



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**SYSTEM ANALYSIS AND DESIGN  
(SECP2613)  
SECTION 01**

**PHASE 3:  
SYSTEM ANALYSIS**

**SUBMITTED TO:  
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**GROUP NAME:  
PIXEL INC**

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## - PHASE 3 - System Analysis

### 1. Overview of Project

Technocom Systems Sdn Bhd, an organization founded as a member of Venture Group which was established in 1984 as a start-up company to provide contract manufacturing services. Technocom specialises in manufacturing and assembling electrical and electronics, computer, and medical products. This organization is in Kempas Johor which is approximately in the middle of Johor Bahru.

With a company size of 501 to 1000 employees, Technocom is rapidly making ground towards becoming a successful company. Technocom offers so many benefits to attract professionals into their organisation such as Dental, Medical, Gym, Parking, Bonus in pay, and Profit-Sharing benefits. Not to mention, their reputable mark in the production and manufacturing industry also attracts fresh and senior specialists in the field to join Technocom.

With such benefits and a reputation to attract specialists into joining them, it is obvious a reliable e-recruitment system is in need. Therefore, this proposal is to upgrade and digitalise the current recruiting system in place at Technocom. A E-Recruitment system is a system which is online based, with a purpose of centralising all processes relating to recruiting within it. Thus, it requires less manpower and hours to operate the system.

### 2. Problem Statement

- a) Difficult to trace any entry or changes to applications.
- b) Difficult to ensure data compliance.
- c) A great amount of time is required to operate the traditional recruitment system.
- d) A great amount of workforce is required to operate the traditional recruitment system.
- e) Difficult to conduct analysis and studies on HR team effectiveness and efficiencies.

### 3. Proposed Solutions

#### **Mission Statement:**

To solve all issues with traditional system, the new system should :

- Have traceability compatibility and also an audit trail to ensure compliance.
- Reduce man hours for administration jobs.

- Able to let the existing man force to invest their time and effort into other tasks with the implementation of said system.
- Be an aid in analysing recruiting team efficiency.

### **Log in / Sign up:**

- 1) Every actor who is intending to use the system has to sign up to acquire a unique username and password to log in to the system in the future.
  - a) Details such as name, Email address, phone number, IC number, username, password will be asked in the sign up page.
  
- 2) Every actor who used the system and has signed up, has to log in with their credentials.
  - a) Username and password which was fixed by the actors will be used as identification to enter the system.

### **Manage Candidate:**

- 1) System is responsible to show job applicants whether their resume is shortlisted by HR-Talent Acquisition or not.
  - a) System could have a window which shows estimated time to get a response from HR-Talent Acquisition.
  - b) The window also should clearly inform job applicants if their application is shortlisted.
  
- 2) Proposed system will be responsible to obtain some job application forms from candidates which were previously submitted via pdf to HR-Talent Acquisition.
  - a) System could have an online form which can be filled up by a job applicant. On submission of said online form, HR-Talent Acquisition can start verification processes for said candidate.
  - b) Hardcopy Documents that must be submitted in softcopy form could be submitted by job applicants via a submission link that is obtainable from the system.
  
- 3) After documents were submitted by a job applicant, HR-Talent Acquisition should have immediate access to said application for verification process.
  - a) HR-Talent Acquisition should have access to the database of the system.

### **Manage interview:**

- 1) System responsible to arrange the date and time of the interview after documents are verified by the HR-Talent Acquisition.
  - a) Date and time will be selected by the hiring panels based on their availability.
  
- 2) Interview date and time will be notified on the system.
  - a) The job applicant will be reminded to check the system in a few days and keep tracking the job application status while uploading the documents to manage candidate use cases.
  - b) The interview date and time will be viewed by the job applicant on the system.
  
- 3) Job applicant agree to attend the interview on the date and time fixed by the control panel
  - a) Job applicants will click the 'agree' as confirmation for the interview session.
  
- 4) Job applicants attend the interview session with the hiring panel(s).
  - a) Job applicants might need to attend another few interview sessions based on the hiring panel(s) preference.
  - b) Job applicants will need to repeat process 2. and 3. if they have to attend another few sessions of interview with the hiring panel(s).
  
- 5) The hiring panel(s) will sort the job applicants based on the interview session
  - a) The shortlisted job applicants details will be updated in the system as 'Shortlisted to hire'.
  - b) Non shortlisted job applicants will be updated in the system as 'Rejected job applicants'.

### **Manage Salary:**

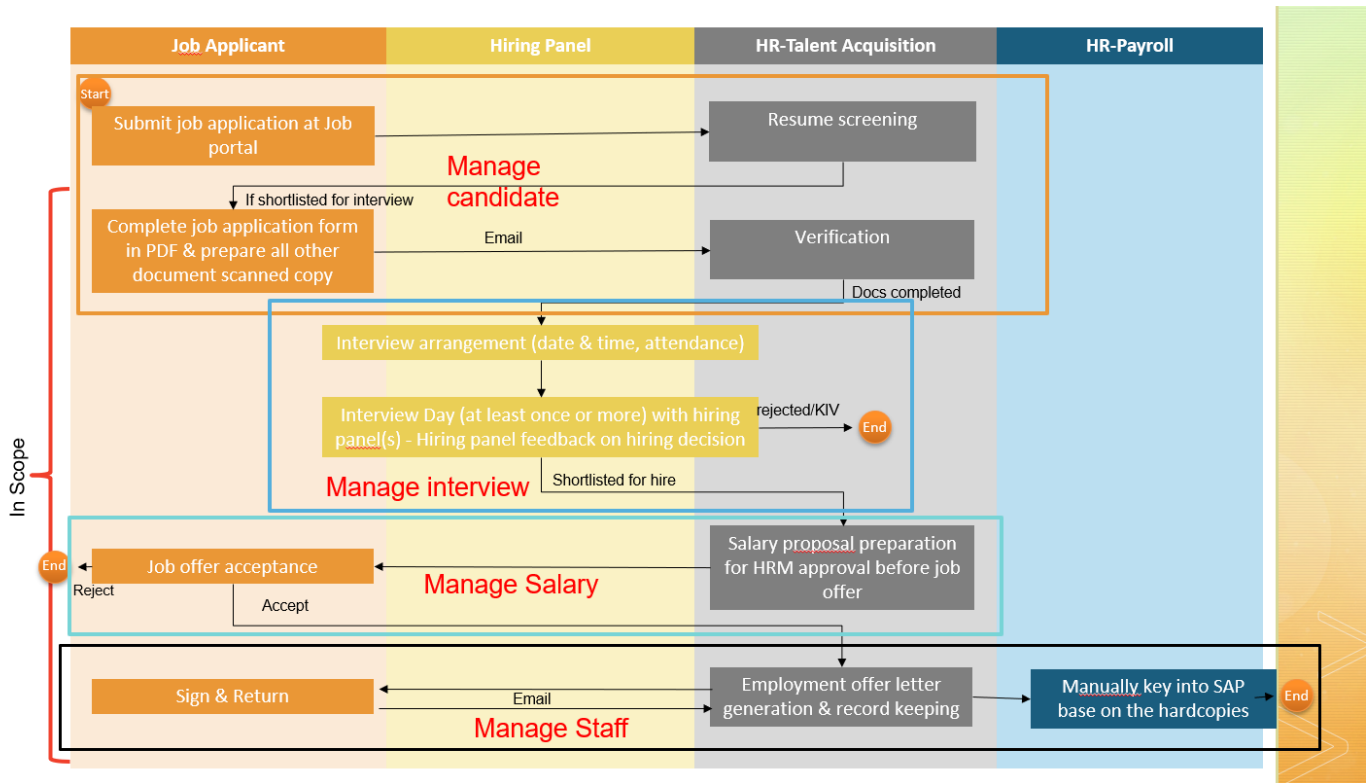
1. After the interview session(s), the system should display the passed candidates information..
  - a) The admin will set the salary proposal for each candidate.
  - b) The HR Manager should be able to access and use the system to see the candidates' information.

2. The HR Manager can accept or reject the proposed salary by the admins in the system directly.
  - a) There should be a dropdown row on the salary proposal sent by the HR-Talent Acquisition to accept or reject it.
  - b) If the proposal is accepted, the system will automatically generate the notification for the candidates regarding the salary offered with an offer letter to them.
  - c) If it is rejected, the admins will be notified and they must send a new salary proposal to the HR Manager.
3. Candidates can accept or reject the offer letter.
  - a) If the candidate accepts the offer letter, the system should process the employment of the candidate.
  - b) If they reject the offer then the process will be stopped.

### **Manage Staff:**

- 1) System should be able to generate an offer letter, prepared by HR-Talent Acquisition after the HR manager approves the salary.
  - a) Applicants will be able to view the offer letter after HR-Talent Acquisition validates salary along with commencement date.
- 2) Applicants who accept the offer letter will be able to fill in the offer letter acceptance form.
  - a) Warning box will be displayed to make sure all the data given are correct.
  - b) Data provided in acceptance form will be saved as new staff.
- 3) HR-Talent Acquisition view details provided in offer letter and acceptance form.
  - a) Details of each applicant will be displayed and HR Talent will save it. That information will be stored in the new staff table for SAP purposes.
- 4) HR Payroll could view the record in the new staff table and make it accessible in SAP.

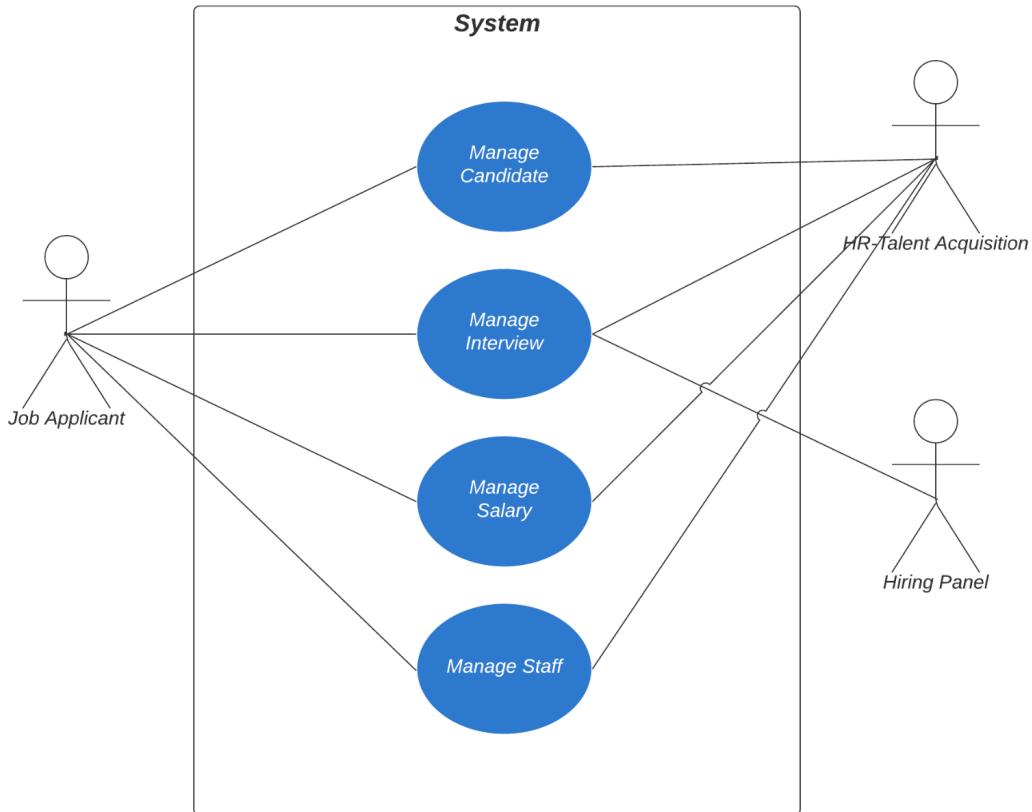
#### 4. Current business process or workflow.



## 5. Use case diagram (as is system)

### Traditional Use case diagram

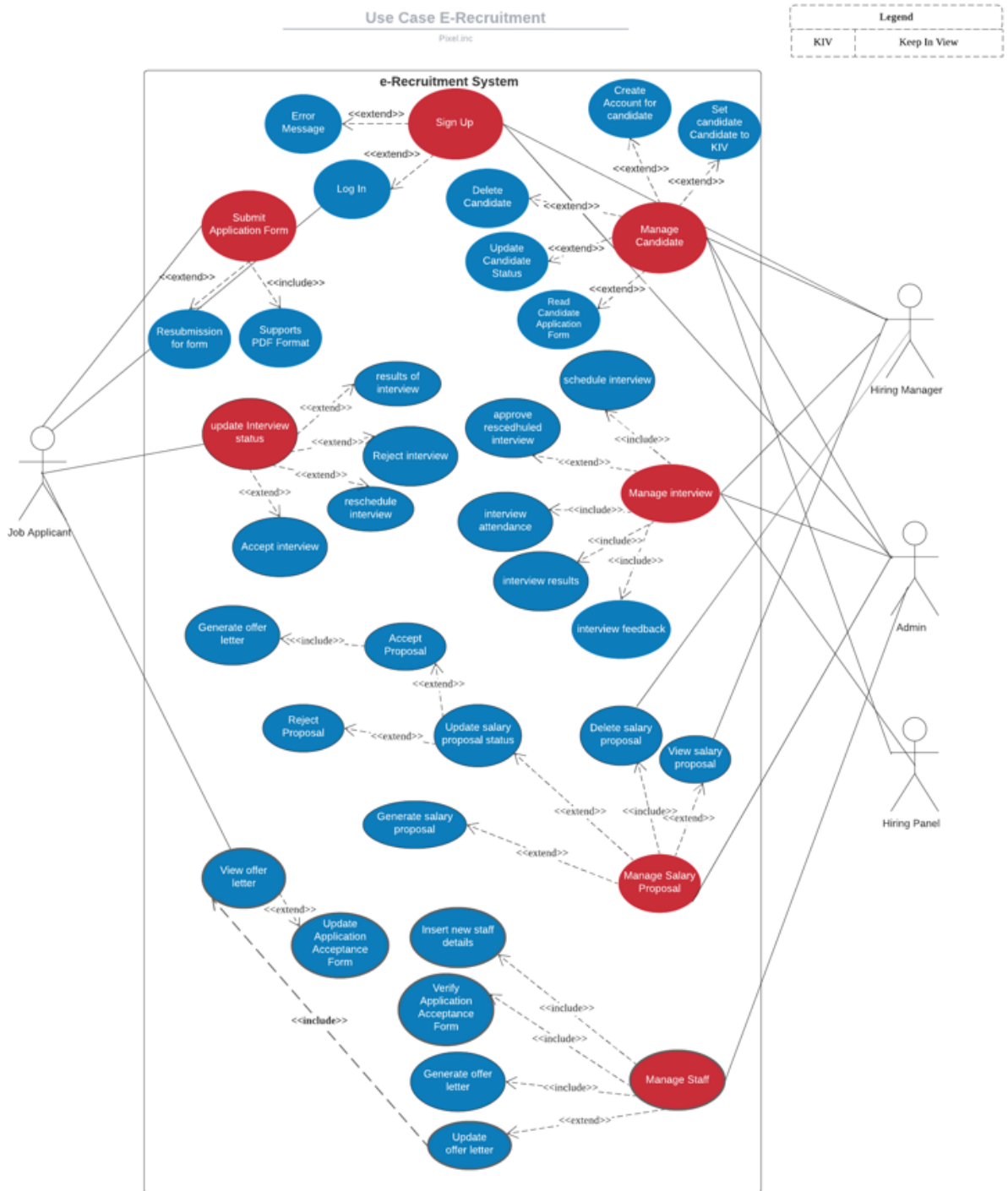
Pixel.Inc | January 1, 2022



## 6. System analysis and specification (to be system)

The system that we will develop is called the E-Recruitment system. This system is primarily designed to **assist users with all aspects of the recruiting process, including applying, modifying, and checking status**. As a result, the system requires less labour and hours to operate.

# 6.1. Use case diagram





## 6.2. Use case description

<b>Use Case Name:</b>	<i>Login / Sign Up</i>	
<b>Member in charge:</b>	All members	
<b>Brief Description:</b>	All users sign up and login to the system to access the system.	
<b>Actors:</b>	Job applicants, HR Managers, Hiring Panels and admins	
<b>Precondition:</b>	Created account is logged out / User does not have any account	
<b>Postcondition:</b>	<ul style="list-style-type: none"> <li>• Redirect account users to their respective page either Candidate page or manager page or admin page.</li> </ul>	
<b>Flow of Activities:</b>	<b>Actor</b>	<b>System</b>
	<ol style="list-style-type: none"> <li>1. Pick either to login or sign up</li> <li>2. Enter credentials to sign up</li> <li>3. Enter credentials to log in</li> </ol>	<ol style="list-style-type: none"> <li>1.1 Redirect user to picked page</li> <li>2.1 Validate their credentials and return a success message or failure message</li> <li>2.2 Register user to system if validation is successful</li> <li>3.1 Check whether credentials entered exists in database</li> <li>3.2 Redirect to respective page if exist</li> </ol>
<b>Exception Conditions:</b>	2.3 If a user entered invalid format for every credential, the user is prompted to correct it	
<b>Extension:</b>	3.3 If the user doesn't exist, then the system redirects the user to log in with a prompt that the user doesn't exist in the database	

<b>Use Case Name:</b>	<i>Manage candidate</i>	
<b>Member in charge:</b>	Terence Loorthanathan	
<b>Brief Description:</b>	This module covers the process of candidate creation and verification of their job application forms. Admin will also be allowed to delete or set a candidate as KIV(Keep in View).	
<b>Actors:</b>	Admins and hiring manager	
<b>Precondition:</b>	Admin or hiring manager must be successfully registered to system	
<b>Postcondition:</b>	<ul style="list-style-type: none"> <li>Admins or hiring managers are able to clearly identify changes made.</li> </ul>	
<b>Flow of Activities:</b>	<b>Actor</b>	<b>System</b>
	<ol style="list-style-type: none"> <li>Create or choose a candidate to make changes on</li> <li>Pick a candidate to make changes on</li> <li>View candidate's job application form</li> </ol>	<ol style="list-style-type: none"> <li>1.1 Allow user to create candidate</li> <li>1.2 List all candidates and a brief description of them.</li> <li>1.3 List their current status.</li> <li>2.1 Show their information in detail</li> <li>2.2 Allow actors to update their status or delete them or view that candidate's job application form</li> <li>3.1 Open a new window that previews their job application form</li> </ol>
<b>Extension:</b>	2.3 Admin's may need to view a candidate's application form multiple times, because each of their submitted application forms can have a discrepancy.	

<b>Use Case Name:</b>	<i>Manage interview</i>
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<b>Member in charge:</b>	Rishma Fathima Binti Basher	
<b>Brief Description:</b>	This module covers the process of the interview session by getting the date and time of the interview session continues by results of interview session after the job candidate attend the interview session	
<b>Actors:</b>	Job applicants, admins and hiring manager	
<b>Precondition:</b>	Applicant's job applications must be successfully verified	
<b>Postcondition:</b>	<ul style="list-style-type: none"> <li>● Hiring manager fix a date and time for the job applicant interview session</li> <li>● Hiring manager update the results of the interview</li> </ul>	
<b>Flow of Activities:</b>	<b>Actor</b>	<b>System</b>
	<ol style="list-style-type: none"> <li>4. Hiring manager fixes a date and time for the job applicant's interview session</li> <li>5. Job applicant changes the date and time of the interview session with valid reason (if necessary)</li> <li>6. Job applicant agree to attend the interview</li> <li>7. Job applicant attend the interview session</li> <li>8. Hiring manager update the results of the interview session</li> </ol>	<ol style="list-style-type: none"> <li>1.1 Update fixed date and time to the system</li> <li>1.2 Interview session date and time visible for applicant and admin</li> <li>2.1 Update fixed date and time to the system</li> <li>2.2 Interview session date and time viewed by the hiring manager and approved</li> <li>2.3 Finalized interview session date and time viewed by the hiring manager, admin and job applicant</li> <li>3.1 Status updated as job applicant agree to attend the interview session</li> <li>4.1 Update the attendance status</li> <li>5.1 update the interview results</li> <li>5.2 Interview results visible to admin and job applicant</li> </ol>

<b>Exception Conditions:</b>	3.2 If the job applicants ignore or did not respond to the interview session date and time until 3 days before the interview, it will be assumed that the job applicant will reject the job offer.
<b>Extension:</b>	5.3 Job applicants might need to repeat the manage interview process a few times if they need to attend another few interview session with the hiring panel.

<b>Use Case Name:</b>	<i>Manage Salary</i>	
<b>Member in charge:</b>	Nayli Nabihah Binti Jasni	
<b>Brief Description:</b>	This module covers the salary arrangement before it is offered to the advanced candidates	
<b>Actors:</b>	Job applicants, HR Manager and admins	
<b>Precondition:</b>	Applicants must passed the interview session(s)	
<b>Postcondition:</b>	<ul style="list-style-type: none"> <li>● HR Manager can view and validate the proposed salary set by the admins (in HR-Talent Acquisition team)</li> <li>● Applicants can view the proposed salary approved by the HR Manager.</li> <li>● After candidates view the proposed salary, offer letter will be issued</li> </ul>	
<b>Flow of Activities:</b>	<b>Actor</b>	<b>System</b>
	<ol style="list-style-type: none"> <li>1. Admin (in HR-Talent Acquisition team) enters the proposed salary</li> <li>4. HR Manager will view and validate the proposed salary</li> </ol>	<ol style="list-style-type: none"> <li>1.1 Save the proposed salary entered</li> <li>2.1 Save the proposed salary validation feedback</li> <li>3.1 Generate offer letter</li> </ol>

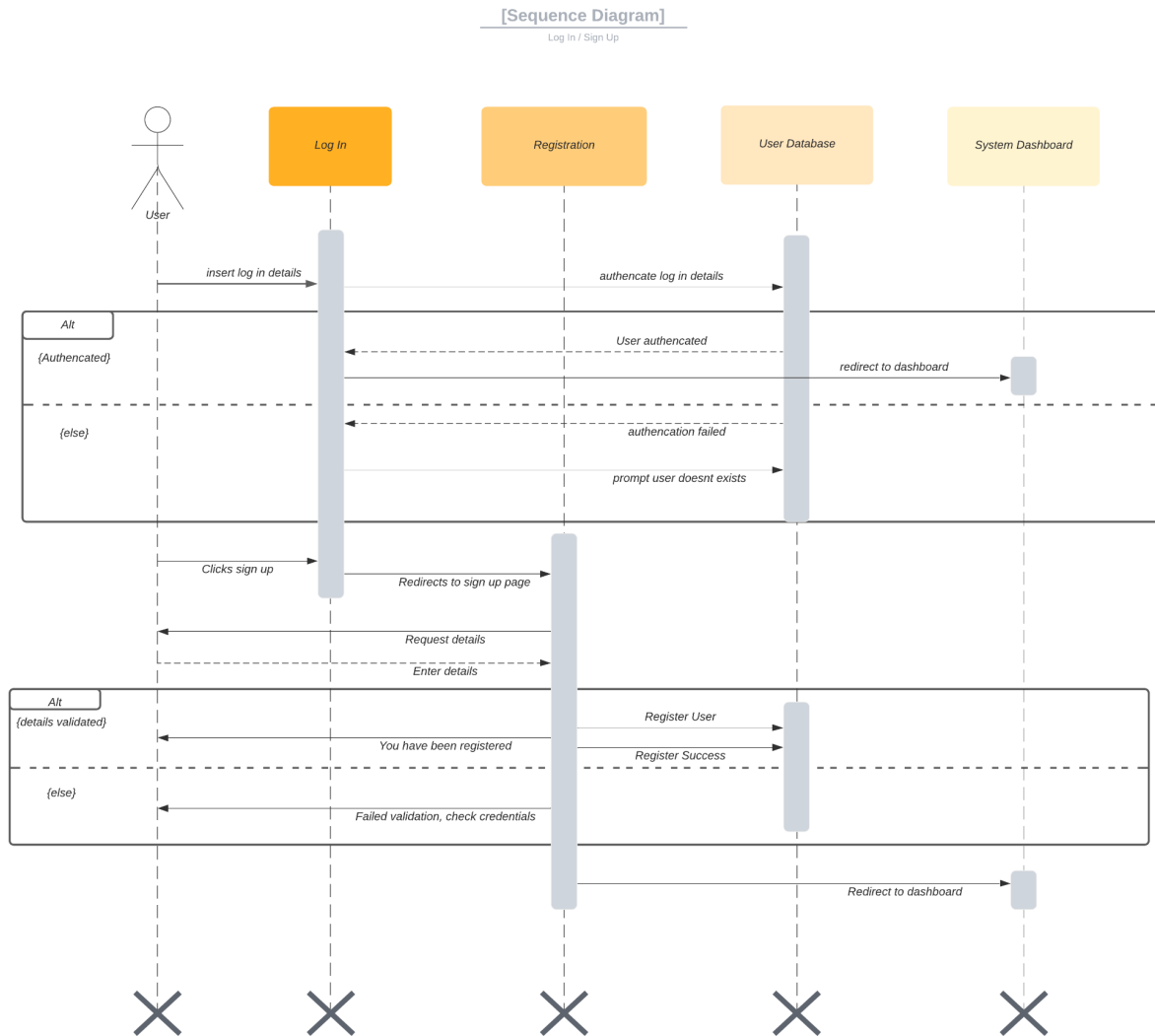
	5. Applicants can view the validated proposed salary.	
<b>Exception Conditions:</b>	3.2 If the applicants ignore the validated proposed salary within 7 days, it is assumed that they are not interested in the job and the offer will be terminated	
<b>Extension:</b>	2.1 HR Manager can reject the proposed salary, then, the admin (in HR-Talent Acquisition team) need to enter new proposed salary until it is approved	

<b>Use Case Name:</b>	<i>Manage Staff</i>	
<b>Member in charge:</b>	Madina Suraya Binti Zharin	
<b>Brief Description:</b>	Staff management is done exclusively for applicants who pass their interview and hiring panel approved the proposed salary	
<b>Actors:</b>	Job applicants, HR talent acquisition, and HR payroll	
<b>Precondition:</b>	Hiring panel must approve the salary and set the commencement date.	
<b>Postcondition:</b>	<ul style="list-style-type: none"> <li>• Applicants can view offer letters and accept the offer by filling in the Acceptance Employment Offer form.</li> <li>• Admin can view new employee details for Systems Applications and Products (SAP).</li> </ul>	
<b>Flow of Activities:</b>	<b>Actor</b>	<b>System</b>
	1. Hiring manager approves the salary and sets a commencement date.	1.1 Create an offer letter with job title, salary details and commencement date.

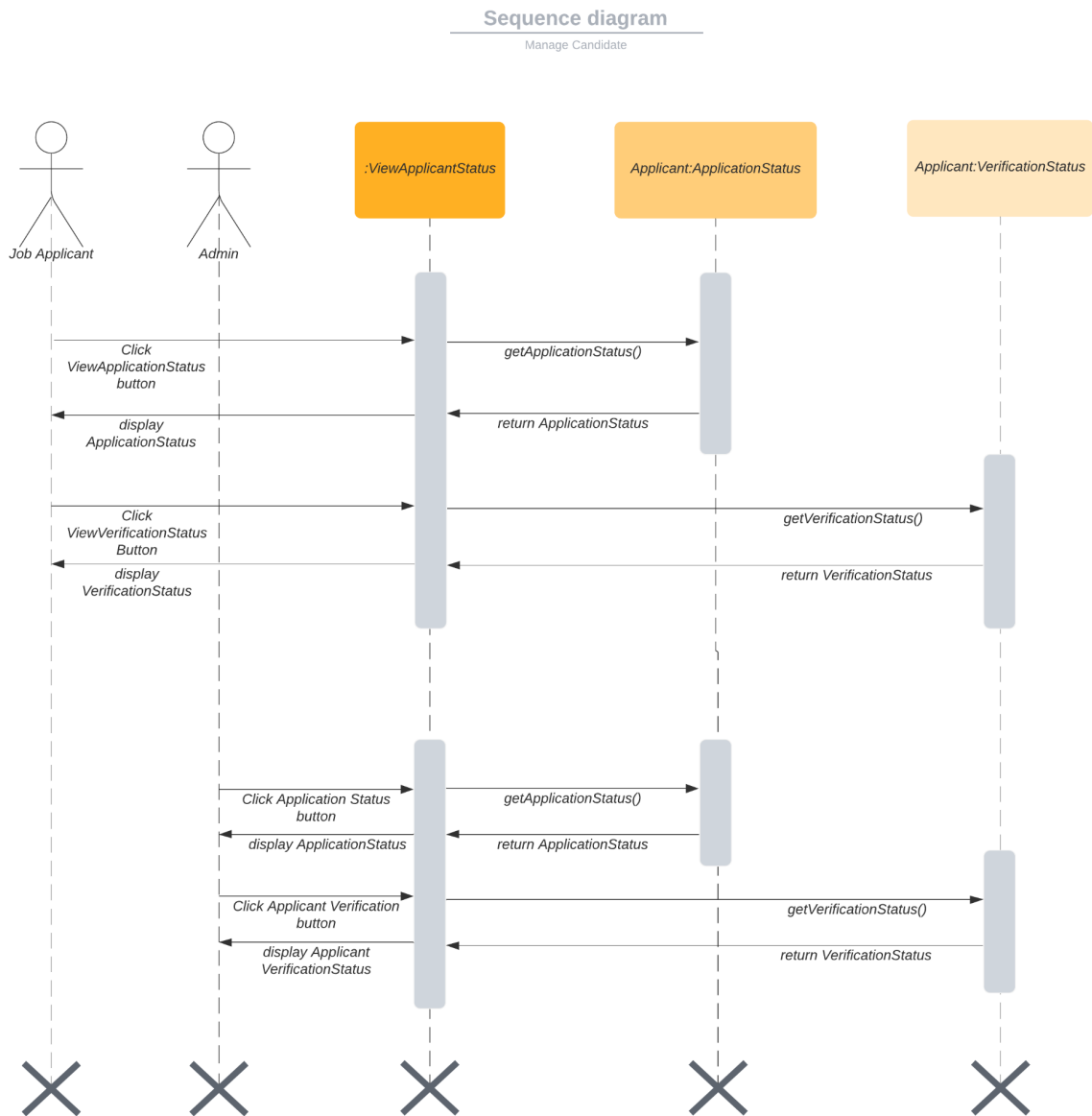
	<ol style="list-style-type: none"> <li>2. Applicants view offer letters.</li> <li>3. Applicants accept offers by filling in an Acceptance Employment Offer form.</li> <li>4. Admin views the details in the offer letter and acceptance form and save it</li> <li>5. Admin access staff details for Systems Applications and Products (SAP).</li> </ol>	<ol style="list-style-type: none"> <li>3.1 Save applicants' details based on information given in the Acceptance Employment Offer form.</li> <li>4.1 Save new employee details as new staff.</li> </ol>
<p><b>Exception Conditions:</b></p>	<ol style="list-style-type: none"> <li>3.2 If the candidate does not complete the Acceptance Employment Offer form within 7 days, it is assumed that they are not interested and the offer will be taken back.</li> <li>4.2 If the admin did not save the Acceptance Employment Offer form details will not be saved as staff.</li> </ol>	
<p><b>Extension:</b></p>	<ol style="list-style-type: none"> <li>2.1 Applicants can request to change the commencement date with valid reason and admin can update the offer letter again once they accept the request.</li> </ol>	

## 6.3. Sequence diagram

### 6.3.1. Module <Login/Sign Up>

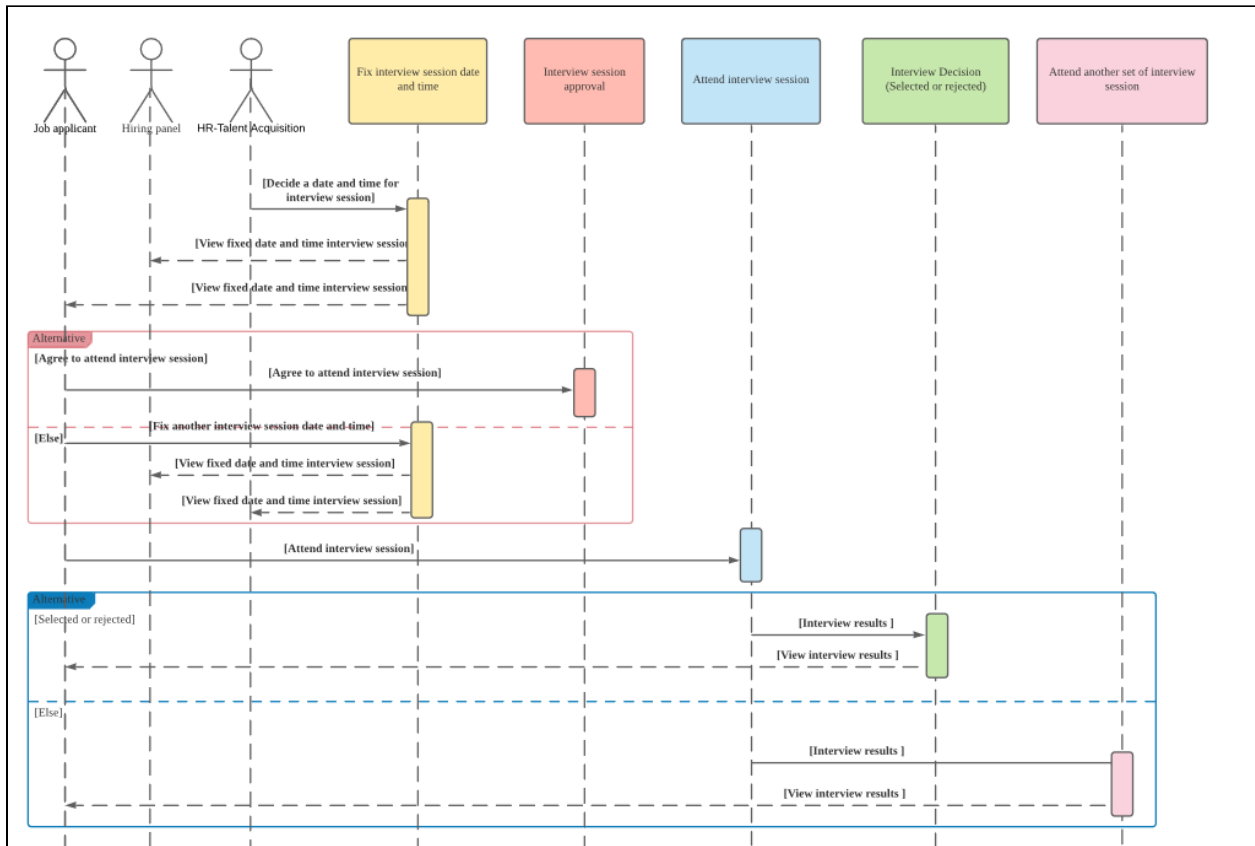


### 6.3.2. Module <Manage Candidate>





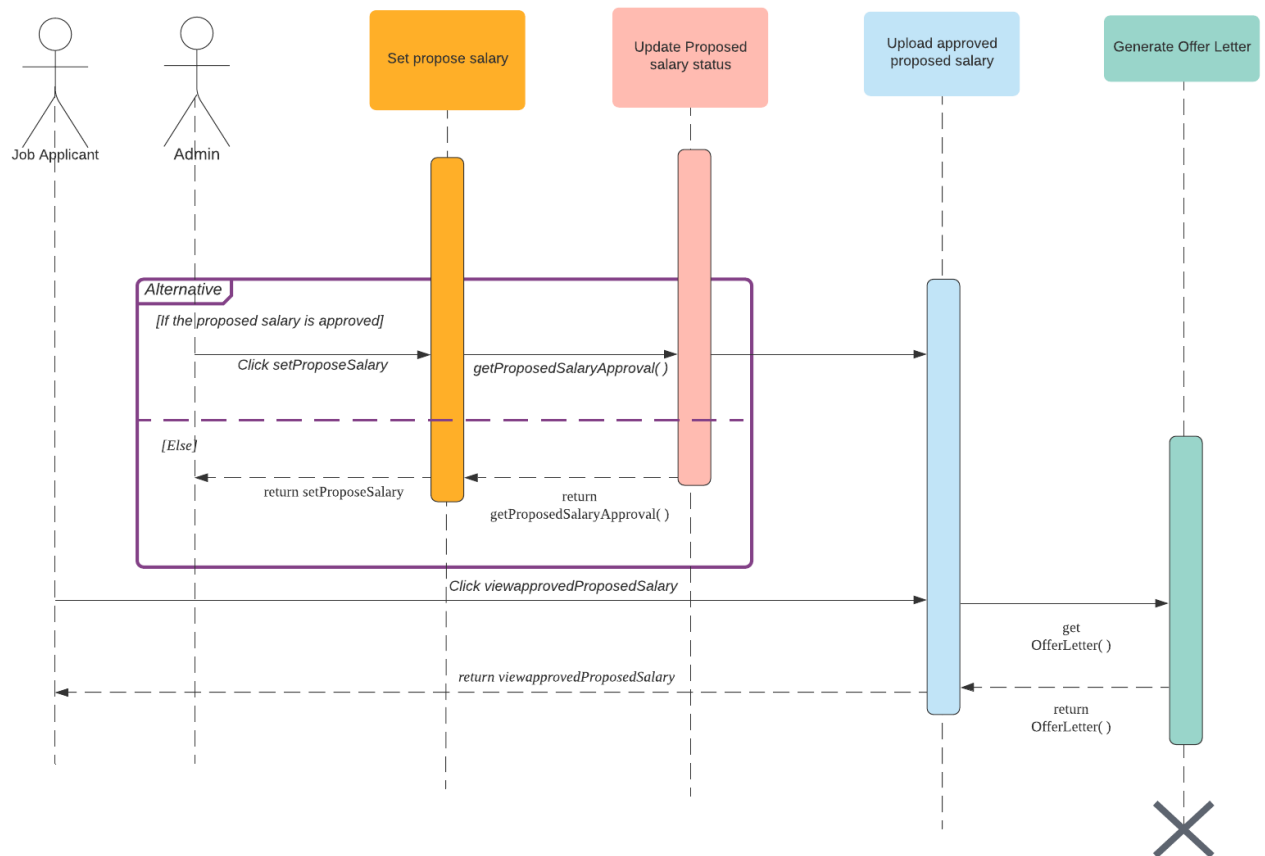
### 6.3.3. Module <Manage Interview>



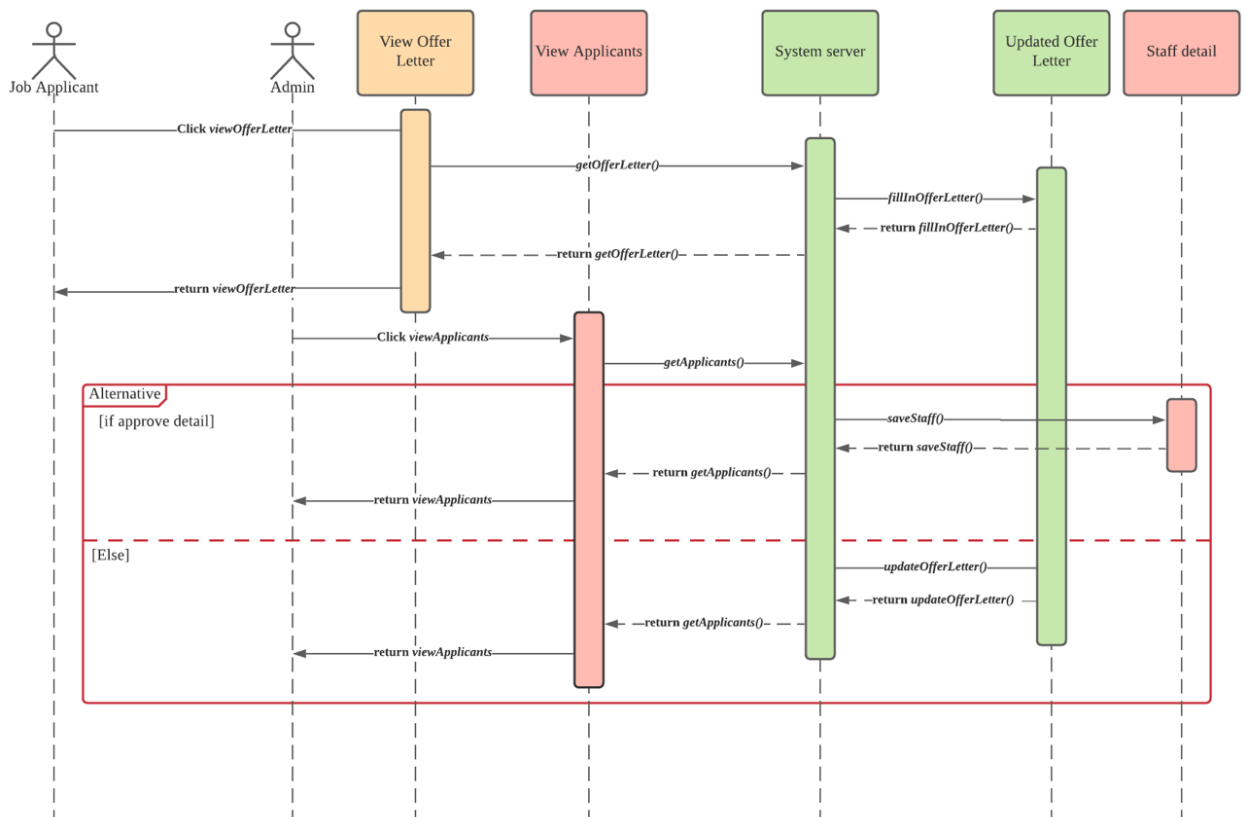
### 6.3.4. Module <Manage Salary>

Updated Sequence diagram

Nelly N | January 18, 2022

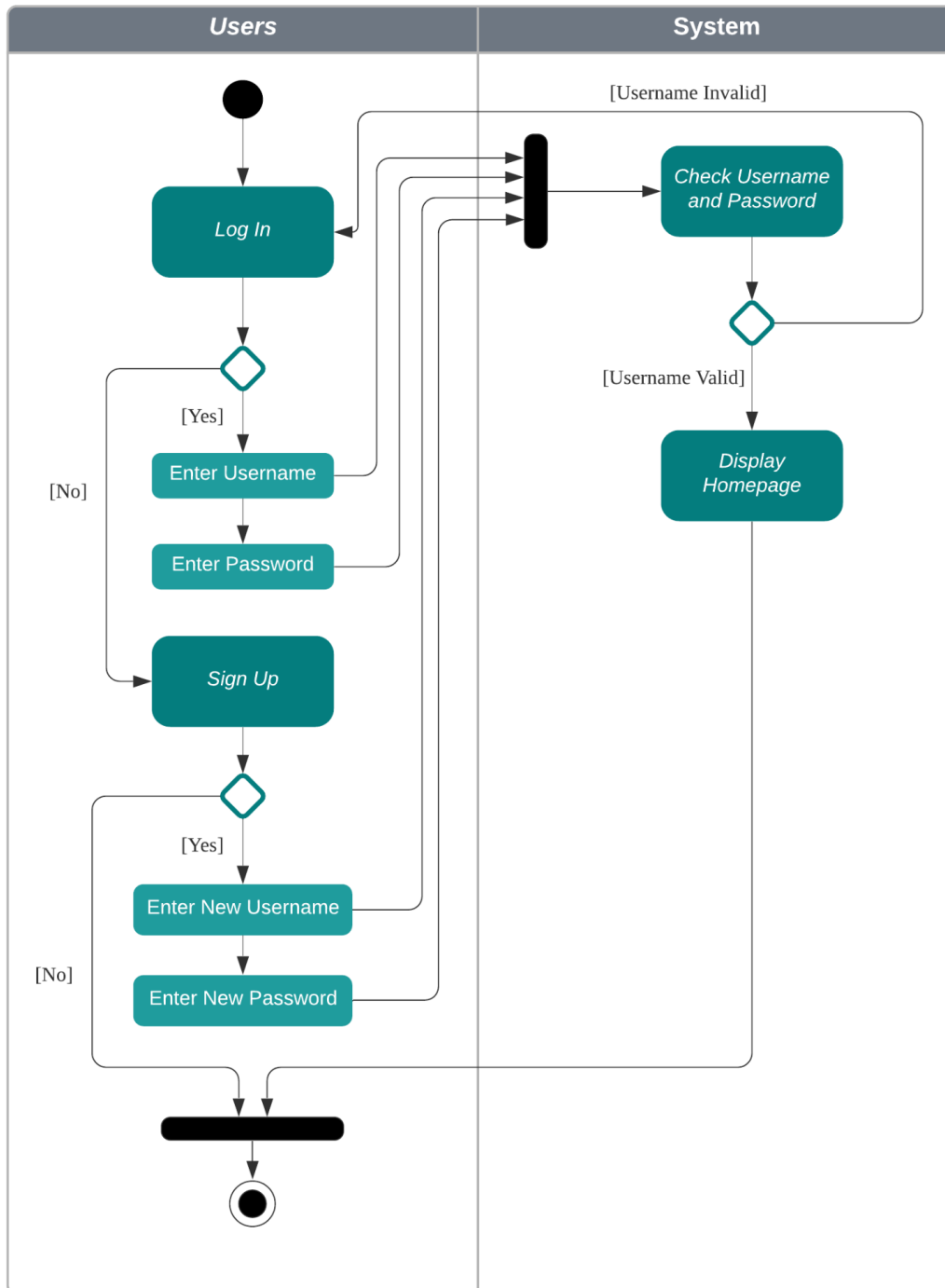


### 6.3.5. Module <Manage Staff>

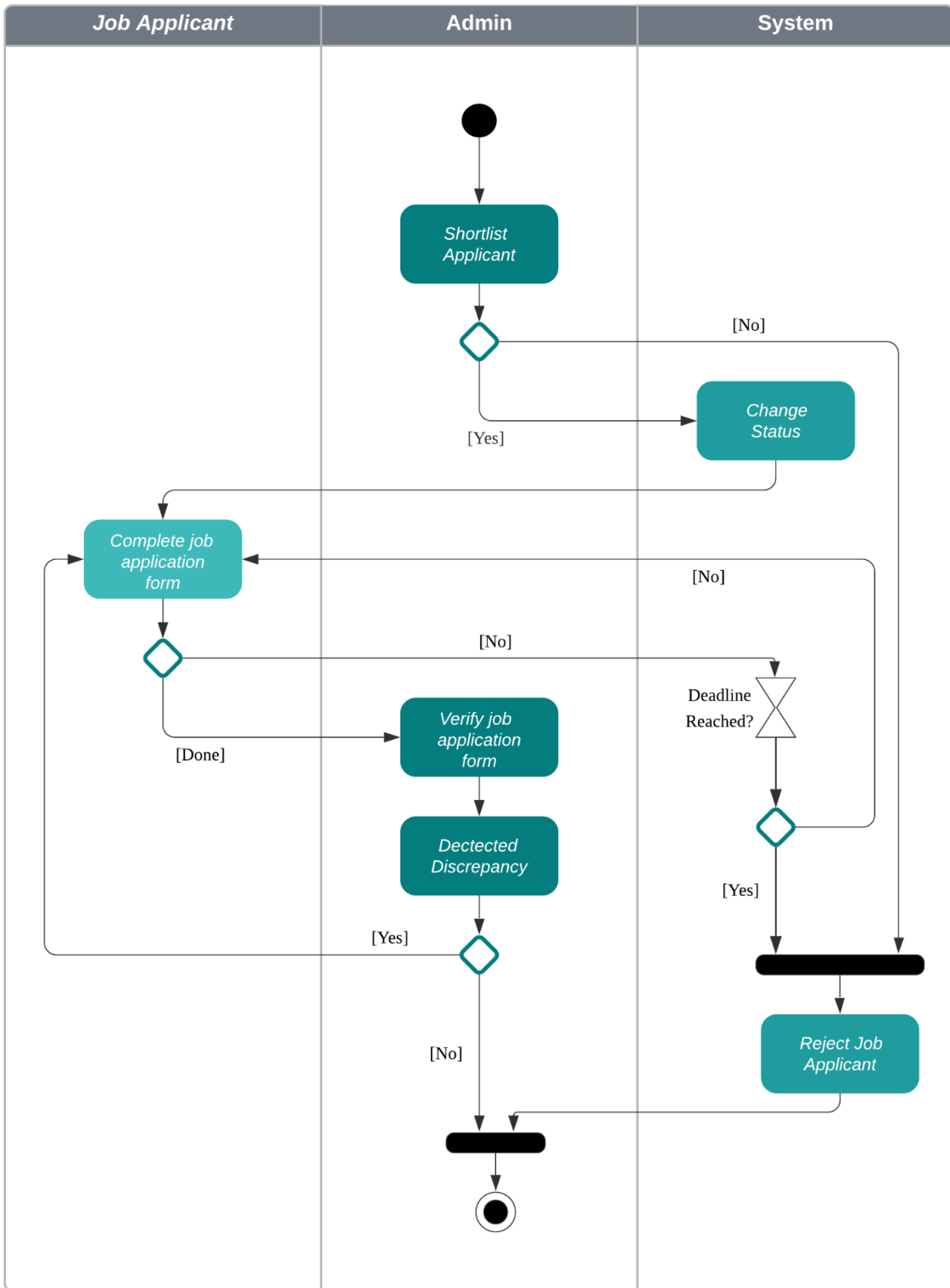


## 6.4. Activity diagram

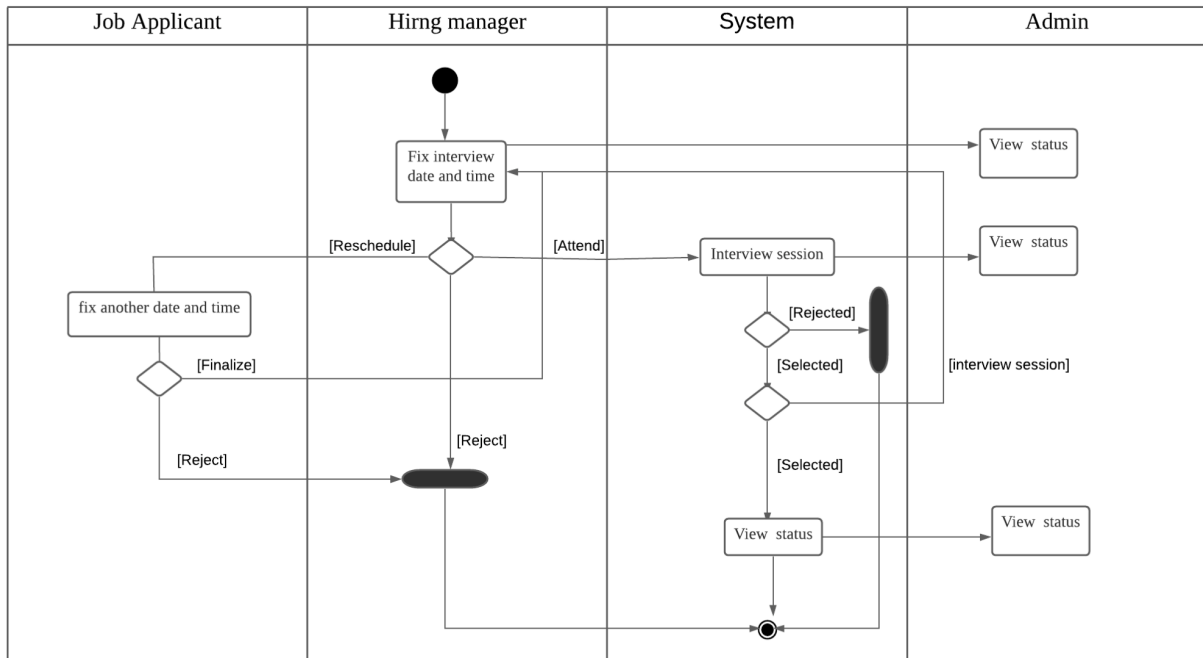
### 6.4.1. Module <Login/Sign Up>



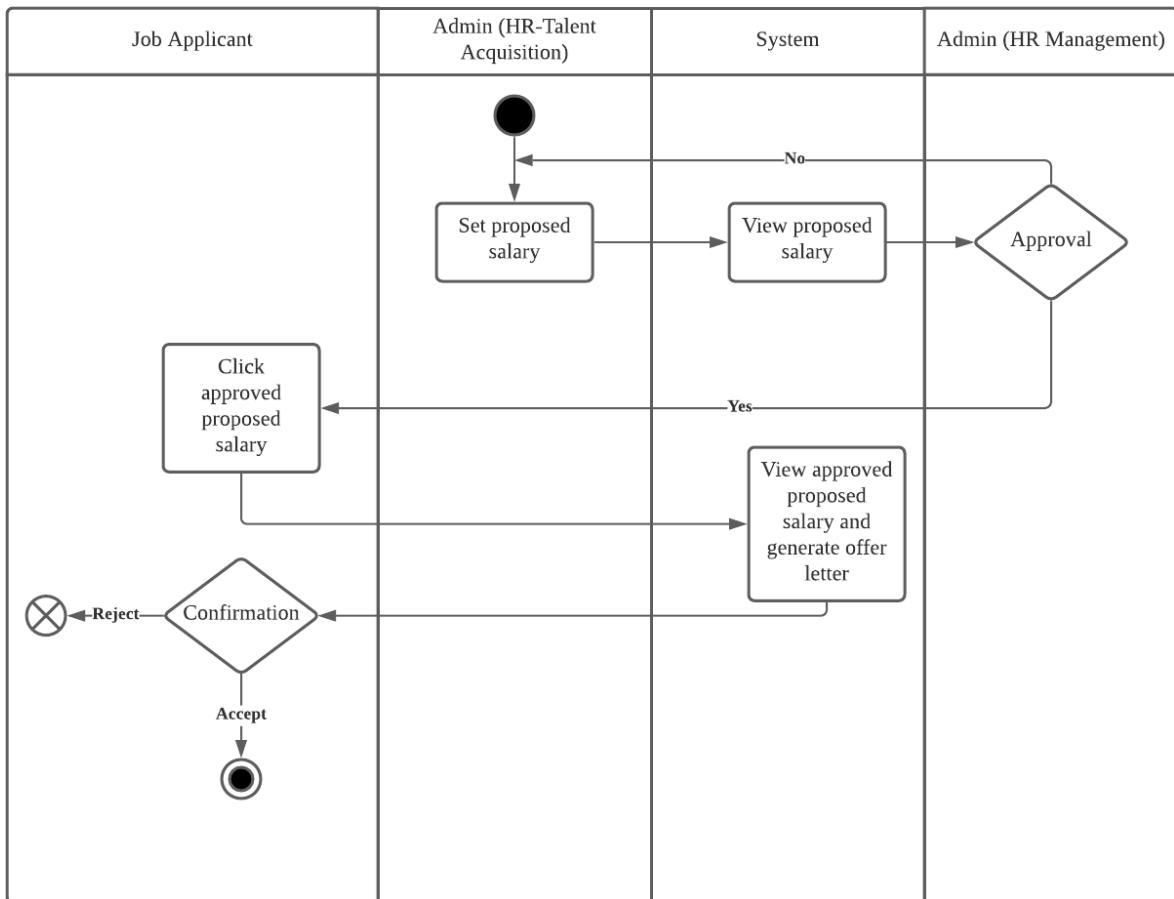
# Module <Manage Candidate>



## Module <Manage Interview>



## Module <Manage Salary>



# Module <Manage Staff>

