FINGERPRINT VOTING SYSTEM

SOFTWARE ENGINEERING COURSE

2022

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Functional Requirements

1- Manage Admins

Function	Its Requirements
1. Admin Register	System must allow admins to register in the system using their information:
1. Aumin Negister	Name
	• Email
	ID Password
2. Advaire Lagrice	
2. Admin Log-in	System should allow admins to "login" to the system and manage it using their Email & Password
3. Accept Candidate	System must allow admins to "add a candidate" to the system.
3. Accept candidate	System must allow damins to add a candidate to the system.
	- The candidate added by only admins .
	- Any number of candidates can be added.
	- Admin will take only the Candidate full name and photo.
	- The admin will take from candidate the election id in which he will nominate.
4. Accept Voters	System will allow the user to register by the admins.
m necept voters	System will allow the aser to register by the daminist
	- The user will send his identity proof to the admins.
	- Admins will register the user's name based on verifying his identity proof and
	system will create an id & password for user to login using them.
5. New Election	System must allow admins to create a new election.
	- Admins will create a new election with:
	Election's Name.
	Election's Id.
	Election's End Date.
6. Announce Election for	System must allow admins to announce an existed election for candidates to
Candidates	nominate.
	- Admins will announce an election that has been created before to allow candidates
	to nominate in this election.
	- It's important to know that this period is limited for only 10 days and after that
	nomination process must be ended.
7. Announce Election for	System must allow admins to announce an existed election for candidates to
Voters	nominate.
	- Admins will announce an election that has been created before to allow users
	(voter) to vote in this created election.
	- It's important to know that this period is limited for only 5 days and after that voting
	process must be ended.
8. Announce Result	System must allow admins to announce the result of an election after its completion
	using its id.
	- Admins can announce the result of an election after its completion with these
	details:
	✓ All candidates who are nominated in this election.
	✓ Total number of votes that have been submitted.
	✓ Total number of right and correct votes that have been submitted.
	✓ Total number of incorrect votes that have been submitted.
	✓ The candidate who has won in this specific election with the total numbers of
	votes that belongs to this candidate.
9. Log Out	System must allow the admins to log out from the system and end up their session.
	Functional Requirements of Manage Admins

2- Manage Voters

Function	Its Requirements
1. Register	System will allow the user to register to vote.
	- The user will send his identity proof to the admins.
	- Admins will register the user's name based on verifying his identity proof.
	- User will receive a message with id & password to use them for logging in.
2. User Login	System must allow the user to "Login" to vote.
	- User will login to the system using the id & password which he has received in a message.

3. Show Candidates	System should allow the users to see the candidates to choose one of them
	- Users will see only the candidates of the election that they want to vote in.
4. User Vote	System must allow the user to "vote" to one candidate.
"Fingerprint"	
	- User will vote to only one candidate, for only one time, in only one election and
	using his fingerprint.
	- The system will not allow the user to vote a second time.
5. User Vote "Eye Print"	System must allow users to vote using another way using their Eye Print.
	- User will vote to only one candidate, for only one time, in only one election and
	using his eye print.
	- The system will not allow the user to vote a second time.
6. Vote Virtually	Voter can vote from any part of the world through webapp.
7. Vote Anonymously	Data of the voter will be safe in database.
	- No one will be able to reach the voter's data.
8. Change Vote	System should allow the voters to change their voting to another candidate.
	- User can only change his voting only one time and choose another candidate who is
	different from the candidate who the user has chosen the first time.
4. User Log Out	System must allow the users to log out from the system and end up their session.
·	

Functional Requirements of Manage Voters

3- Manage Candidates

Function	Its Requirements
1. Candidate Register	System must allow Candidates to register in the system using their information:
	Name
	Email
	• Password
3.1.3.2 Candidate Log-in	System must allow the candidates to log in the system using their Email & Password .
3. Nominate	System must allow candidates to "nominate" to a specific election.
	 The candidate will nominate to a specific election. The candidate will nominate by sending his name & photo to the admin. The candidate will be accepted by only the admins. The admin will take from candidate the election id in which he will nominate.
4. Cancel Nomination	System must allow candidates to "cancel" their nomination to a specific election.
	- The Candidate who has canceled his nomination cannot be able to nominate again in this election which he has went out.
5. Candidate Log-out	System must allow the candidates to log out from the system and end up their session.

Functional Requirements of Manage Candidates

4- Manage Elections

Function	Its Requirements
1. New Election	System must allow admins to create a new election.
	- Admins will create a new election with:
	 Election's Name.
	Election's Id.
	Election's End Date.
2. Copy to User	System must send each voter who has successfully voted an email to prove they have voted.
	- Email must mention this information:
	Election Id
	 The candidate who the user vote.
	 Date of his voting and Time
3. Elections History	System must allow admins & users to see the completed and previous elections.
	- Admins & users can see previous elections including:
	✓ All candidates who are nominated in this specific election.
	✓ Total number of right and correct votes.
	✓ Total number of incorrect votes.
	✓ The candidate who has won in this specific election with the total numbers of votes that belongs to this candidate.
	✓ The date of this election.

4. Generate Statistics	System should generate a voting statistic at the end of each election.
	- Statistics must only be available after the end of the election.
5. Compare Election	System should have this feature: Comparing among the elections that they are ended
Results	up and represent each election information as we have mentioned in function 3.1.4.3

Functional Requirements of Manage Elections

Non-Functional Requirements



1.	User should have opportunity to choose language they want to use
2.	The system must respond the business operation in less than 3 seconds for user (admin).
3.	The system should response the operation messages to the users after solving the complaint.

Non-Functional Requirements of Performance



1.	The system must handle safe login and logout through session.
2.	The web application must be secure.
3.	It must be protected to avoid any data breach.
4.	Reveal who registered and who did not but only available for system employees
	not anyone else.
5.	Votes shouldn't know it result of election before election revealing result date
6.	The system must check if user is in the country database and allowed to vote or
	insider and cannot vote.
7.	Website must check first if the voter is robot or not and cannot be an attacker.
8.	System votes cannot be modified.

Non-Functional Requirements of Safety and Security



1.	Every error in the system must be handled and prompt the user.
2.	Mean time of failure does not exceed 3 seconds and 20-time breakdown at a year
3.	The system must be available at all events related to voting.

Non-Functional Requirements of Reliability



1.	The system must open to all computers and browsers.
2.	The system should have user-friendly interface.
3.	Using different languages.
4.	Utilize for illiterate people.
5.	Provide tools for handicapped.
6.	Web application should be eased to use.

Non-Functional Requirements of Usability



1.	The system must be available 24/7.
2.	It must work continuously at any time during the 24 hours.

Non-Functional Requirements of Availability

System Use Case Diagram

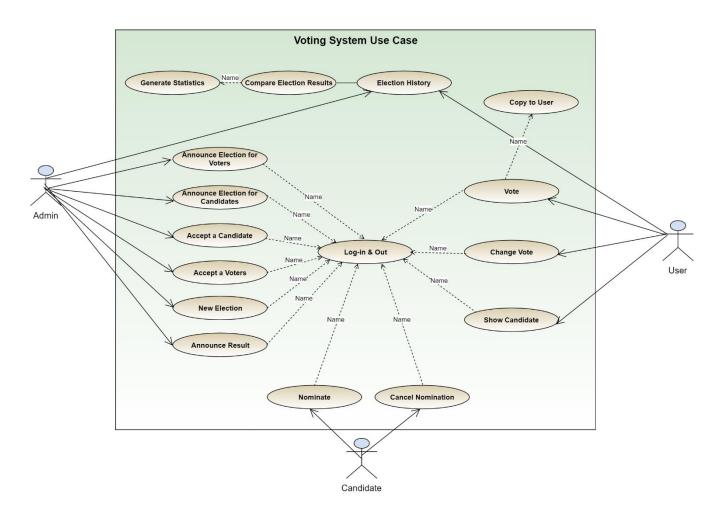
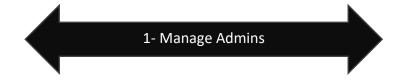


Figure 1: System Use Case Diagram

Detailed Use Case





Use Case ID	#01
Use Case Name	Admin Register
Actors	Admins
Description	Register Admins to the system
Pre-conditions	The Admin Has to enter their: - Id
	- Name - Email
	- Password
Post-conditions	If the case completed Successfully:
	- Admin can access the system and do their jobs.
Main Scenario	1. Open Register page.
	2. Enter the Admin id, name, Email, and password.
	3. Click on Register Button.
Alternative	If any of the admins enter wrong:
(Unsuccessful scenario)	- id: if the id was entered wrong more than 3 times the account will be closed after being prompted to renter it.
	- Name: prompt the admin to renter it.
	- Email and password: will be prompted "invalid, please renter it ", after 2 trials account will be closed.



Use Case ID	#02
Use Case Name	Admin Log-in
Actors	Admins
Description	Admins should be able to log-in to the system.
Pre-conditions	Admins should enter their:

	- Email
	- Password
Post-conditions	If the case completed Successfully:
	- Admin can log-in to the system.
Main Scenario	1. Open Log-in page.
	2. Enter Admin's Email and password.
	3. Click on Log-in Button.
Alternative	If the Admin entered wrong Email or password, then they will be prompted "invalid Email or
(Unsuccessful	password, try again ".
scenario)	If they tried to renter their Email or password more than three times system will be closed.



Use Case ID	#03
Use Case Name	Accept a Candidate
Actors	Admins, Candidates
Description	Add a candidate to the system.
Pre-conditions	Admins should allow candidates to enter:
	- Their Name and photo
	- Election if they want to nominate in.
Post-conditions	If the case completed Successfully:
	- Candidate will be nominated to the system and ready to be voted.
Main Scenario	1. Admin will log-in to the system.
	2. Candidate register to the system by entering their full name, photo, and election id.
	3. Click register button.
Alternative	If election id isn't in the system, candidate will be prompted to renter.
(Unsuccessful	
Scenario)	
Special Requirements	Any number of candidates is valid in the system.
	Candidates must be added by admins only.



Use Case ID	#04
Use Case Name	Accept a Voters
Actors	Admins, Voters.
Description	Accept a voter to the system.
Pre-conditions	-Admin should register the voter.
	-Voter should send their identity proof to the admins.
Post-conditions	If the case completed Successfully:
	-Voter will be accepted in the system and ready to vote.
Main Scenario	1.Voter will send their identity proof to admins.
	2.Admins will register the voter's name by identity proof.
	3. System will create an id and password for this voter to log-in to the system using them.
Alternative	If the Voter identity proof isn't valid in the database will be prompted to renter and if still
(Unsuccessful	invalid after 2 trials system will wait 24 hours to reaccept information from this voter.
Scenario)	
Special Requirements	Voter must be available in the country database and a citizen in it.



Use Case ID	#05
Use Case Name	New Election
Actors	Admins
Description	System must allow admins to create a new election.
Pre-conditions	Admins will create a new election with:
	- Election's NameElection's Id.
	- Election's End Date.
Post-conditions	If the case completed Successfully:
	- An election will be added to the system.
Main Scenario	1. Admin will register to the system.
	2. Admin will enter Election's name, id, and end date.
	3. Election will be added to the system.
Alternative	None
(Unsuccessful	
Scenario)	
Special Requirements	None



Use Case Name	Announce Election for Candidates
Actors	Admin, Candidate.
Description	Admin will announce the result to candidates.
Pre-conditions	- Admins must announce an election that has been created before to allow candidates to nominate in this election.
	- It's important to announce that this period is limited for only 10 days and after that nomination process must be ended.
Post-conditions	If the case completed Successfully: - An election will be announced to candidates.
Main Scenario	 Admin announce the result for candidates. Admin announce the limited time for the process.
Alternative	None
Special Requirements	None



Use Case ID	#07
Use Case Name	Announce Election for Voters
Actors	Admin, voter.
Description	Admins will announce elections to voters.
Pre-conditions	- Admins will announce an election that has been created before to allow users (voter) to vote in this created election.
	- It's important to know that this period is limited for only 5 days and after that voting process must be ended.
Post-conditions	If the case completed Successfully: - An election will be announced to voters.
Main Scenario	 Admin announce the result for voters. Admin announce the limited time for the process.
Alternative	None
Special Requirements	None



Use Case ID	#08
Use Case Name	Announce Result
Actors	Admins
Description	Announce the result of elections.
Pre-conditions	Admins can announce the result of an election after its completion with these details:
	- All candidates who are nominated in this election.
	- Total number of votes that have been submitted.
	- Total number of right and correct votes that have been submitted.
	- Total number of incorrect votes that have been submitted.
	The candidate who has won in this specific election with the total numbers of votes that
	belongs to this candidate.
Post-conditions	If the case completed Successfully:
	- The admin will announce election's result.
Main Scenario	1. Any of the users will enter the election page.
	2. Enter election's id.
	3. Click election result.
	4. Election result will appear.
Alternatives	If election's id is wrong:
	The user will be prompted to renter it.
Special Requirements	None



Use Case ID	#09
Use Case Name	Log Out
Actors	Admins
Description	System must allow admins to log-out.
Pre-conditions	None
Post-conditions	If the case completed Successfully:
	- The admin will log-out.
Main Scenario	1. Enter Log-out page.
	2. Press Log-out Button
Alternative	None
Special Requirements	None



Use Case ID	#10
Use Case Name	Register
Actors	voter
Description	The voter enters his identity proof to get an id and password to be able to login to system
	and vote
Trigger	Voter wants to get id and password
Pre-conditions	Voter has an identity proof to register to system and didn't register before
Post-conditions	Voter has an id and password
Error Situations –	- Voter had register on the system-system will give an error message
System	- voters enter his identity proof wrong- system will give an error message
State in the Event of an Error:	
Standard Process	- voters enter his identity proof
(Main	- system checks the identity proof
Success Scenario):	- The identity proof is right
	- Admin add him to the system and give him an id
	and password
	- Voter has an id and password to login to the system
Includes	none
Alternative Processes	none
(Alternative	
Scenarios):	

Case 11

Use Case ID	#11
Use Case Name	User Login
Actors	Voter
Description	User now has an id and password and want to login to the system to vote in a election
Trigger	Voter requests to Login to the system
Pre-conditions	Voter had register in the system
Post-conditions	Voter login to system
Error Situations –	- Voter entered his id or his password wrong-system will give an error massage
System	
State in the Event of	
an Error:	
Standard Process	- Voters enter his id and password
(Main	- The system checks them
Success Scenario):	- Voter login successful
Includes	Check the form of the data and it's existed in the database
Alternative Processes	none
(Alternative	
Scenarios):	

Case 12

Use Case ID	#12
Use Case Name	Show Candidates
Actors	Voter
Description	The system will show to the voter all candidates who have nominated to the election which
	he has choose and the voter must choose one from them
Trigger	Voter requests to see the nominated candidates
Pre-conditions	voter must enter the id of the election to see the nominated candidates for this election
Post-conditions	Voter must choose one from them to give his vote
Error Situations –	Id of the election that the voter had entered is not exist – system will send an error message
System	
State in the Event of	
an Error:	
Standard Process	- Voter will enter the id of the election
(Main	- System show the nominated candidates of this election
Success Scenario):	- The voter must choose one from them
Includes	none
Alternative Processes	none
(Alternative	
Scenarios):	



Use Case ID	#13
Use Case Name	User Vote "Fingerprint"
Actors	voter
Description	Voter will choose only one candidate and vote to him only one time in only one election using his "fingerprint"
Trigger	User requests to vote to one candidate using his "fingerprint"
Pre-conditions	Voter sees all the nominated candidate of the election that he wants to vote in, and he shouldn't have voted before
Post-conditions	Voter gives his vote to a specific candidate
Error Situations – System State in the Event of an Error:	 Voters give his vote to a candidate more than on time – system will give an error message Voters choose two candidates to vote for – system will give an error message Voter had voted before in another election – system will give an error message
Standard Process (Main Success Scenario):	 Voter will enter the id of a specific election that he wants to vote in System will show all the nominated candidate of this election Voter will put his fingerprint System will check it Finger print is for some who fits the criteria Voter will choose a specific candidate to vote for Voters submit his request to give vote
Includes	none
Alternative Processes (Alternative Scenarios):	none



Use Case ID	#14
Use Case Name	User Vote "Eye Print"
Actors	voter
Description	Voter will choose only one candidate and vote to him only one time in only one election using his "Eye print"
Trigger	User requests to vote to one candidate using his "Eye print"
Pre-conditions	Voter sees all the nominated candidate of the election that he wants to vote in, and he shouldn't have voted before
Post-conditions	Voter gives his vote to a specific candidate
Error Situations – System State in the Event of an Error: Standard Process (Main Success Scenario):	 Voters give his vote to a candidate more than on time – system will give an error message Voters choose two candidates to vote for – system will give an error message Voter had voted before in another election – system will give an error message Voter will enter the id of a specific election that he wants to vote in System will show all the nominated candidate of this election Voter will put his fingerprint System will check it Eye print is for some who fits the criteria Voter will choose a specific candidate to vote for Voters submit his request to give vote
Includes	None
Alternative Processes (Alternative Scenarios):	none

Case 15

Use Case ID	#15
Use Case Name	Vote Virtually
Actors	Voter
Description	Voter can give his vote in the election from anywhere through a web app
Trigger	Voter requests to vote in the election from anywhere
Pre-conditions	none
Post-conditions	Voter can vote from anywhere
Error Situations –	none
System	
State in the Event of	
an Error:	
Standard Process	- Voter login to the system
(Main	- Voters see all the nominated candidate to the election
Success Scenario):	- Voter choose one on them and give him his vote
	- Voter votes in the election
Includes	none



Use Case ID	#16
Use Case Name	Vote Anonymously
Actors	System
Description	The system will not allow any one able to reach to the voter's data
Trigger	No one can see the voter's data
Pre-conditions	Voter enters his data on the system
Post-conditions	Voter's data is not available for any one
Error Situations –	None
System	
State in the Event of	
an Error:	
Standard Process	- Voter will enter his data on the system
(Main	- System get the data and put it in a save place no one can access it
Success Scenario):	See the data and parties in a care place in one can access in
Includes	None
Alternative Processes	None
(Alternative	
Scenarios):	

Case 17

Use Case ID	#17
Use Case Name	Change Vote
Actors	Voter
Description	Voter can change his vote only one time from a specific candidate to another candidate
Trigger	Voter requests to change his vote to another candidate
Pre-conditions	Voter has already vote before to a specific candidate
Post-conditions	Voter's vote has been changed
Error Situations –	- Voter hadn't voted before
System	- Voters change his vote to the same candidate who he has voted for
State in the Event of an Error:	- Changed his vote more the one time
Standard Process	- Voters change his vote and give it to another candidate
(Main	- System will check that is the first change time and he choose another candidate
Success Scenario):	- Vote has been changed
Includes	Voter had voted before
Alternative Processes (Alternative Scenarios):	none

Case 18

Use Case ID	#18
Use Case Name	Log Out
Actors	voter
Description	Voter wants to logout from the system
Trigger	voter requests to logout of the system
Pre-conditions	Voter has login to the system
Post-conditions	Voter is out of the system
Error Situations –	none
System	
State in the Event of	
an Error:	
Standard Process	- Voter logout from the system
(Main	
Success Scenario):	
Includes	none
Alternative Processes	none
(Alternative	
Scenarios):	



Use Case ID	#19
Use Case Name	Register Candidate
Actors	Candidate
Description	Registration of candidates in the system
Pre-conditions	None
Post-conditions	The system will contain the candidates name, email, and password
Exceptions	None
Includes	Candidate
Special Requirements	The email and password must be valid



Use Case ID	#20
Use Case Name	Log-in Candidate
Actors	Candidate
Description	System must allow the candidates to log in the system using their Email & Password .
Pre-conditions	The user is already registered
Post-conditions	He has an account on the site and is allowed to use it
Exceptions	If the email and password are entered incorrectly, it will not be allowed to use
Includes	Candidate
Special Requirements	The email and password must be valid



Use Case ID	#21
Use Case Name	Nominate
Actors	Candidate
Description	Candidates nominate for a specific election.
Pre-conditions	Candidate has already logged in
Post-conditions	The system will contain the candidate's photo, name, and election id to be nominated
Exceptions	None
Includes	Candidate
Special Requirements	None



Use Case ID	#22
Use Case Name	Cancel Nomination
Actors	Candidate
Description	Candidates can cancel their candidacy for certain elections.
Pre-conditions	The candidate must be nominated in this election before.
Post-conditions	The Candidate was canceled from the elections.
Exceptions	None
Includes	Candidate
Special Requirements	None



Use Case ID	#23
Use Case Name	Log-out Candidate
Actors	Candidate
Description	The candidate can logout from the system
Pre-conditions	The candidate has an account in the system
Post-conditions	The candidate does not have an account in the system
Includes	Candidate
Special Requirements	None

Use Case ID	#24
Use Case Name	New Election
Actors	Admins
Description	Admins will create a new election with:
	Election's Name.
	Election's Id.
	Election's End Date
Pre-conditions	None
Post-conditions	New elections are being created
Exceptions	None
Includes	Election
Special Requirements	Every election has an election id and end date



Use Case ID	#25	
Use Case Name	Copy to User	
Actors	System	
Description	System must send each voter who has successfully voted an email to prove they have	
	voted.	
Pre-conditions	Elections and voting have already taken place	
Post-conditions Knowing which candidate, the user voted for and the date and time of voting for		
	particular election based on the election identity.	
Exceptions	None	
Includes	Election	
Special Requirements	None	



Use Case ID	#26		
Use Case Name	Elections History		
Actors	admins & users		
Description	Election administrators and users can see all information about previous elections		
Pre-conditions	Elections and voting have already taken place		
Post-conditions	View all information about previous elections		
Exceptions	None		
Includes	Election		
Special Requirements	None		



Use Case ID	#27			
Use Case Name	Generate Statistics			
Actors	System			
Description	System should generate a voting statistic at the end of each election.			
Pre-conditions	Elections and voting have already taken place			
Post-conditions	t the result of the voting statistic at the end of each election.			
Exceptions	ne			
Includes	Election			
Special Requirements	Statistics must only be available after the end of the election.			



Use Case ID	#28			
Use Case Name	Compare Election Results			
Actors	System			
Description	The system should compare the elections that ended up and represent all the electoral			
	information			
Pre-conditions	The elections have taken place, the results and the statistics are appeared			
Post-conditions	We have a comprehensive comparison of all election results			
Exceptions	If there is only one candidate for the elections			

Sequence Diagrams

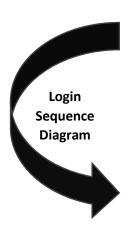
Sequence Diagrams

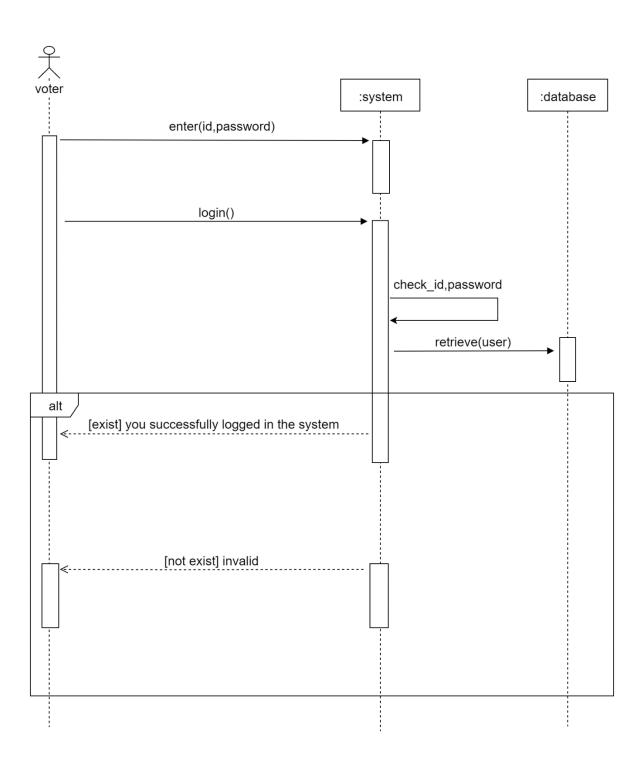
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- **❖** Vote Fingerprint
- Change Vote
- **❖** Nominate
- ❖ New Election
- Cancel Nomination
- Logout

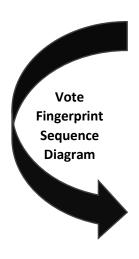
System Sequence Diagrams

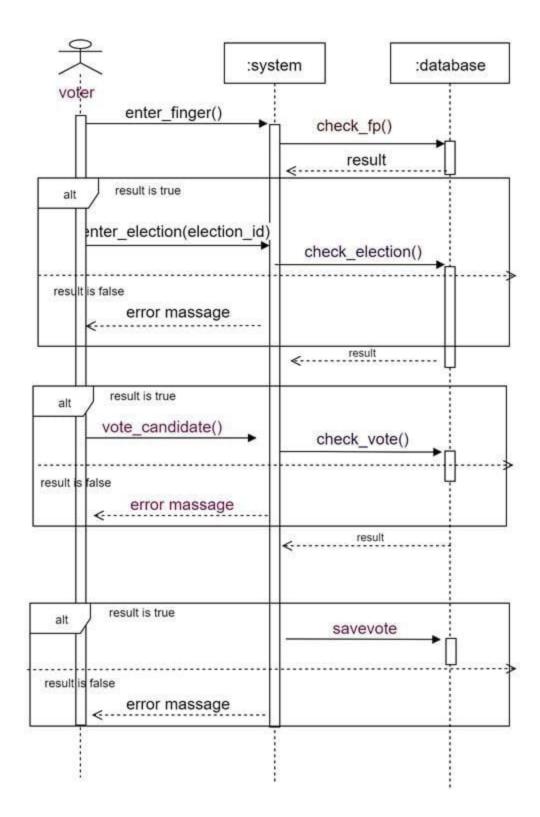
- **❖** Login
- ❖ Vote Fingerprint
- Change Vote
- Nominate
- New Election
- Cancel Nomination
- **❖** Logout

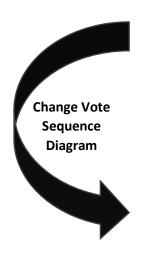
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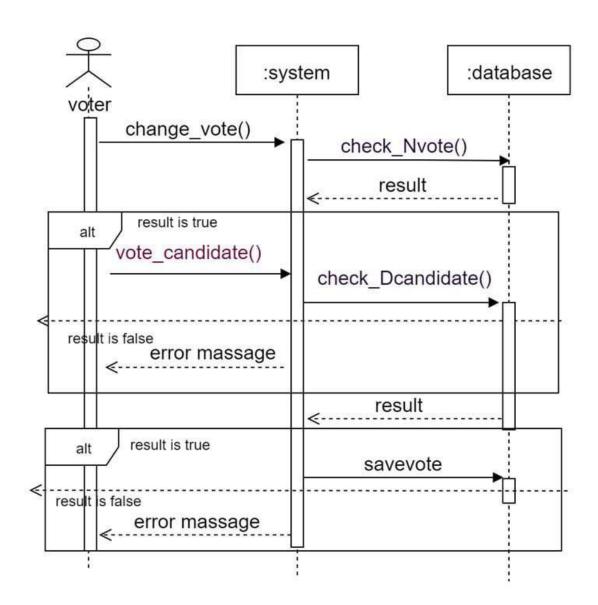




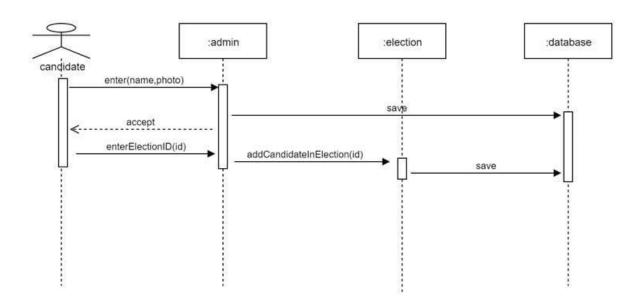


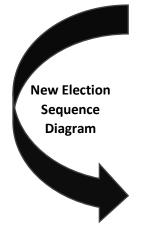


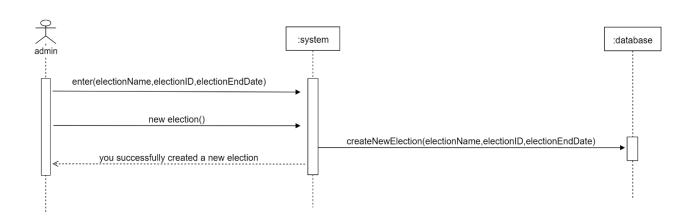


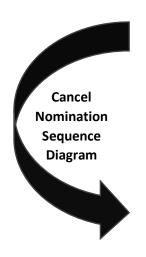


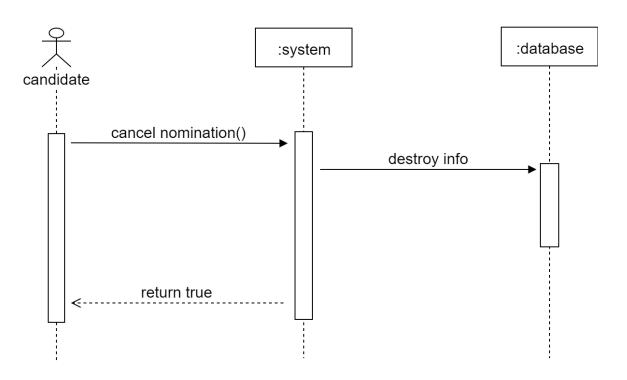


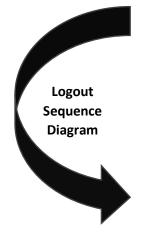


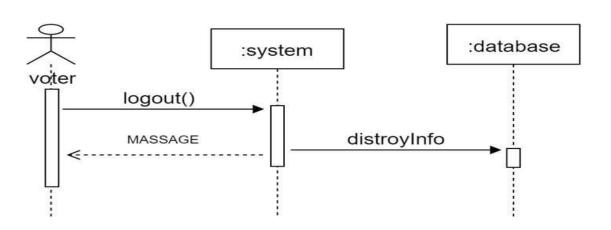




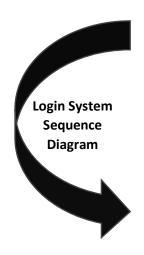


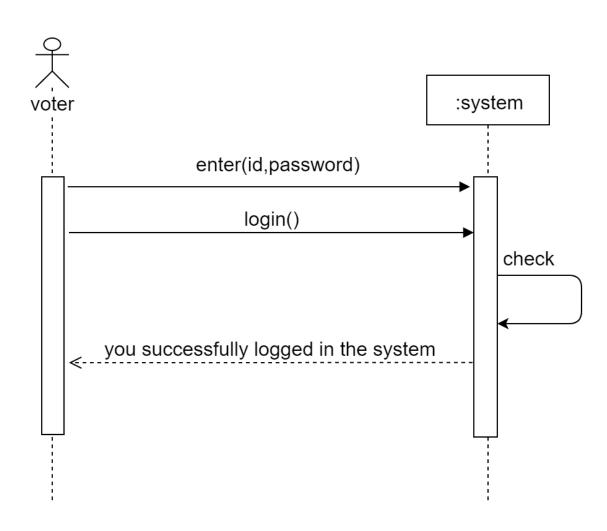




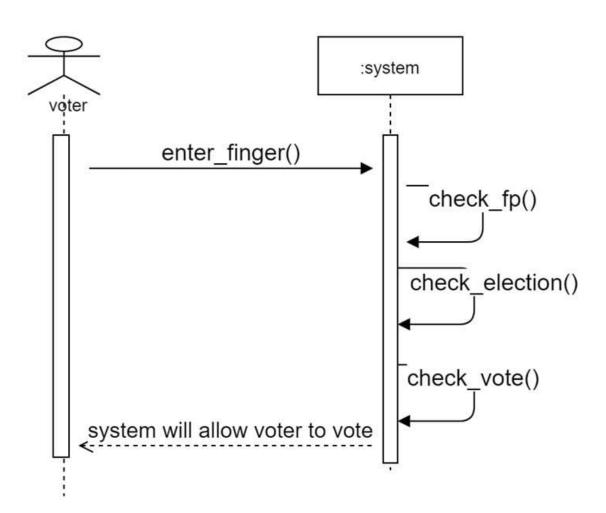


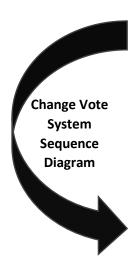
Sequence System Diagrams

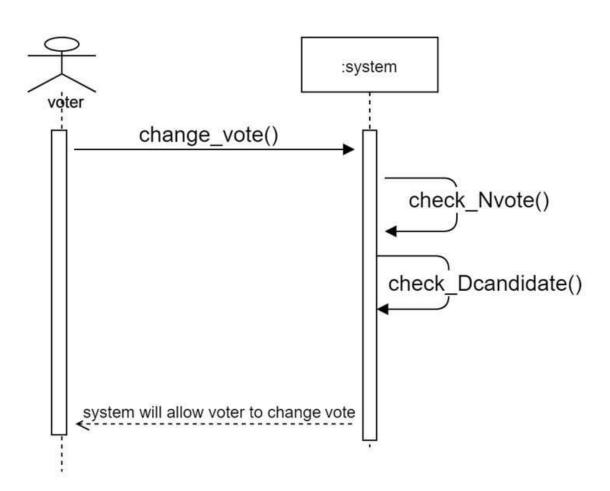


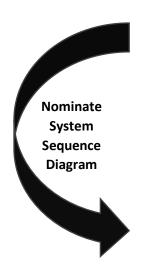


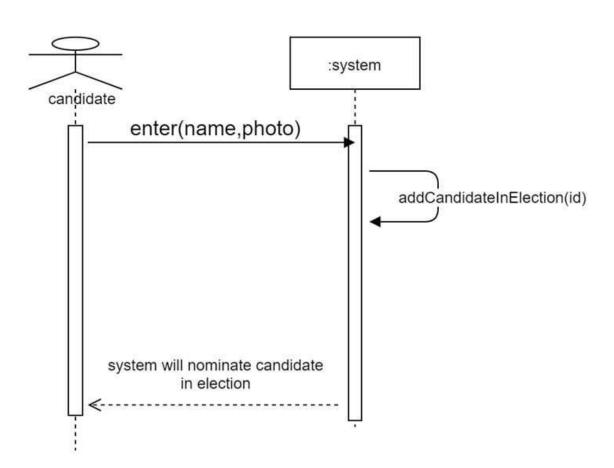


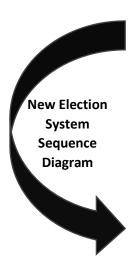


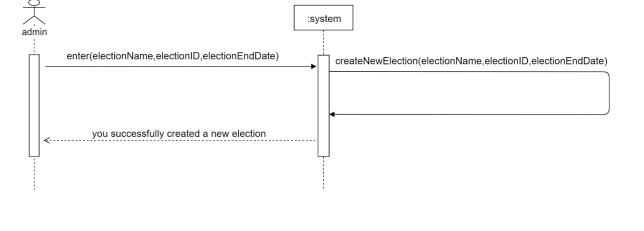




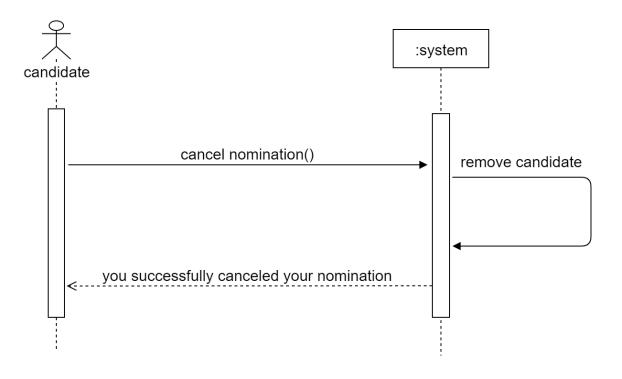


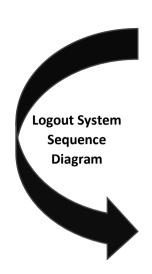


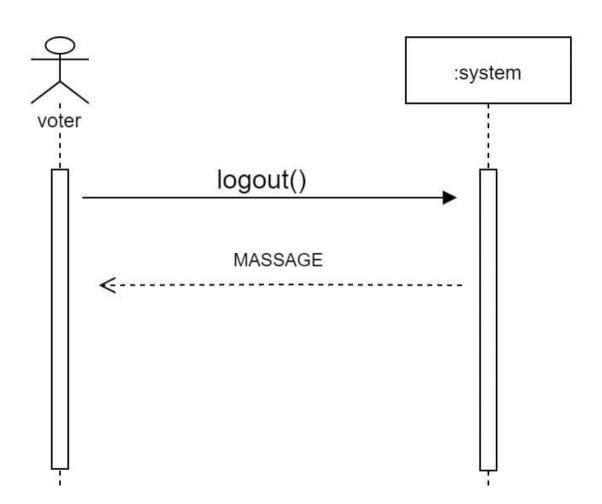




Cancel Nomination System Sequence Diagram







Activity Diagrams

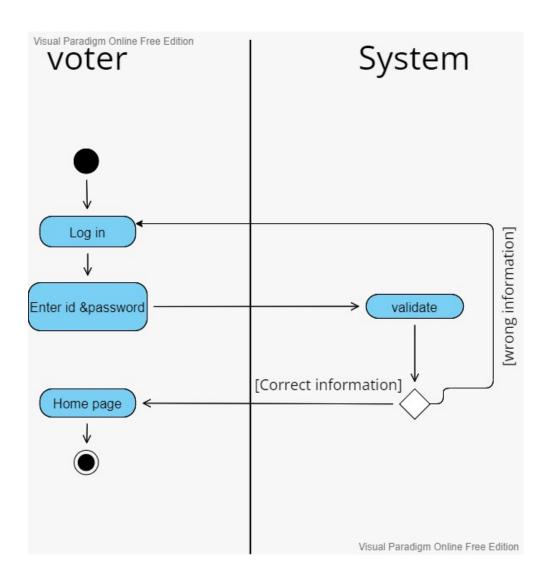
- Activity Diagrams for Functions
 - Login
 - Vote Fingerprint
 - Change Vote
 - Nominate
 - New Election
 - Cancel Nomination
 - Show Result

- Activity Diagrams for Actors
 - o Admin
 - Voter
 - Candidate

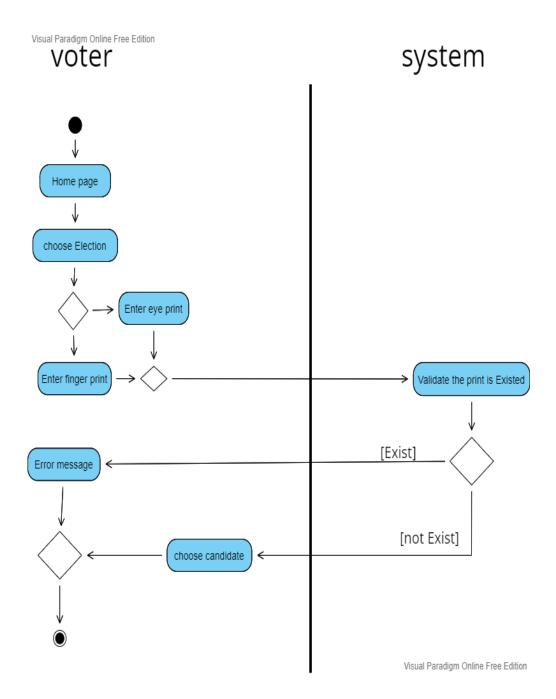
Activity Diagrams - Functions



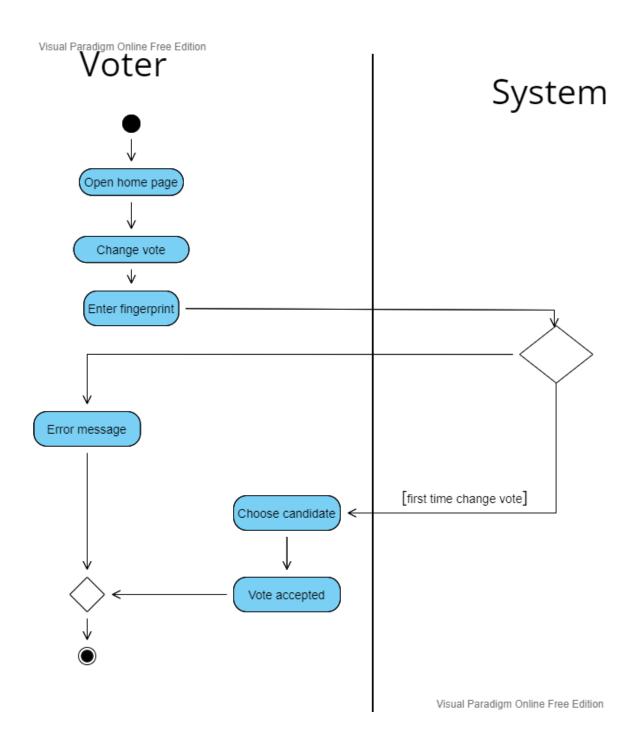








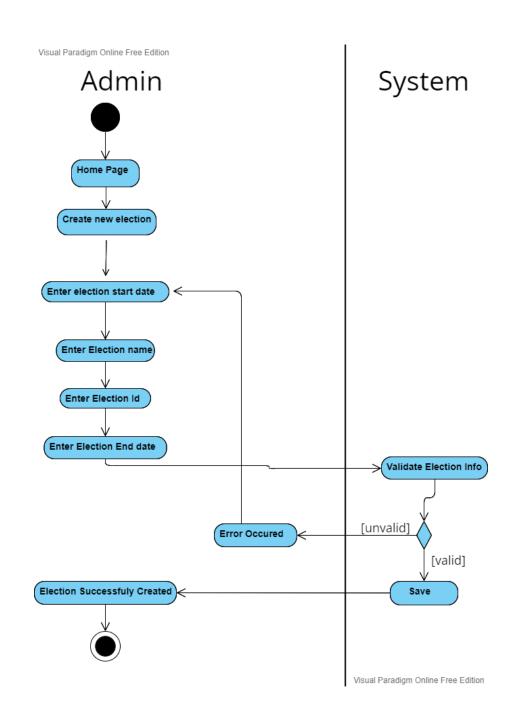




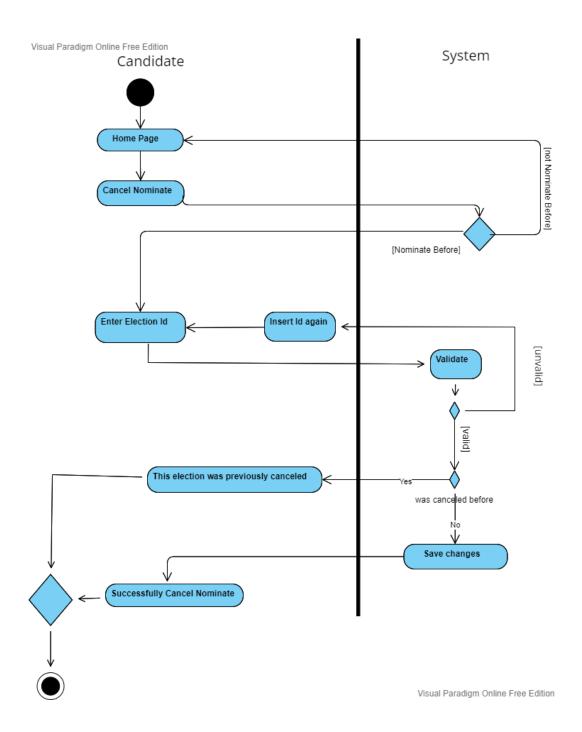


Visual Paradigm Online Free Edition System Candidate Home Page Nominate Enter election Id Validate Enter candidate name and photo [unvalid] [valid] Save changes Nominated Successfully Visual Paradigm Online Free Edition

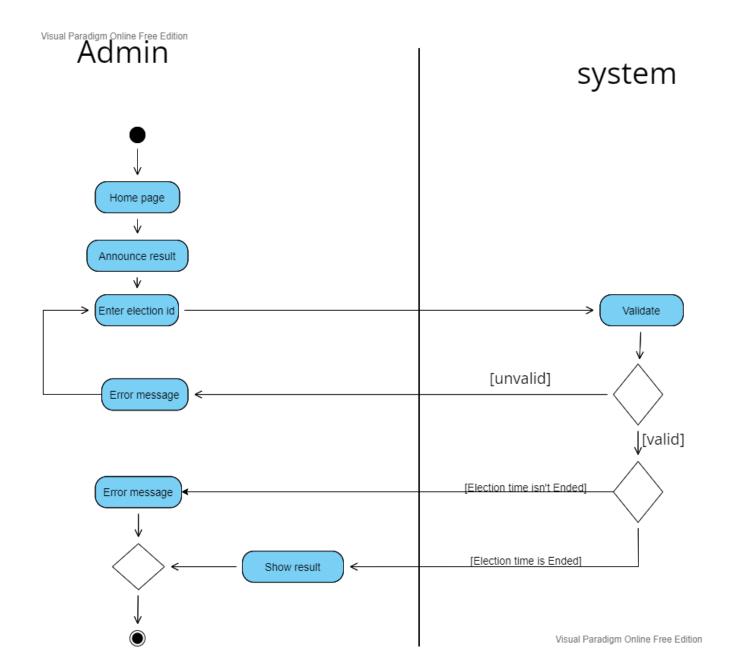






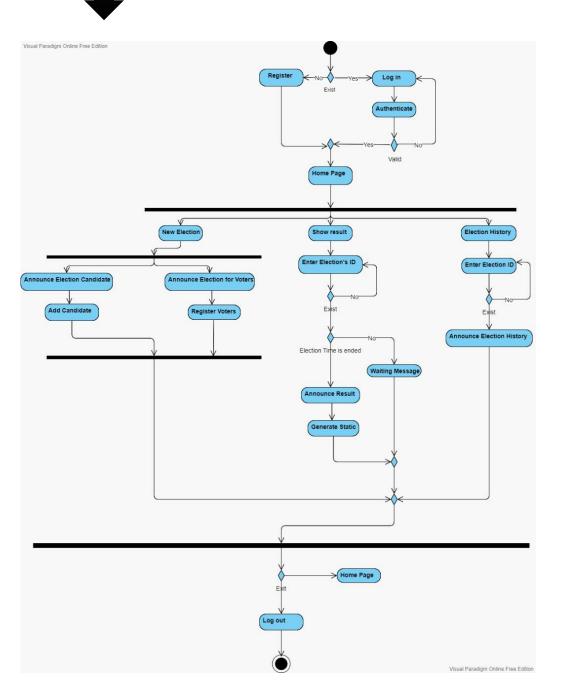


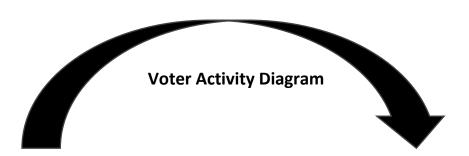


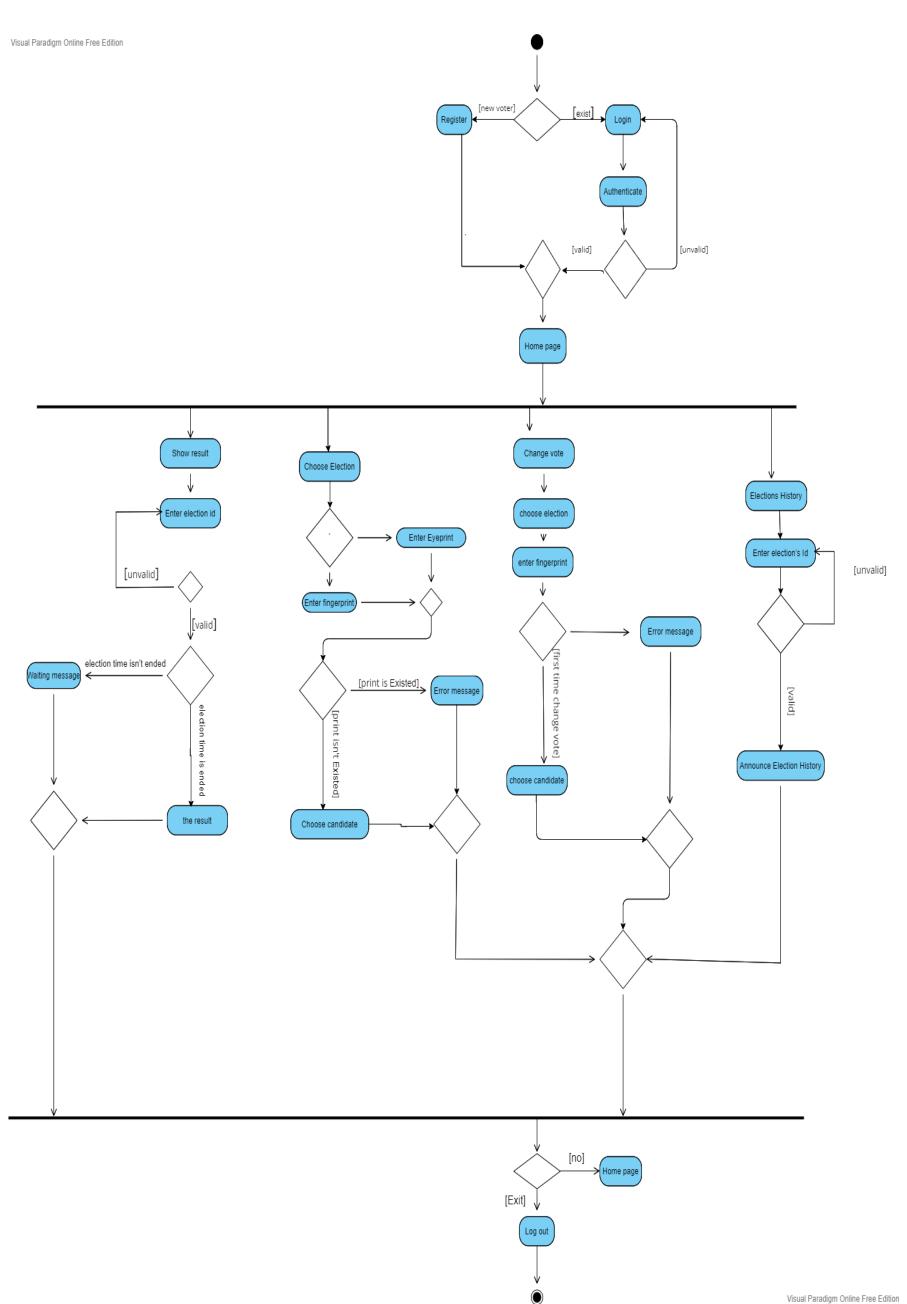


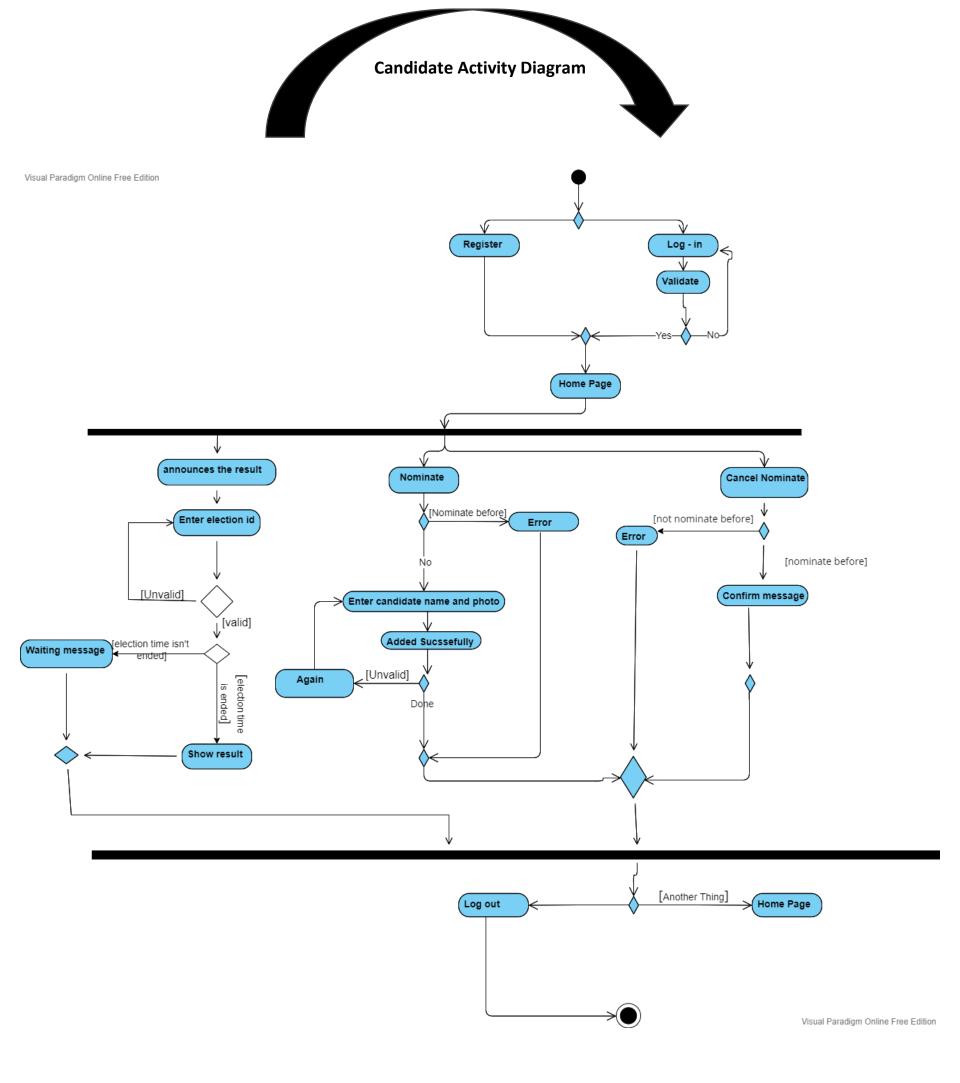
Activity Diagrams - Actors



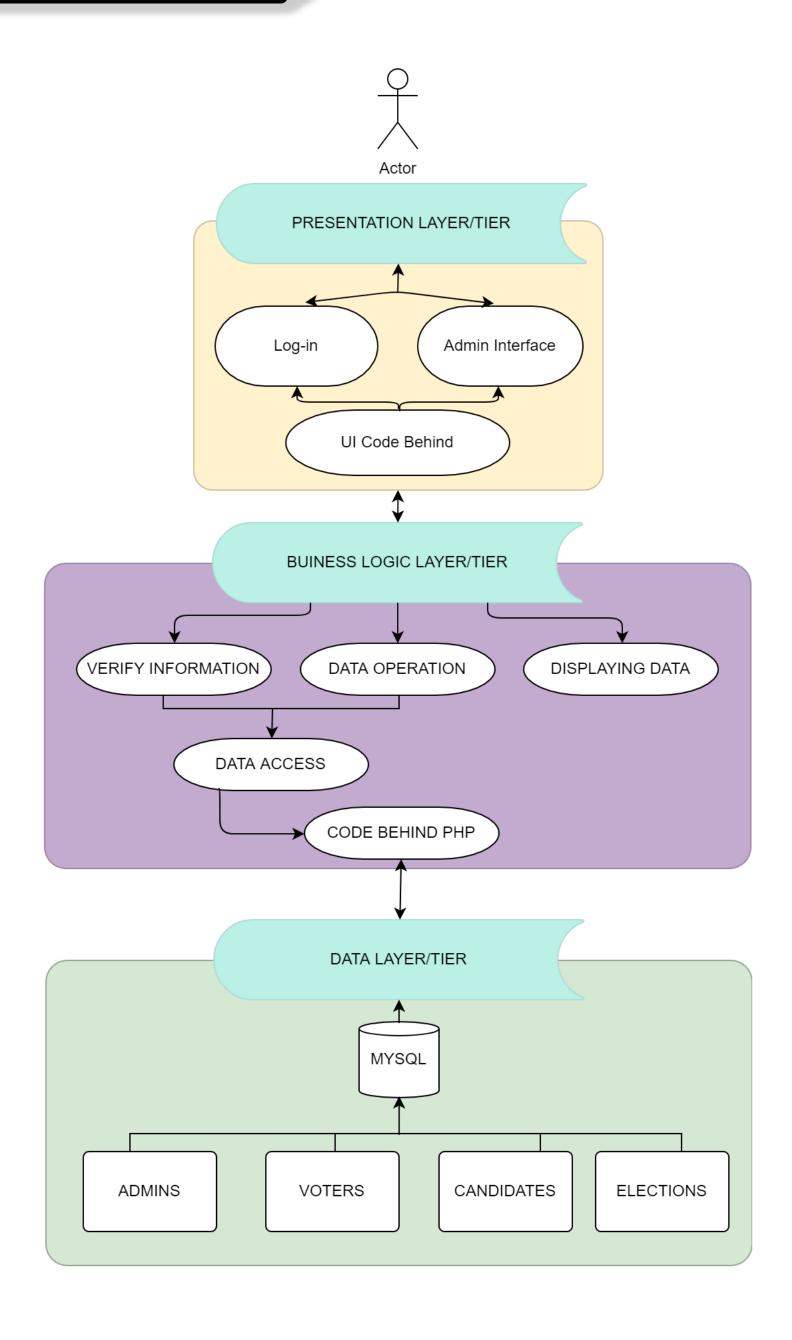




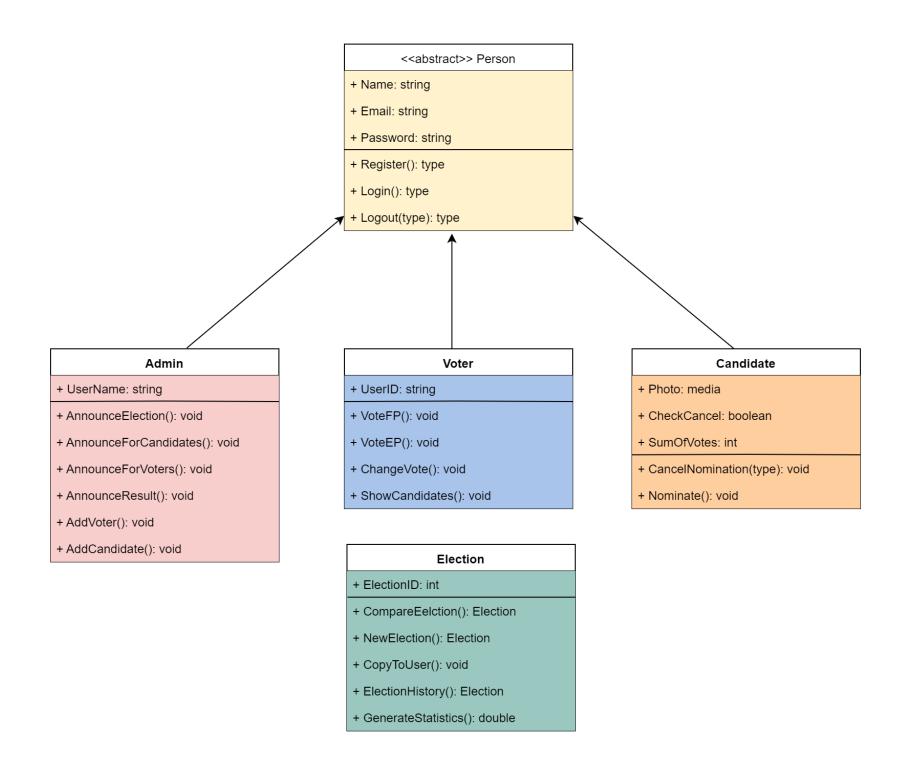




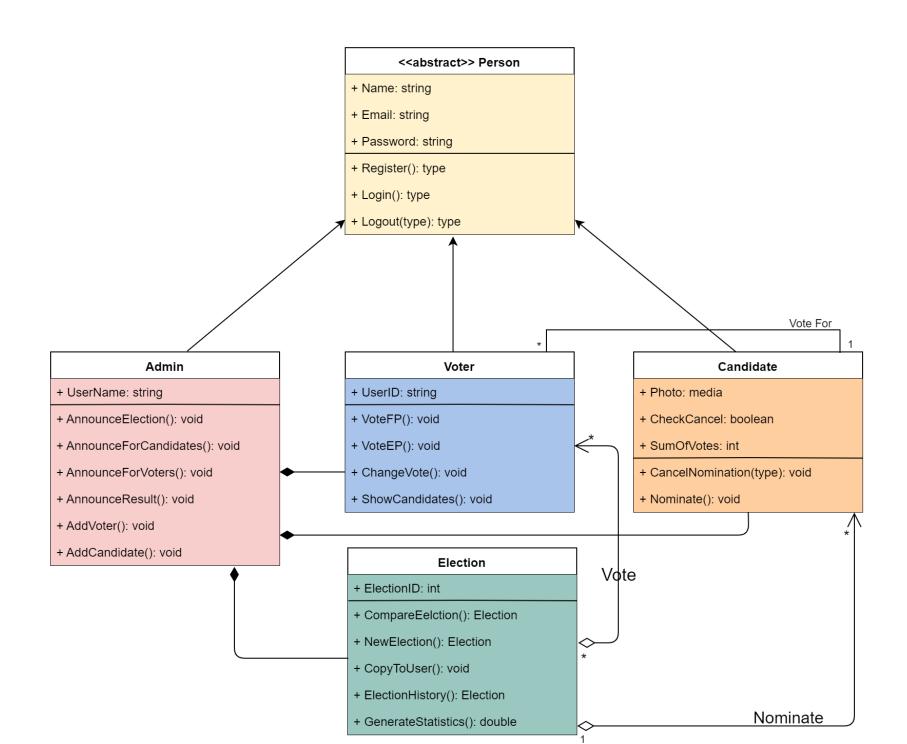
System Architecture



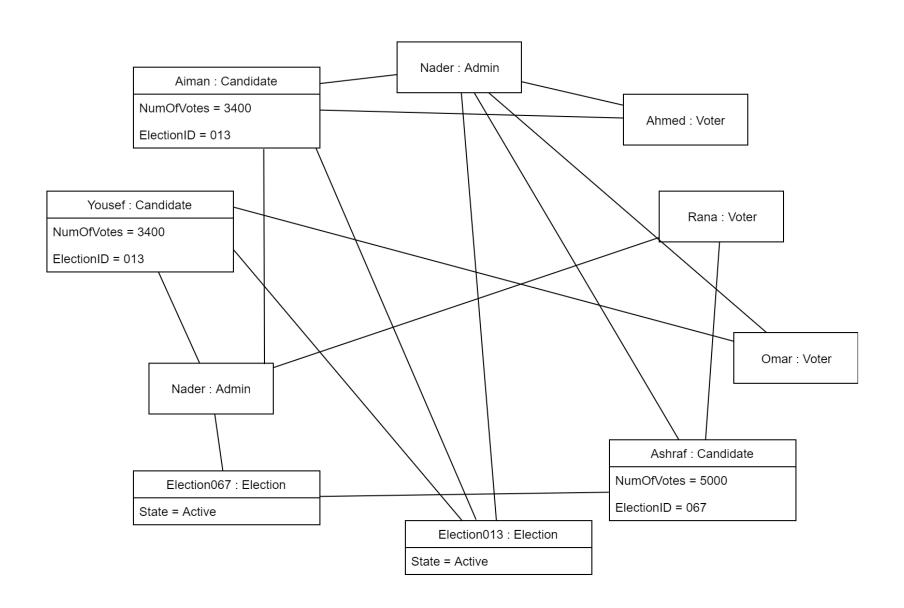
UML Classes - Version 1



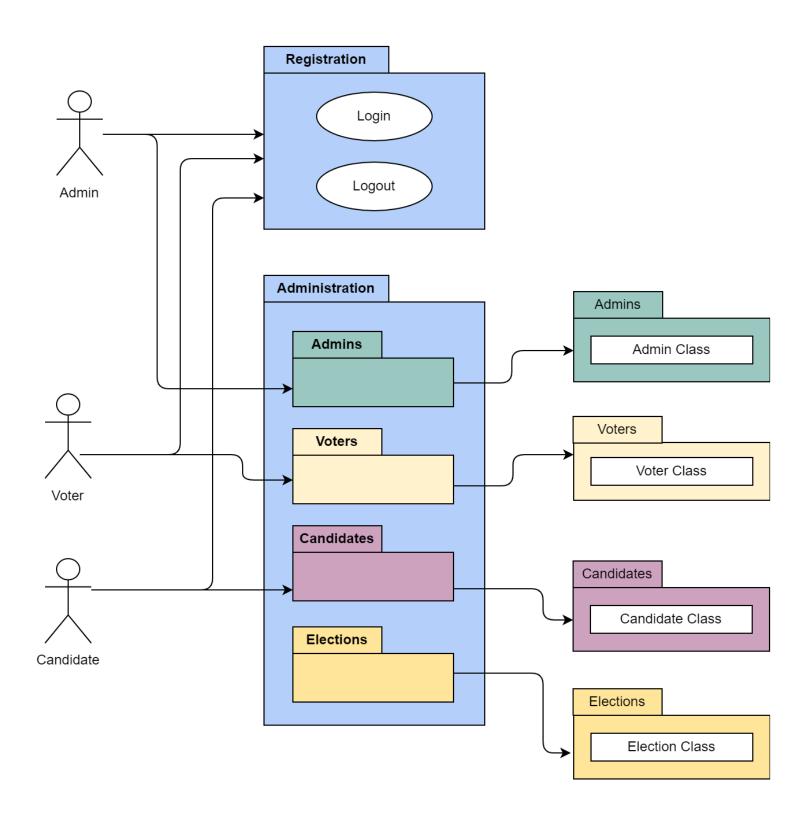
UML Classes - Version 2



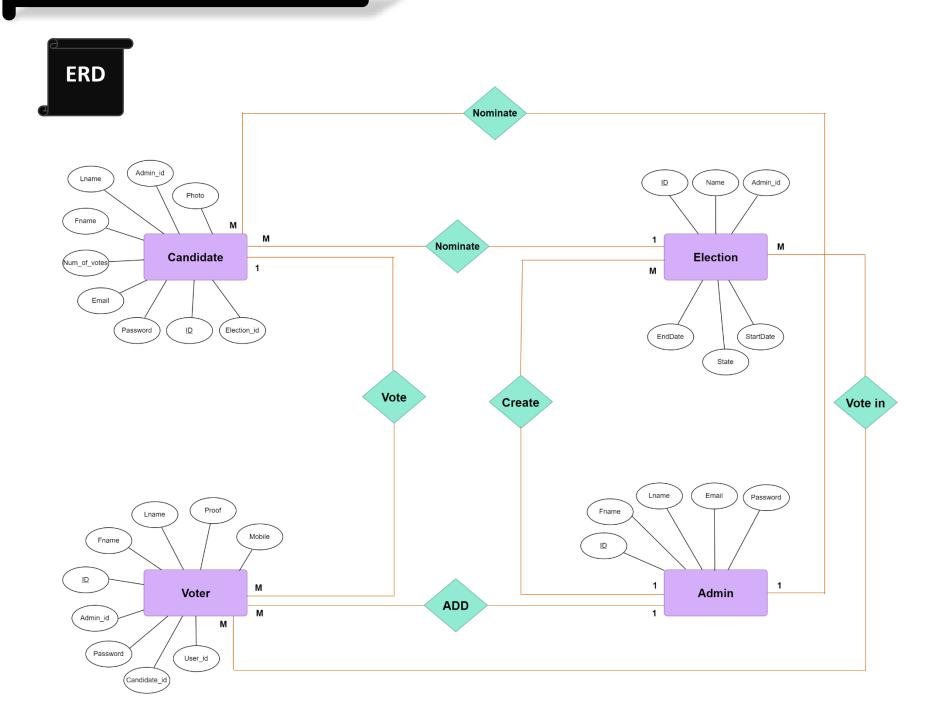
Object Diagram



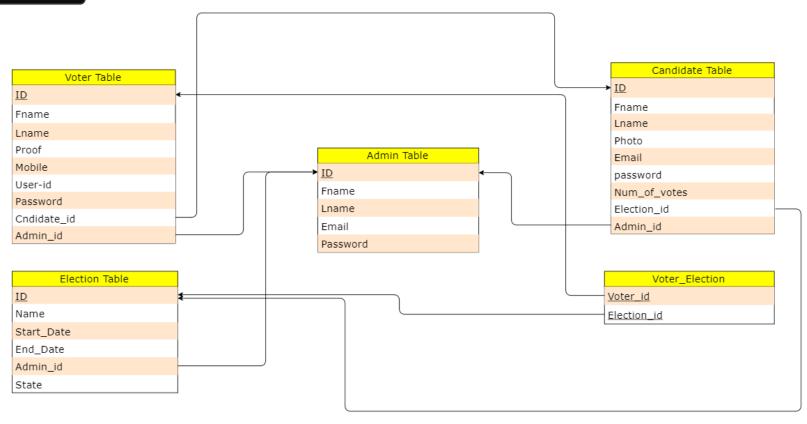
Package Diagram



Databases



Entities



Databases - Tables

ADMINS

Columns	Type	Null	Unique	Default
<u>ID</u>	Int	NO	YES	
First_Name	Varchar (100)	NO	NO	
Last_Name	Varchar (100)	NO	NO	
Email	Varchar (100)	NO	YES	
Password	Varchar (100)	NO	NO	

VOTERS

Columns	Туре	Null	Unique	Default
<u>ID</u>	Int	NO	YES	
First_Name	Varchar (100)	NO	NO	
Last_Name	Varchar (100)	NO	NO	
User_id	Varchar (100)	NO	YES	
Password	Varchar (100)	NO	NO	
Proof	Varchar (100)	NO	YES	
Mobile	Varchar (100)	NO	YES	
Admin_id	Int	NO	NO	

Candidate_id int NO NO

CANDIDATE

Columns	Туре	Null	Unique	Default
<u>ID</u>	Int	NO	YES	
First_Name	Varchar (100)	NO	NO	
Last_Name	Varchar (100)	NO	NO	
Email	Varchar (100)	NO	YES	
Password	Varchar (100)	NO	NO	
Num_of_Votes	Int	NO	NO	
Election_id	Int	NO	NO	
Admin_id	Int	NO	NO	
Photo	media	NO	YES	

ELECTION

Columns	Type	Null	Unique	Default
<u>ID</u>	Int	NO	YES	
Name	Varchar (100)	NO	NO	
Admin_id	Varchar (100)	NO	NO	
StartDate	Varchar (100)	NO	YES	
EndDate	Varchar (100)	NO	NO	
State	Varchar (100)	NO	YES	NotActive



THIS FORM IS FOR BOTH THE GENERAL & MEDICAL INFORMATICS PROGRAMMES

SE-I COURSE PROJECT (PHASE 1 COVER SHEET)

Discussions Scheduled for Week 10 (more details will be announced later).

- o Print 1 copy of this cover sheet and attach it to a printed copy of the documentation (SRS, ... etc.). You must also submit softcopies of all your documents (as PDFs); details will be announced later.
- o Please write all your names in Arabic.
- o Please make sure that your students' IDs are correct.
- o Handwritten Signatures for the attendance of all team members should be filled in <u>before</u> the discussion.
- o Please attend the discussion on time (announced separately), late teams will lose 5 grades.

Project Name:	A Fingerprint Voting Application
Team Information (t	ped not handwritten, except for the attendance signature):

	ID [Ordered by ID]	Full Name [In Arabic]	Attendance [Handwritten Signature]	Final Grade
1	202000330	روان حسام محمد ابراهیم	of the who	
2	202000376	ساره وليد سيد الحاج	سارة وليد سيد	
3	202000813	محمد ماهر حسين فرحات	مجد ما هر حسن	
4	202000861	محمود هاني سعيد محمد	we 360 138	
5	202000898	مصطفی حسین کمال حسین	Il mus seess	
6	202001010	نورهان طارق عبدالهادي	فورهام طارور عدلهادى	

Grading Criteria:

Grading Criteria:			
10 Items		Grade	Notes
1. Functional Requirements	1		
2. Non-Functional Requirements	1		
3. Use-Case Diagram(s) including general use-cases for the system, and the detailed use-cases description	2		
4. System Architecture – including applied Architectural Pattern(s)	1		
5. Activity Diagrams	2		
6. Database Specification (ERD, Tables)	2		
7. Class Diagram (<i>Interfaces, Classes, Relations</i>) – An initial version based on the requirements and Use-Case/Activity diagrams.	2		
8. Object Diagrams (Including object diagrams that illustrate the preconditions and the post-conditions of selected functions)	1		
9. Package Diagram(s)	1		
10. Sequence Diagrams including System Sequence Diagrams (SSDs)	2		

Teaching-Assistant's Signature:	
	15