce portal to their website, so patients are able to book (pay) or cancel (refund) their appointments. This is required because as stated in their service request document, some patients might not be covered by the Canadian government and this would generate a fee that they would need to pay for or receive a refund for. With the addition of an e-commerce portal, it is expected that there will be an overall cost increase of 5-10% for web server operations and maintenance costs should ABC clinic opt for extended services beyond software development and training.

Question 4 - First Cut Diagram



Question 5 Screen Shots of Table

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highlight
1	Patients	patients	Actor		8	
2	Nurses	nurses	Generated Model Eleme...		3	
3	Receptionists	receptionists	Generated Model Eleme...		3	
4	Assistant managers	Assistant managers	Actor		1	
5	New Patients	New Patients	Generated Model Eleme...		1	
6	Permanent Patients	permanent patients	Generated Model Eleme...		1	
7	Time	24 hours	Generated Model Eleme...		1	
8	Walk-in Patient	walk-in patient	Generated Model Eleme...		1	
9	Doctor	doctor	Generated Model Eleme...		4	
10	System	system	Generated Model Eleme...		11	
11	Manager	manager	Generated Model Eleme...		1	
12	Abnormal Lab Test Results	abnormal lab test results	Use Case		1	
13	Fill Ministry of Health's forms	filling up Ministry of Health's forms	Use Case		1	
14	Store Patient Data	store patient related data electronically	Generated Model Eleme...		1	
15	Phone Booking	call the clinic to book an appointment	Generated Model Eleme...		1	
16	Become Permanent Patients	decide may become permanent patients	Generated Model Eleme...		1	
17	Require Paper Form	required to send these paper forms	Generated Model Eleme...		1	
18	Book Appointment	book	Generated Model Eleme...		2	
19	Cancel Appoinment	cancel	Generated Model Eleme...		1	
20	Reschedule Appointment	reschedule an appointment	Generated Model Eleme...		1	

No.	Candidate Class	Extracted Text	Type ↗	Description	Occurrence	Highlight
21	Oline Booking	online	Generated Model Element	Generated Model Element	1	
22	No Shows/Missed Appoint.	No shows or missed appointments	Generated Model Element	Generated Model Element	1	
23	Penalty	charged	Use Case	Use Case	1	
24	Pay Fees	pay for these services	Generated Model Element	Generated Model Element	1	
25	Medical/Sick Notes	medical/sick notes	Use Case	Use Case	0	
26	Travel Vaccinations	travel vaccinations	Use Case	Use Case	1	
27	Credit card	credit card	Use Case	Use Case	1	
28	Cash	cash	Use Case	Use Case	3	
29	Track Patients' Appointment	keep a track of patients' appointment	Generated Model Element	Generated Model Element	1	
30	Change Status	change the status accordingly	Generated Model Element	Generated Model Element	1	
31	Checked In	checked in	Use Case	Use Case	2	
32	In The Queue	placed in the queue	Generated Model Element	Generated Model Element	1	
33	Store Patients' Info	store patients' basic information	Use Case	Use Case	1	
34	Seen by the next available doctor	seen by the next available doctor	Generated Model Element	Generated Model Element	1	
35	Request a Particular Doctor	request to be seen by a particular doctor	Generated Model Element	Generated Model Element	1	
36	Jump The Wait Line	jump the wait line in case of an urgent need	Use Case	Use Case	1	
37	Patients Special Circumstances	patients with special circumstances	Generated Model Element	Generated Model Element	1	
38	Scheduled Double Time	scheduled for double time	Use Case	Use Case	1	
39	Verify Patient's Health	verify each patient's health	Generated Model Element	Generated Model Element	1	
No.	Candidate Class	Extracted Text	Type ↗	Description	Occurrence	Highlight
40	Check in Status	marks "checked in" status	Generated Model Element	Generated Model Element	1	
41	Check out Status	marks a "check out" status	Generated Model Element	Generated Model Element	1	
42	Examination Room	take the patient to an examination room	Generated Model Element	Generated Model Element	1	
43	Enter Patient health Info	enter his or her temperature, height, weight	Generated Model Element	Generated Model Element	1	
44	Enter Patient's Symptoms	enter patient's complaints/symptoms, diag	Generated Model Element	Generated Model Element	1	
45	Log Patient's Visit History	Log patient's visit history	Generated Model Element	Generated Model Element	1	
46	Prescriptions	Prescriptions	Generated Model Element	Generated Model Element	1	
47	Lab Requisitions	Lab Requisitions	Generated Model Element	Generated Model Element	1	
48	Specialist Referrals	Specialist Referrals	Generated Model Element	Generated Model Element	1	
49	Store Scanned Docs	store scanned copies of paper documents	Generated Model Element	Generated Model Element	1	
50	Receiving paper based lab results	receiving paper based lab results/specialist	Generated Model Element	Generated Model Element	1	
51	Recalled back to the Clinic	recalled back to the clinic immediately	Generated Model Element	Generated Model Element	1	
52	Record of Calls or Messages	keep a track of all the calls made or message	Generated Model Element	Generated Model Element	1	
53	Bill the Government	bill the government	Generated Model Element	Generated Model Element	1	
54	Check Payments	see their payments	Generated Model Element	Generated Model Element	1	
55	Has Insurance	coverage by an insurance	Generated Model Element	Generated Model Element	1	
56	Accounts Receivable	provide the Accounts Receivable	Generated Model Element	Generated Model Element	1	
57	Patient's Reports	provide reports about patients, visits, financ	Generated Model Element	Generated Model Element	1	
58	Scheduling Doctors	scheduling doctors	Generated Model Element	Generated Model Element	1	
59	Payroll	calculate the number of hours worked	Generated Model Element	Generated Model Element	1	
60	Pass Info to Accountant	provide this information to our accountant	Generated Model Element	Generated Model Element	1	
61	Booked	booked	Use Case	Use Case	2	
62	Cancelled	cancelled	Use Case	Use Case	2	

Question 6

Use Case Title: Booking an appointment
Primary Actor: Patient
Level: Kite (summary)
Stakeholders: Patient, Receptionist
Precondition: patients access to phone calls and online booking
Minimal Guarantee: Pre-book an appointment ⊕
Success Guarantee: Booking successfully confirmed ⊕
Trigger: accessing online booking or phone call
Main Success Scenario: <ol style="list-style-type: none">1. Patient either calls receptionist or checks website for online booking2. Patients search for a free time slot3. Search for physicians/ doctors availability4. Choose a specific doctor if desire5. Patient books and confirms their booking in desired time period with desires doctor has been made
Extensions: <ol style="list-style-type: none">1. Checking for patient status. If it's a permanent patient, they can make booking online or by phone call. Otherwise, if the patient is a new patient, they can only book an appointment via phone call.2. Booking online fails, patient can still book by calling a receptionist3. Booking by call has a long waiting time, permanent patient can make booking online

Use Case Title: Placed in queue

Primary Actor: walk-in patient

Level: Kite (summary)

Stakeholders: walk-in patient, system

Precondition: walk-in patient explains about their requests and situation

Minimal Guarantee: Patient will be placed in the queue for the next available doctor



Success Guarantee: according to walk-in patient status, in urgent situation, clinic will meet their expectations



Trigger: walk-in patient visits the clinic



Main Success Scenario:

- 1) Walk-in patient visits the clinic
- 2) Walk-in patient approaches the receptionist
- 3) Receptionist checks patient status and places the patient in the queue
- 4) Receptionist will also consider urgent conditions.

Extensions:

- 1) In order to place the patient in the queue properly, we have to consider some aspects.
- 2) In case of urgent conditions, urgent extension will be used.
- 3) In case of special treatments, walk-in patient can request to visit a particular doctor.
- 4) In case patient needs more time for her/his visit with doctor, patient will be scheduled for double time visit.

Use Case Title: Cancel an appointment

Primary Actor: Permanent Patient

Level: Kite (summary)

Stakeholders: Permanent Patient , receptionist , system

Precondition: appointment already has been booked

Minimal Guarantee: Rollback of any deposit for the appointment



Success Guarantee: Successfully cancel the booked appointment so the time and doctor will be available on the system



Trigger: Patient calling receptionist or visit the website



Main Success Scenario:

1. Permanent patient either calls receptionist or visits website for online cancelation
2. Patients chooses the previously booked appointment
3. Patient cancels and confirms their booking has been removed
4. In case of paid deposit, patient will be refunded

Extensions:

1. Checking for patient status. If it's a permanent patient, they can cancel booking online or by phone call. Otherwise, if the patient is a new patient, they can only cancel an appointment via phone call.
2. Online cancelation fails, patient can still cancel by calling a receptionist
3. Online cancelation by call has a long waiting time, permanent patient can cancel the booking online

Use Case Title: Reschedule an appointment

Primary Actor: Permanent Patient

Level: Kite (summary)

Stakeholders: Permanent Patient , receptionist , system

Precondition: appointment already has been booked

Minimal Guarantee: cancel the current booking and postpone it to another time



Success Guarantee: change the date and time of booking

Trigger: Patient calling receptionist or visit the website

Main Success Scenario:

1. Patient either calls receptionist or checks website for online reschedule booking
2. Patients cancels the previously booked appointment
3. Patient changes searches for a new free time slot
4. Search for physicians/ doctors availability
5. Choose a specific doctor if desire
6. Patient rebooks and confirms their rescheduling in desired time period with desires doctor has been made

Extensions:

1. Checking for patient status. If it's a permanent patient, they can reschedule online or by phone call.
2. Rescheduling online fails, patient can still reschedule by calling a receptionist
3. Rescheduling by call has a long waiting time, permanent patient can reschedule online

Use Case Title: changing status

Primary Actor: system

Level: Kite (summary)

Stakeholders: system, patient

Precondition: Booking has been made

Minimal Guarantee: any changes of status will be updated

Success Guarantee: status will be accordingly change based on the patient action and saved in the system.

Trigger: Patient books an appointment



Main Success Scenario:

- 1) System checks the patient's actions and status.
- 2) In case of booking, system will change status to booked.
- 3) In case of booking cancelation, system will change status to canceled.
- 4) In case of patient's no show, system will change status to no show.
- 5) In case of leaving without treatment, system will change status to LWT.
- 6) In case of checking in, system will change status to check in.



Extensions:

- 1) System checks the patient's actions and status.
- 2) In case of booking, system will change status to booked.
- 3) In case of booking cancelation, system will change status to canceled.
- 4) In case of patient's no show, system will change status to no show.
- 5) In case of leaving without treatment, system will change status to LWT.
- 6) In case of checking in, system will change status to check in.
- 7) In case of checking out, system will change status to check out.

Use Case Title: Verify patient health



Primary Actor: Receptionist

Level: Kite (summary)

Stakeholders: Patient , Receptionist

Precondition: Patient provides health card

Minimal Guarantee: Receptionist checks the health card for verification



Success Guarantee: health card will be verified so patient can use insurance offers



Trigger: patient wants to use insurance coverage



Main Success Scenario:

1. Receptionist asks for insurance from patient
2. Patient provides health card
3. Health card will be approved
4. Insurance coverage will be considered

Extensions:

None

Use Case Title: Recall Patient Back

Primary Actor: Receptionist

Level: Kite (summary)

Stakeholders: Patient , Receptionist

Precondition: Call patients for the first time

Minimal Guarantee: they will contact patient a few times until they response



Success Guarantee: call will be successfully made to inform the patient



Trigger: urgent situation



Main Success Scenario:

1. Receptionist keeps track of calls
2. In case of emergency situation, receptionist will contact patient
3. In case of not answering, receptionist will call the patient again

Extensions:

1. In case of abnormal test result, Lab Requisitions use case will perform and recall will be made to the patient.

Use Case Title: Print out forms

Primary Actor: System

Level: Kite (summary)

Stakeholders: System

Precondition: prepare forms

Minimal Guarantee: make sure forms are completed



Success Guarantee: prints out forms by a chosen method of accomplishment



Trigger: need accessing forms



Main Success Scenario:

1. System saves all the details and information of patients
2. When clinic needs to gather files for different purposes, it will print out the forms

Extensions:

1. Different ways of accomplishing tasks to send to the external party.
2. method of accomplishing tasks

Use Case Title: Keep track of calls and Messages

Primary Actor: System

Level: Kite (summary)

Stakeholders: System , receptionist

Precondition: make calls or have messages

Minimal Guarantee: saves all the calls and messages between patient and system/receptionist



Success Guarantee: clinic would make urgent calls if needed



Trigger: urgent situations

Main Success Scenario:

1. Calls will be saved in the system
2. Messages will be saved in the System

Extensions:

None

Use Case Title: Provide reports

Primary Actor: System

Level: Kite (summary)

Stakeholders: System , receptionist

Precondition: gathers all info and keep track of patient's activities

Minimal Guarantee: system update the status and keep track of status
+
[]

Success Guarantee: finalise and complete the report activities of patients
+
[]

Trigger: system needing to have access to visits or financial aspects of clinic

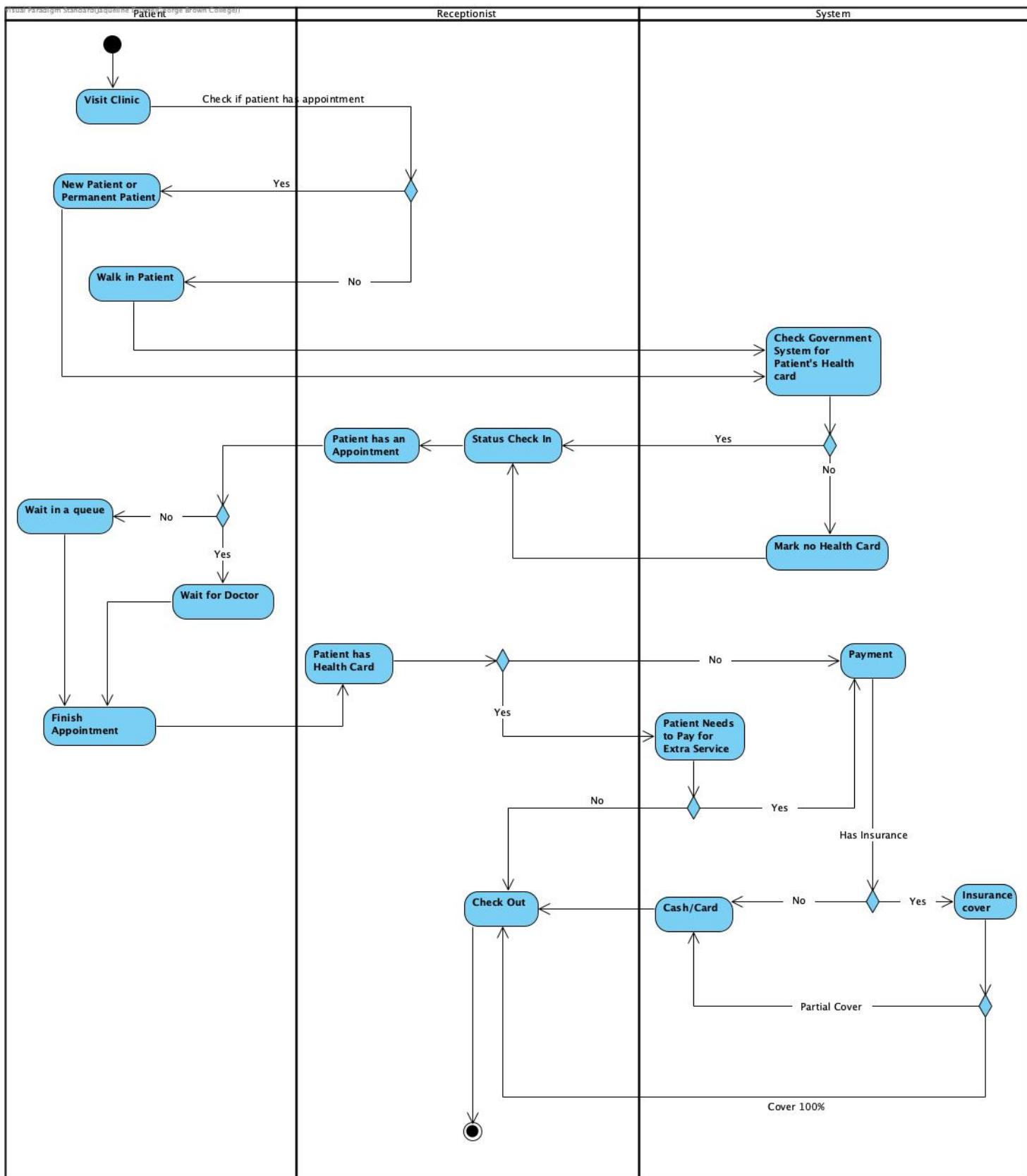
Main Success Scenario:

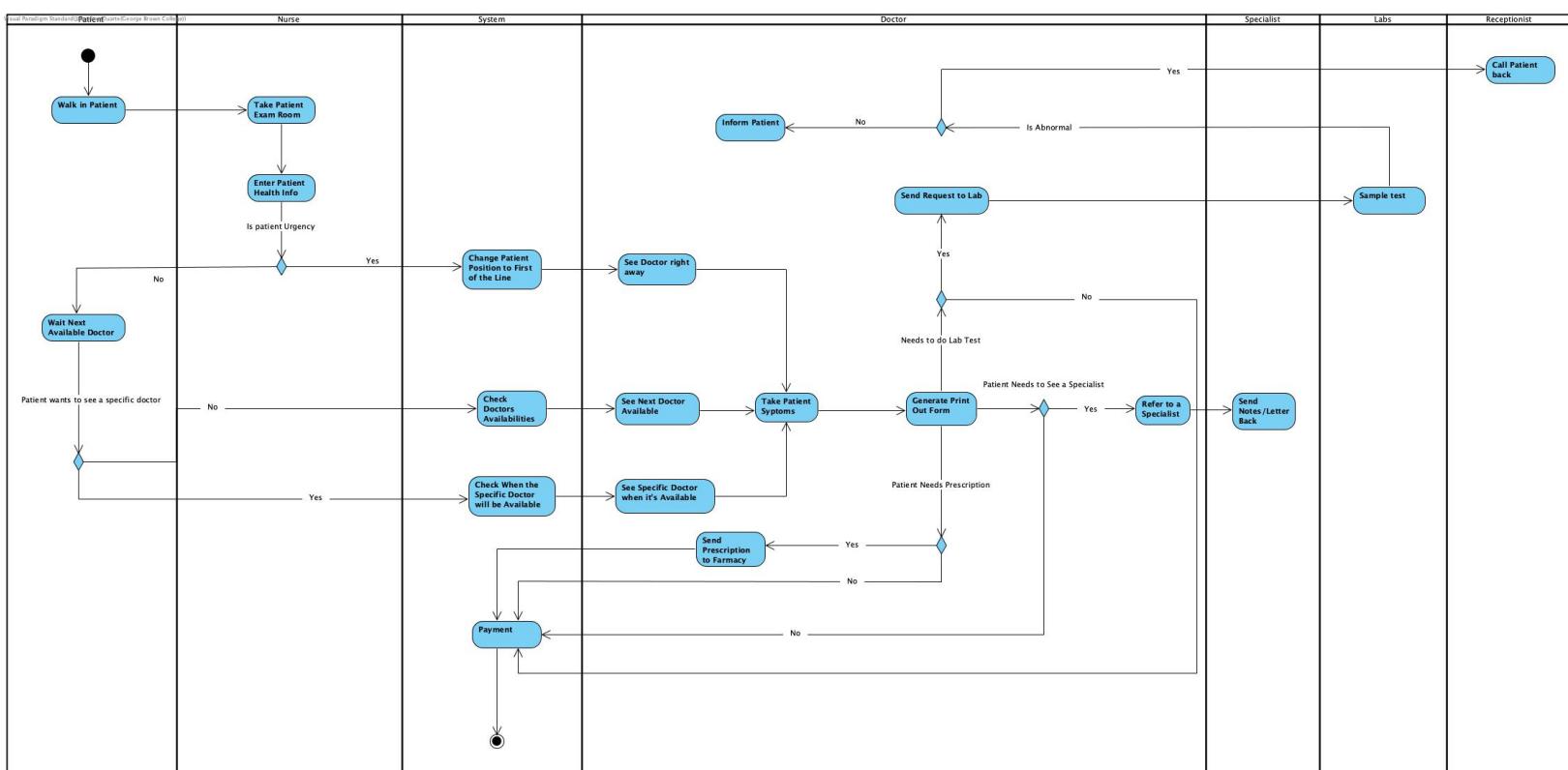
1. System and receptionist will carefully keep track of reports containing patient information, visits and so on.
2. It will specifically provide different reports for all needed information

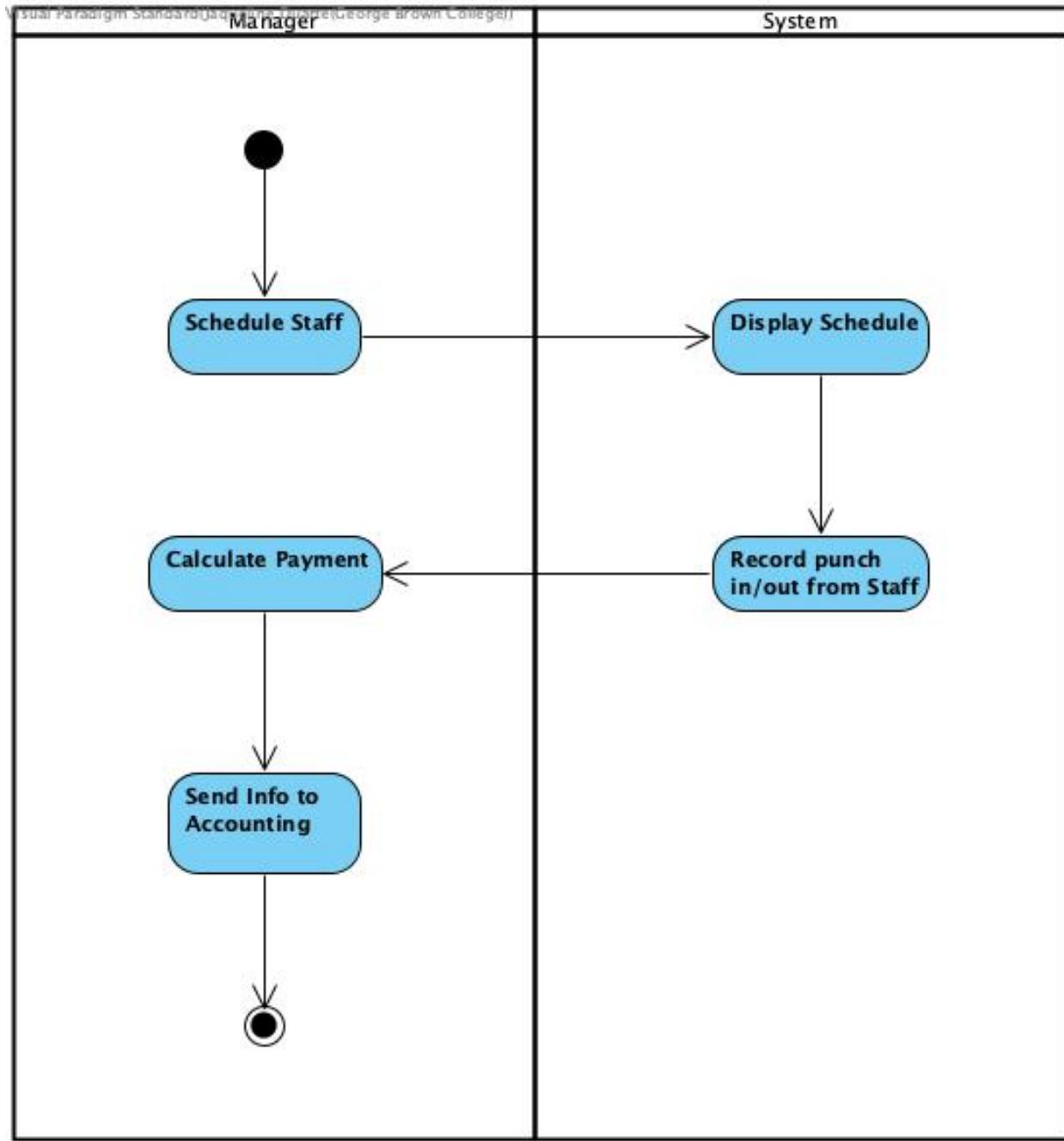
Extensions:

1. In case of needing accurate figure of reports, we will have Statistics Usage
2. In case of needing financial reports for payments, we will have Financial Accounts Report
3. For keeping track of patient symptoms, treatments and son on , we will provide Patients Reports
4. Visits Reports

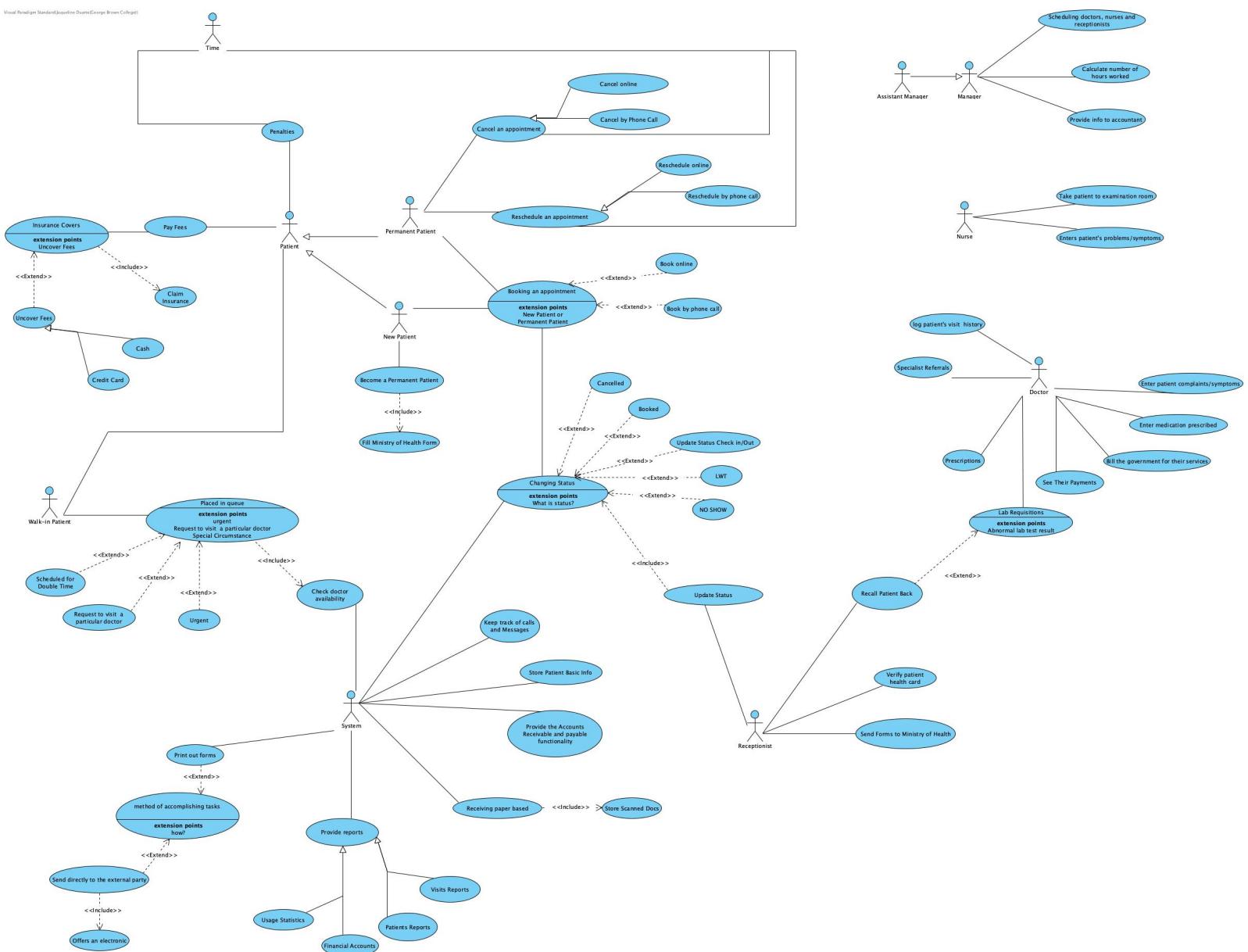
Question 7- Activity Diagrams



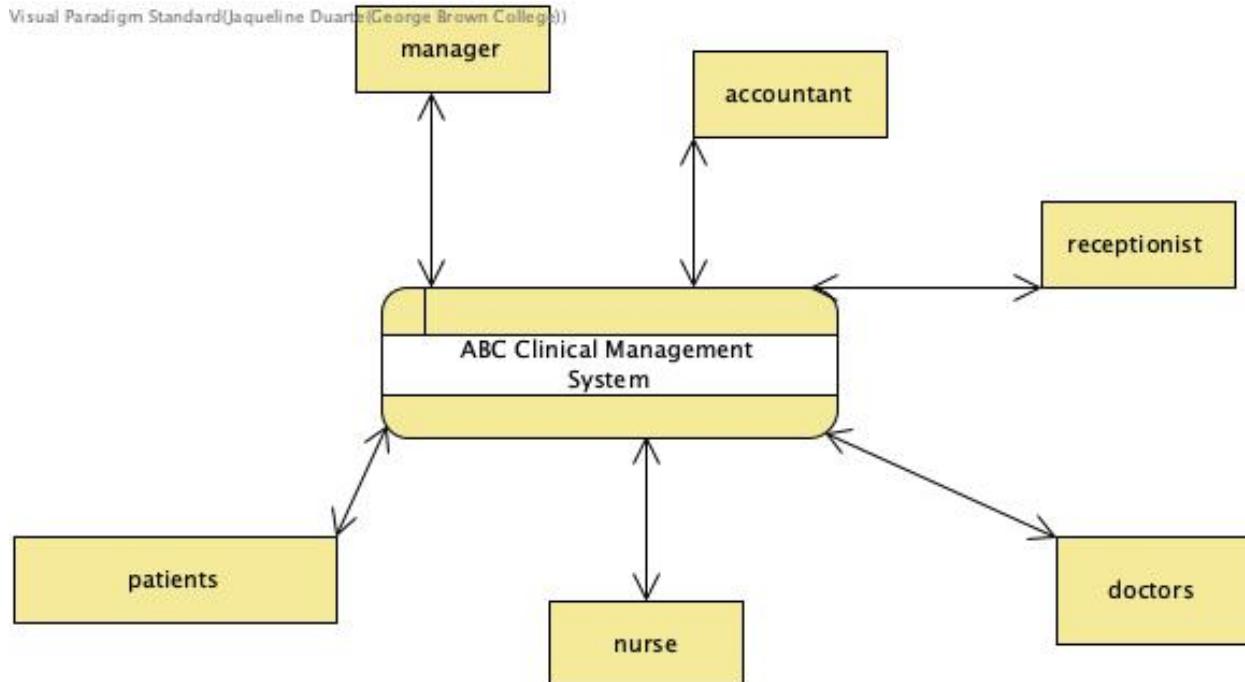




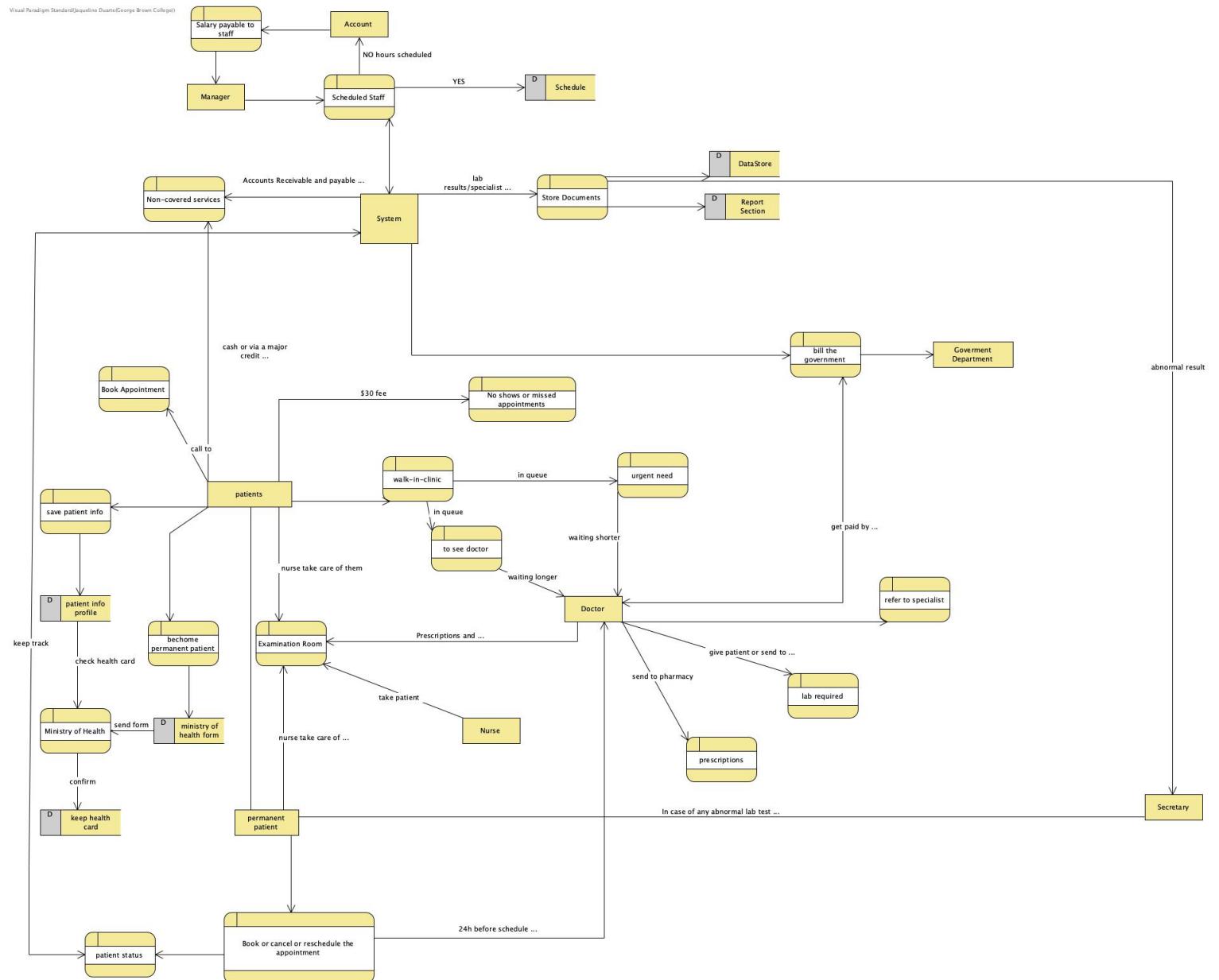
Question 8



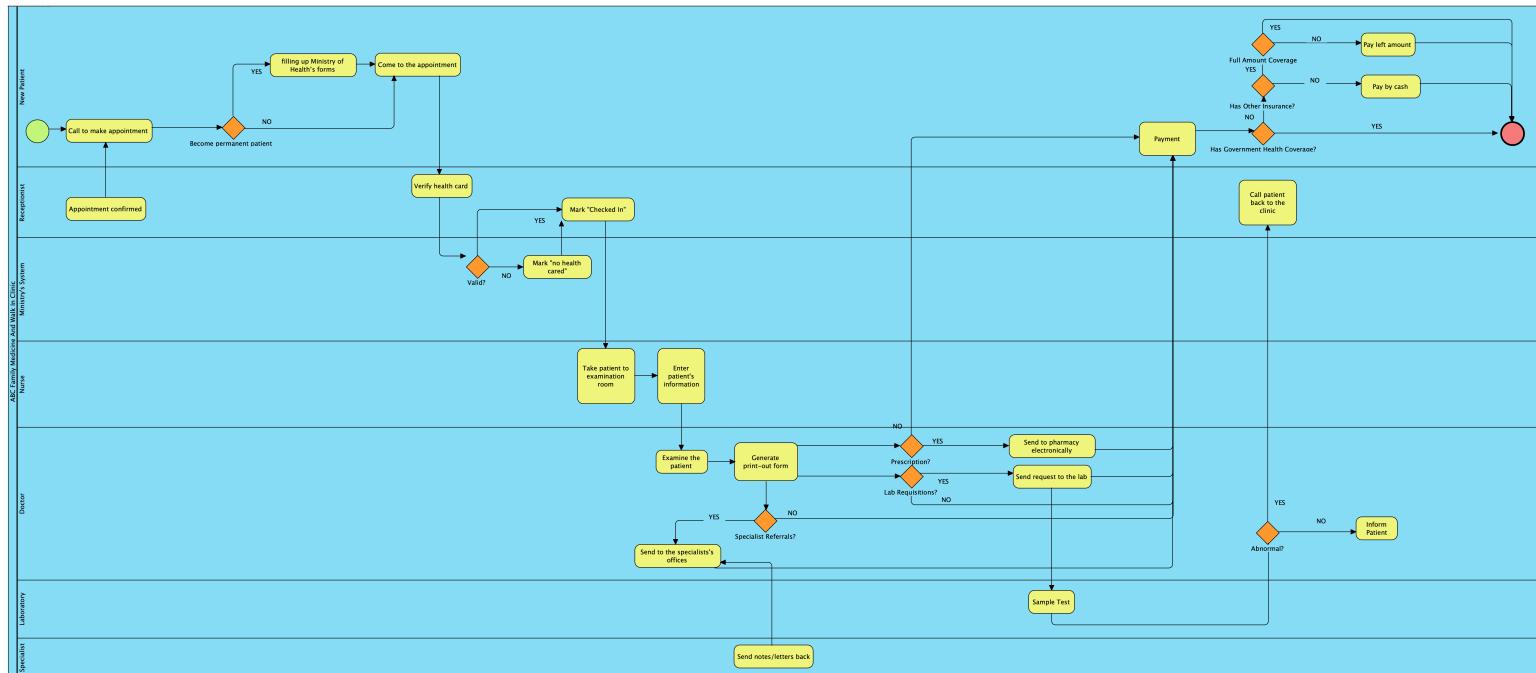
Question 9



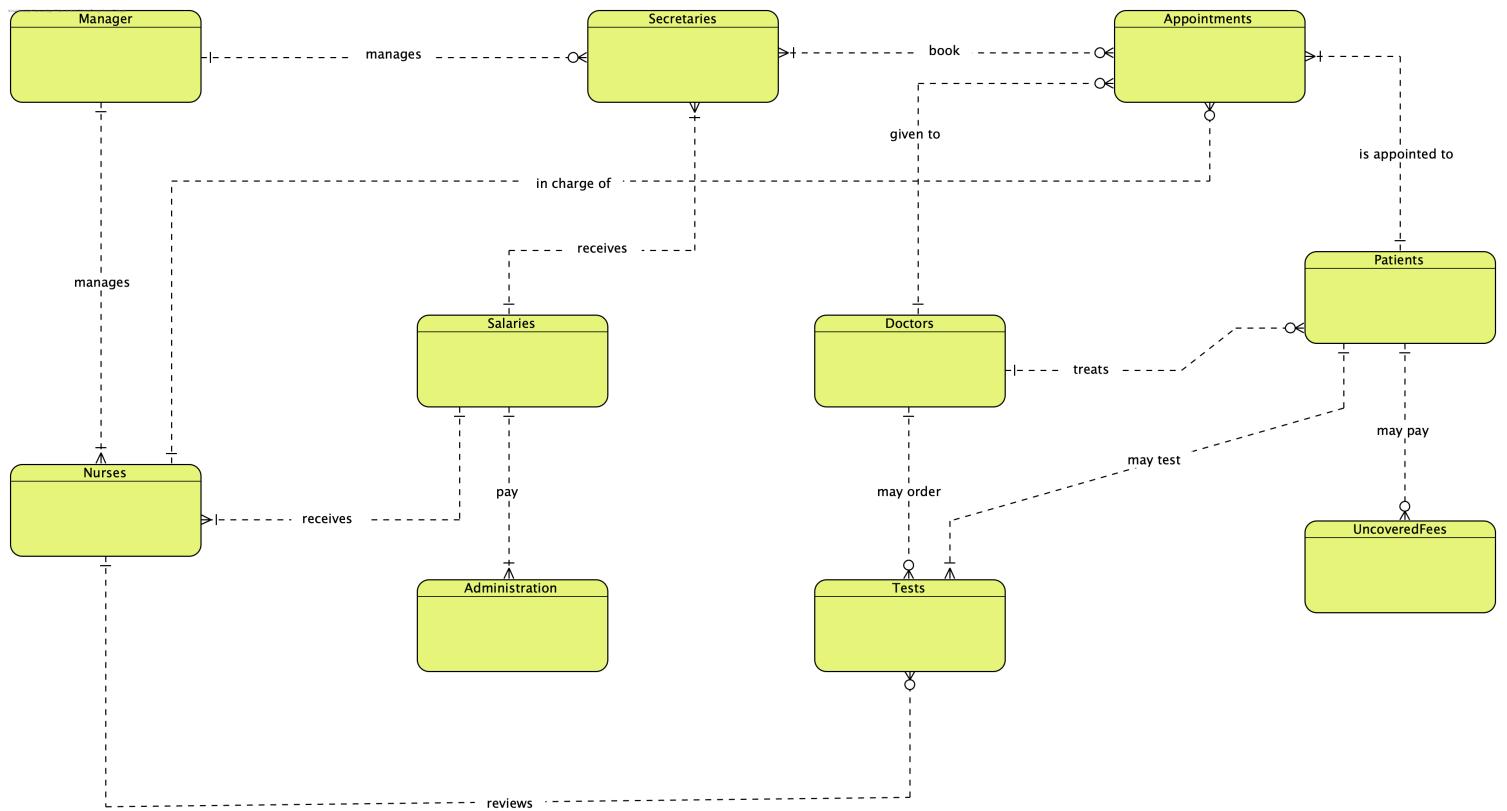
Question 10



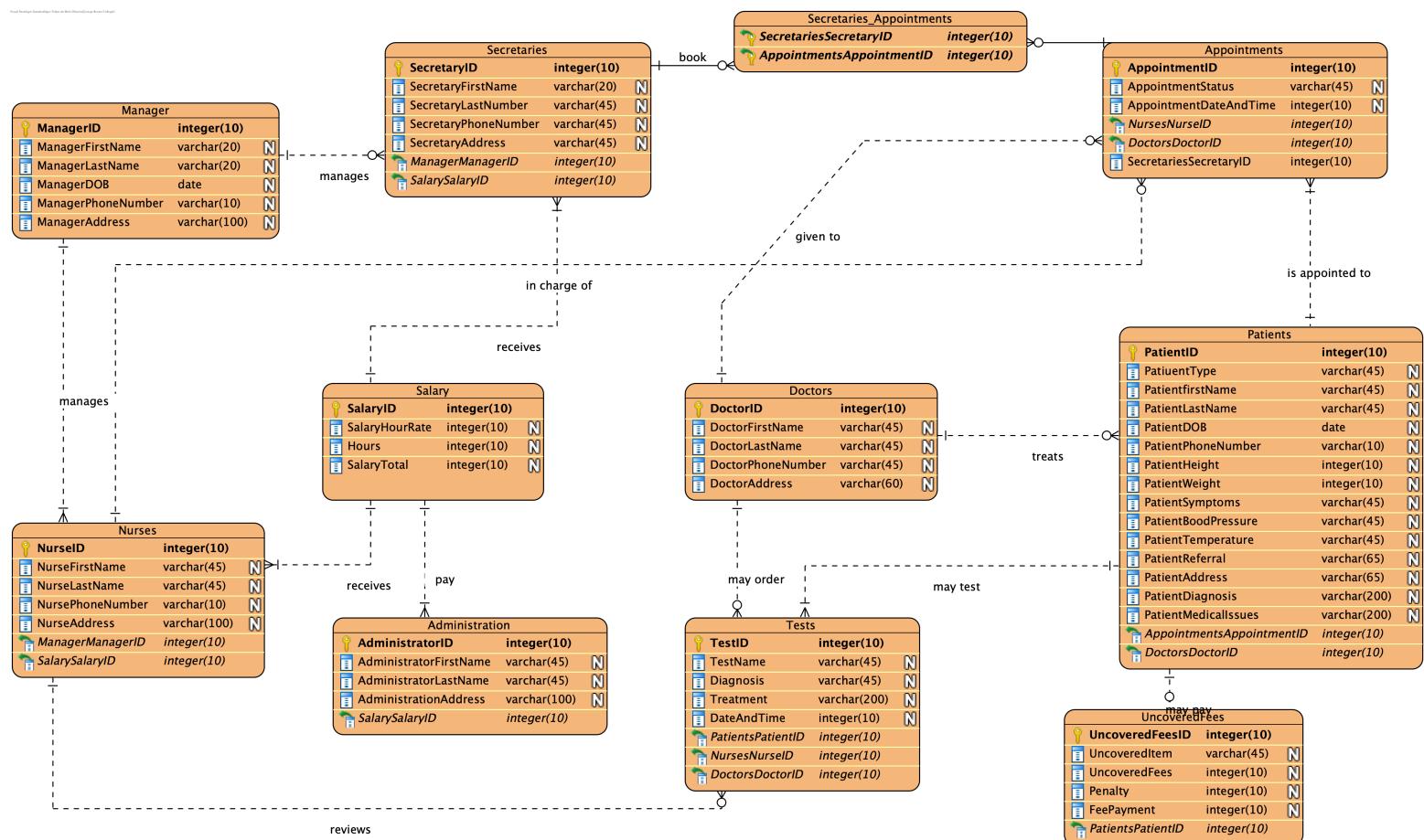
Question 11



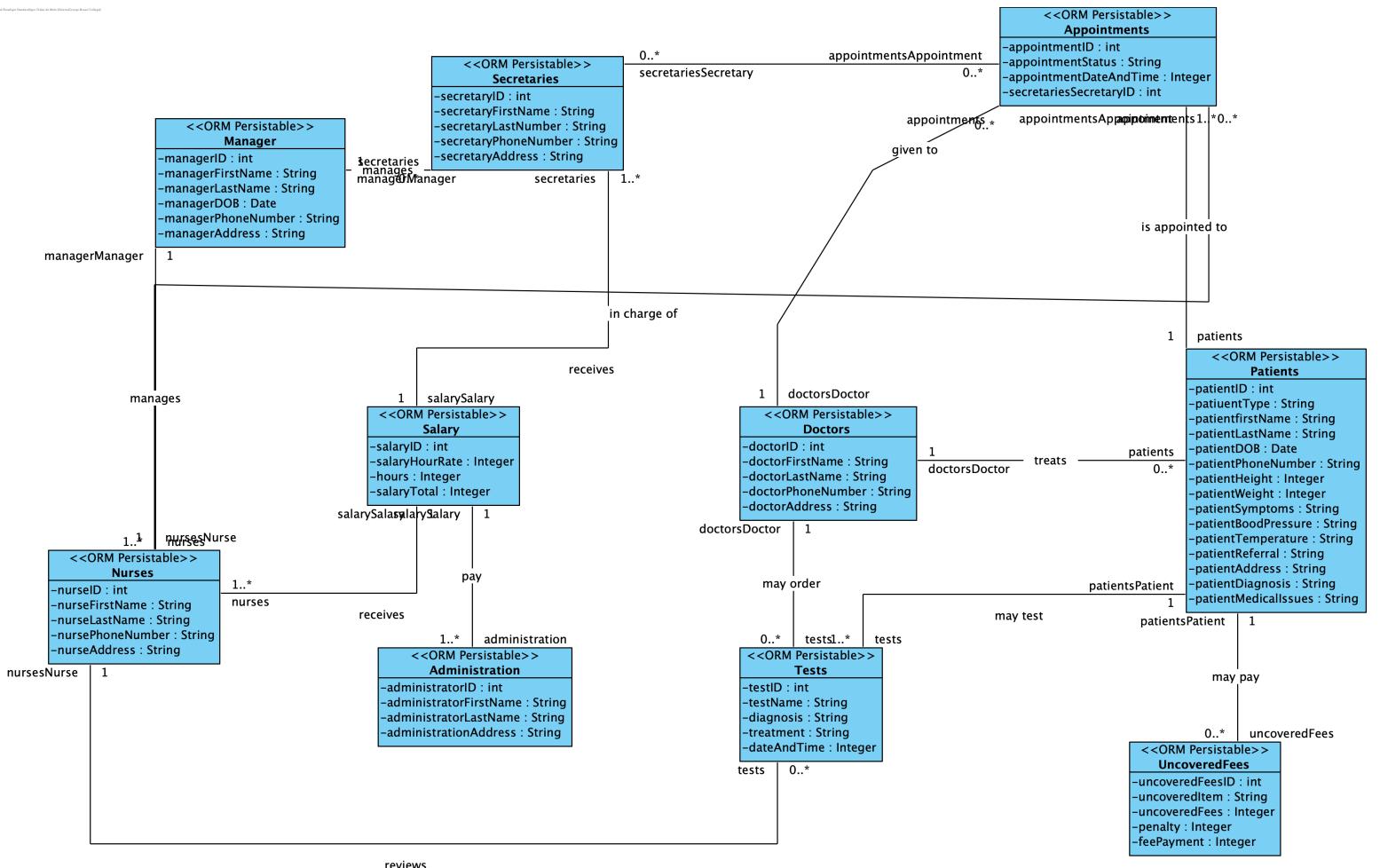
Question 12



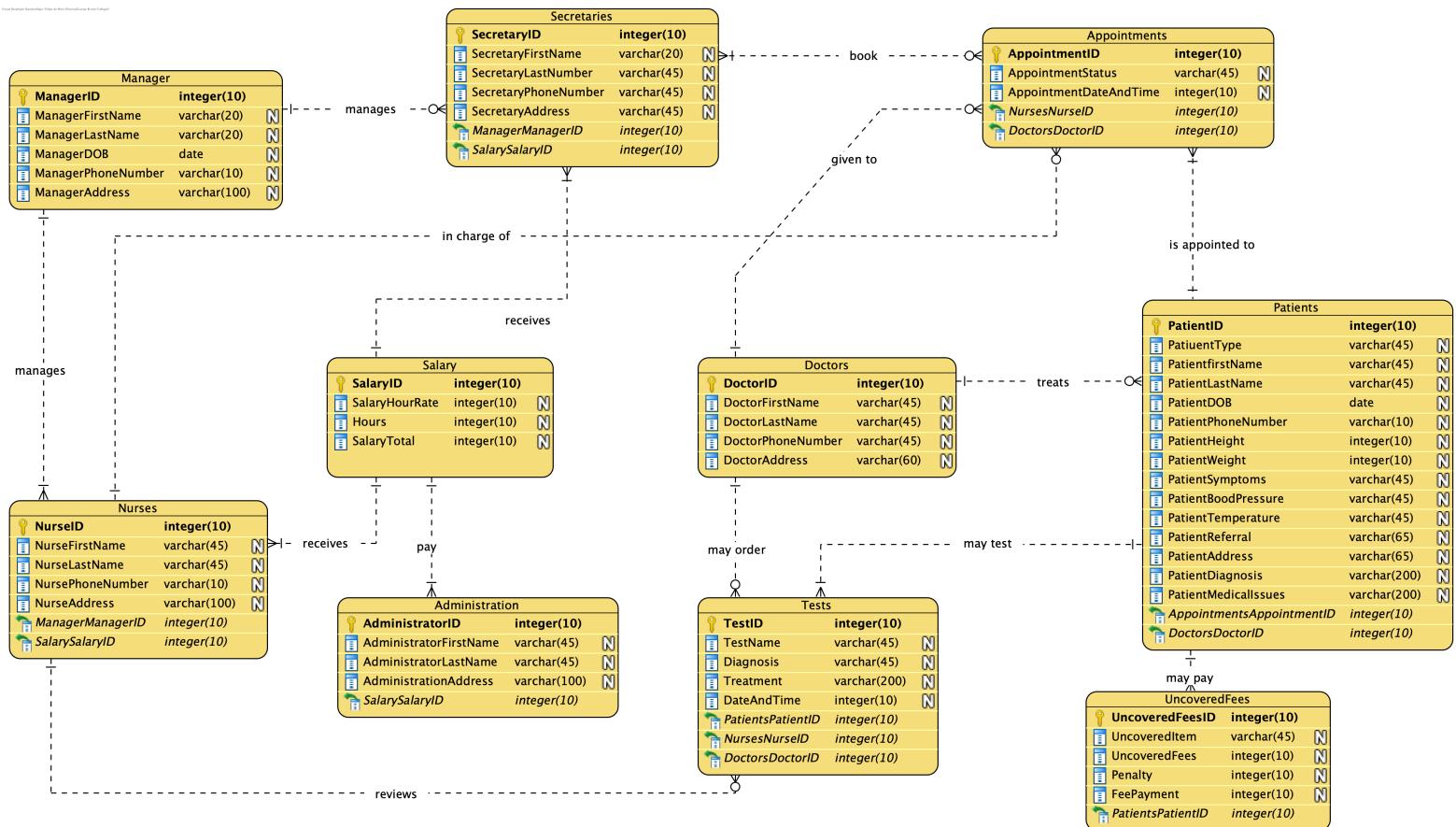
Question 13



Question 14



Logical



Question 15

Visual Paradigm Standard (Valunchanu|George Brown College)

New Appointment | ABC Clinic

http://www.abc-clinic.ca/patient_app_main.php

Appointments Medical Reports My Profile My Payments

New Appointment Form

Preferred Date

October 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Preferred Physician: Dr.Peter Parker

Preferred Timeslot: 14:01-15:00

Preferred Confirmation: Email

Please input your symptoms or problems here.

Save Submit Clear

Please note that you are able to change your appointment up to 24 hours without penalty before purposed timeslot

Emergency Service Form | ABC Clinic

<http://www.abc-clinic.ca/emergency.php>



Emergency Service Form

Are you a permanent patient at ABC CLinic?

Lastname	<input type="text" value="Smith"/>	Firstname	<input type="text" value="Maria"/>
Blood Type	<input type="text" value="AB"/>	Allergies	<input type="text" value="-"/>
Pain Level	<input type="button" value="9 - Very Unbearable ▾"/>	Bleed Level	<input type="button" value="5 - Medium ▾"/>

Please input your symptoms or problems here.

Please note that our staffs will recheck your symptoms to adjust your wait time

Manage Staffs | ABC Clinic

http://www.abc-clinic.ca/manage_staffs.php



Staff Schedule Report

Day	Time											
	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	
5 DEC 2022 Mon												
6 DEC 2022 Tue												
7 DEC 2022 Wed												
8 DEC 2022 Thu	OFF											
9 DEC 2022 Fri												
10 DEC 2022 Sat												

Total Hours: 33 Hourly Wage: \$25.50 Weekly Pay: \$841.50

Visit History | ABC Clinic

http://www.abc-clinic.ca/visit_history.php

Appointments Medical Reports My Profile My Payments

 ABC FAMILY CLINIC

Visit History Form

Patient Name: John Doe DOB: Dec 18, 1996

Visit ID	Date	Doctors	Results
1	Jan 02, 2018	Jane	High blood pressure*
2	Mar 18, 2019	Smith	Normal*
3	July 01, 2020	Jane	Normal*

*Please click to see the details.

Visual Paradigm Standard (Vatsavachan) George Brown College II

Patient Payment Form | ABC Clinic

http://www.abc-clinic.ca/admin_payment.php

Dashboard Registration Payment Upload / Download

 ABC FAMILY CLINIC

Patient Payment Form

BookingID	<input type="text" value="120522 - 100001"/>	PatientID	<input type="text" value="401234"/>
Lastname	<input type="text" value="Oliveira"/>	Firstname	<input type="text" value="Felipe"/>

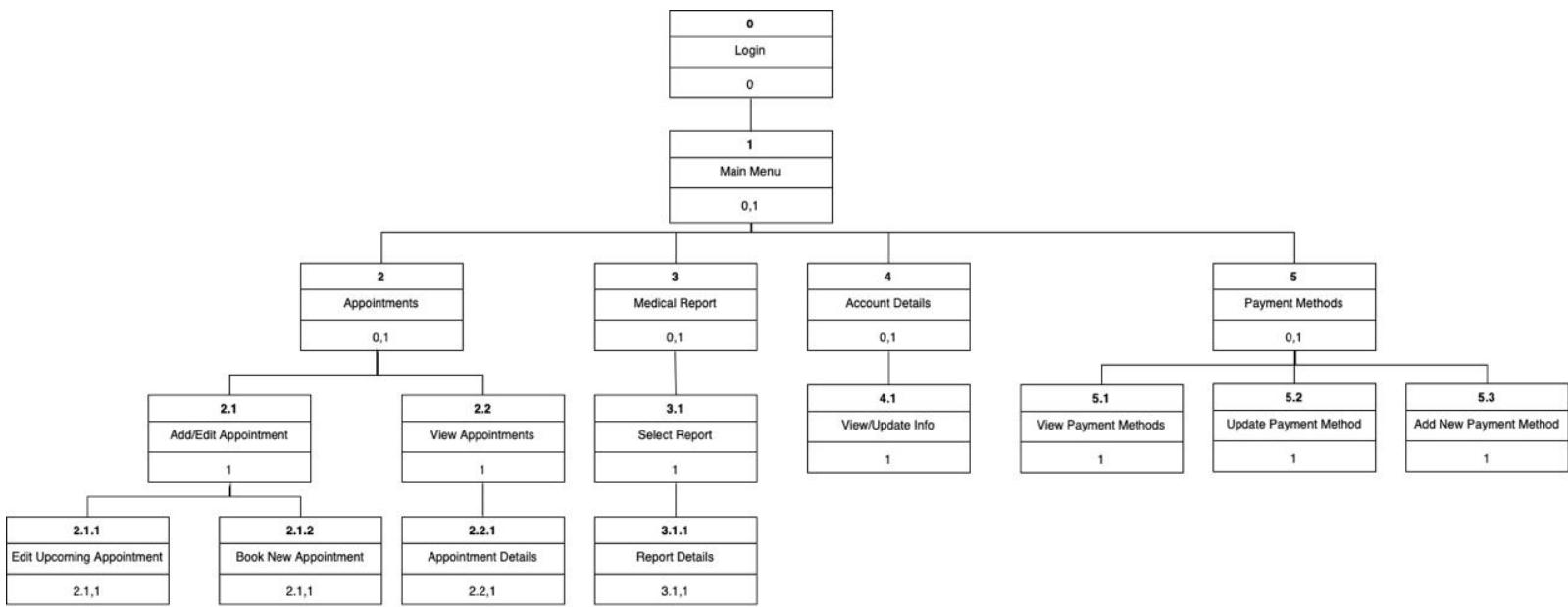
Treatments / Items	Price
Diagnosis - Dr. Peter Parker	\$200.00
Medical Tools	\$100.00
Medical Chocolate	\$50.00
+ Add Treatments / Items	
Total	\$350.00

[Add Payment Method](#)

Total amount covered: \$300.00 Total amount due: \$50.00

[Save](#) [Submit](#) [Clear](#)

Question 16



Question 17

ABC clinic

Test Strategy

Test Type and Tests Performed

Unit **testing** will be conducted by our team members specifically each module of the program will be tested to figure out any possible errors. Then team members will combine modules and implement the integration testing. The purpose of the integration testing is checking all modules in a sequence before integrating to the entire system and finally test out to make sure that the entire system works properly.

Recovery • Unplug main server to test power backup system

- Switch off main server to test the automatic switching to backup server

Security • Try to purchase without being a customer

- Try to examine server directory files both within the PVF domain and when connecting from an outside Internet service provider

Stress • Have multiple users simultaneously establish accounts, process purchases, add to shopping cart, remove from shopping cart, and so on

Performance • Examine response time using different connection speeds, processors, memory, browsers, and other system configurations

- Examine response time when backing up server data

