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Orange Labs Egypt
Part of Orange International R&D Centers

FRA Arbitration Portal

Technical Proposal

September 26, 2021

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DOCUMENT VERSION

Version number	Date of version	Nature of changes	Author
S0F0	May 8th, 2021	Initial Draft Version	Mohammad Aly
S0F2	May 11th, 2021	Reduced scope for quick launching	Mohammad Aly
S0F3	May 19th , 2021	Changes requested By Dr. Tarek Fathy - Save/cont form - Validate mail/Mobile no Upload documents during step by step application)	Mohammad Aly
S0F4	June 6th, 2021	Comply with UI and language requirements	Mohammad Aly
	15 of AUG 2021	To Cover the Main Architecture	Reda Drehim
	23 of SEPT 2021	To Cover the Phase 1 scope	Reda Drehim
S0F7	June 26th, 2021	Adding 3rd party integration and Portal Pages Hierarchy	Mohammad Aly

REFERENCE DOCUMENTS

Reference	Date	Version	Description

SUMMARY SHEET

1. CONTACTS

FRA Arbitration Unit, Director	Dr Marian Kaldas	
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1. PROJECT OVERVIEW

1.1. PURPOSE

This Document is to cover the main Architecture and Design and User stories for the FRA Arbitration Portal

1.2. SCOPE

High Level of Business and Architecture and Design for FRA Arbitration Portal

2. REQUIREMENTS

Website dedicated to the center that includes digitalization of the arbitration process.

There will be a link if the FRA site to the FRA Arbitration website

The target website should give information about the FRA Arbitration Authority; includes, vision, mission, arbitration process, requirements new Arbitrators need to meet in order to join the FRA arbitrators list.

The main objective of this phase is to register Arbitrators that meet the FRA criteria. So that Candidates can submit an application, upload the supporting document during a step by step application process, and pay for the application fees (manual payment process via bank deposit to be detailed), then the application will be processed at two levels of approvals.

3. WEBSITE CONTENT

FRA will provide the content and information to be presented in the new website. Briefly, this will include below pages: <in both English and Arabic language>

3.1 HOME PAGE

Sections (Center in brief , why arbitrate and Executive Manager word)

3.2 ABOUT US PAGES

Sections and sup pages (Board of Trustees, Advisory Board ,Executive Director , Vision, Mission ,Core Values and Center Operating Rules)

3.3 ARBITRATORS AND MEDIATORS AND EXPERTS PAGES AND SECTIONS

Below tables summarizes the portal contents for the three mentioned pages in both lLanguages

L1 Main Page	Level 2	Level 3/ Sub tab	Level 4/ Sub tab
Home Page			
	Center in brief		
	why arbitrate		
	Executive Manager word		
About Us			
	BOARD		
		Board of Trustees	
		Advisory Board	
		Executive Director	
	Strategy		
	Center Operating Rules		
	Careers		
Arbitrators & mediators & experts			
	Arbitrators		
		General requirements to Register	
		Registration forms	
		conflict of interest forms	
		Code of ethics	
		List of Arbitrators	
	Mediators		
		General requirements to Register	
		Registration forms	
		conflict of interest forms	
		Code of ethics	
		List of Arbitrators	
	Experts	General requirements to Register	
		Registration forms	
		conflict of interest forms	
		Code of ethics	
		List of Experts	
			Insurance
			Finance

L1 Main Page	Level 2	Level 3/ Sub tab	Level 4/ Sub tab
الصفحة الرئيسية			
	نبذة عن المركز		
	لماذا التحكيم في المركز؟		
	كلمة المديرالتنفيذي		

			عن المركز
		الهيكل التنظيمي للمركز	
	مجلس الأمناء		
	اللجنة الاستشارية		
	المدير التنفيذي		
	الهيكل الإداري		
		استراتيجية المركز	
	الرؤية		
	الرسالة		
	الأهداف		
		قواعد عمل المركز	
	النظام الأساسي للمركز		
	ميثاق شرف العاملين بلمركز		
		الوظائف	
			المحكمين والوسطاء والخبراء
		المحكمين	
	المتطلبات و الشروط العامة للتسجيل		
	نماذج التسجيل		
	نموذج عدم تعارض المصالح		
	ميثاق شرف المحكمين		
	قائمة المحكمين		
سوق المال			
التأمين			
التمويل			
أنشطة أخرى			
		الوسطاء	
	المتطلبات والشروط العامة للتسجيل		
	نماذج التسجيل		
	نموذج عدم تعارض المصالح		
	ميثاق شرف الوسطاء		
	قائمة الوسطاء		
سوق المال			
التأمين			
التمويل			
أنشطة أخرى			
		الخبراء	
	المتطلبات و الشروط العامة للتسجيل		
	نماذج التسجيل		
	نموذج عدم تعارض المصالح		
	ميثاق شرف الخبراء		
	قائمة الخبراء		
سوق المال			
التأمين			
التمويل			
أنشطة أخرى			

3.4 REGISTRATION PROCESS

3.5 LOGIN PROCESS

3.6 ARBITRATOR APPLICATION PROCESS

4. APPLICATIONS PROCESS FUNCTIONAL REQUIREMENTS

I. Applicant create an account/validate contacts (Application creates his own account using his ID number or passport number (foreigners) , both email and mobile number must be validated before he can create/submit an application)

II. Applicant Submit an application (Applicant goes through a step by step application form; he can save the form and return later on.Supporting documents to be uploaded for each application step.Application to be submitted after all steps and uploads completed)

III. Finance user Change the payment status to paid (FRA Finance department gets the payment information from the bank and checks for the relevant payment and form ID. Users from the finance team will be able to change the application status to “paid” for a specific form (based on the form ID) but he cannot change it once more.)

IV. System moderator First level application review (The system moderator review the application and submitted documents then can approve or reject as the first level approval)

V. FRA Director Second level application review (The system moderator review the application and submitted documents then can approve or reject as the second and final level approval)

VI. System admin Manage system accounts (He can create/delete system accounts for other users.)

VII. Moderator/director/read only users view all applications /statistics (View all applications. Browse/Search applications via applicant ID number, form ID, Payment status)

VIII. FRA portal (system actor) Send notifications (Via email and/or SMS)

IX. All human actors expect applicant Manage own account (Only to change to reset (forget) password.For applications: ID number cannot be changed)

X. Workflow: The application will have the following possible statuses:
- Submitted: after the candidate fill-in the form upload the supporting documents
- Paid: when the application fee is paid.
- Initially approve: the application is being reviewed at the first level and then
- Final approval: second and final approval
- Rejected: the application can might be rejected at the first or second approval state

- Deleted: the application might be deleted if not paid for a after a specific time slot.

5. THIRD PARTY INTEGRATION

5.1 SMSC

FRA is expected to provide an SMSC service to send the OTP and relevant notifications. Integration interface to be specified by FRA

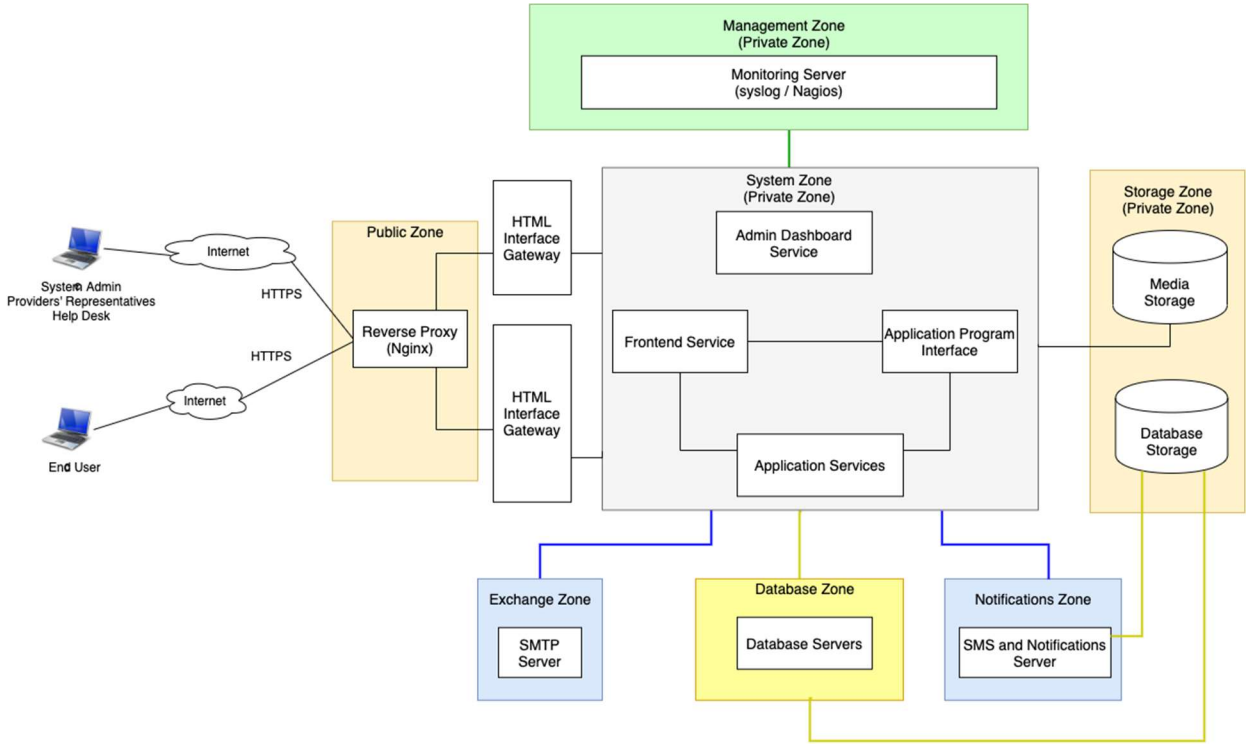
5.2 EXCHANGE SERVER

Same as SMSC, FRA is expected to provide an Exchange service to send the OTP and relevant notifications. Integration interface to be specified by FRA

6. NON-FUNCTIONAL REQUIREMENTS

#	Description	
1	Performance and scalability	
2	Portability and compatibility	
3	Reliability	
4	availability	
5	Security	
6	Localization	
7	Usability	

7. SYSTEM ARCHITECTURE



8. MAIN LAYERS

7.1 USER FRIENDLY DASHBOARD

This will be the dashboard that allow all type of admin user to manage their jobs

7.2 WEBSITE VISITOR AND FRONTEND USER INTERFACE

This will be responsive website that visitors and frontend users will use the portal

9. INFRASTRUCTURE ARCHITECTURE

Below is a summary for the required infrastructure, taking into consideration both vertical and horizontal scalability to be considered according to the traffic volume.

Function	vCPU	RAM	Storage
Private VM1 for Backend server (BPE_SERVICE_BE)	8	16 GB	500 GB
Private VM2 for Web server (BPE_SERVICE_WEB)	8	16 GB	100 GB
Private VM3 for admin server (BPE_SERVICE_ADMIN)	8	16 GB	100 GB
Database server	4	8 GB	1 TB
Attached storage shared to VM1 & VM2			1TB

DB server

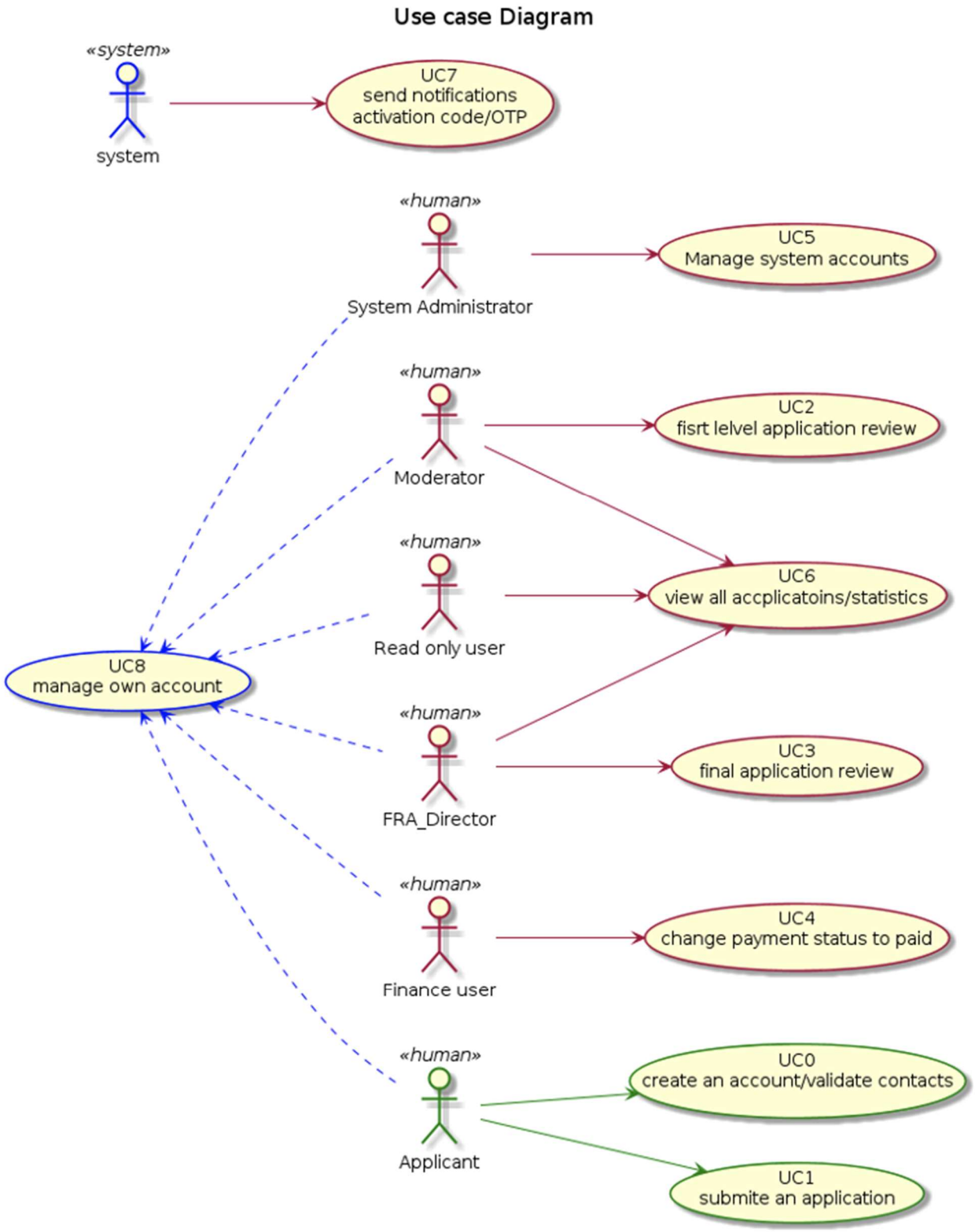
Service / Server	Database server
Backup server	YES (active /active)
Persistence of session	No

Load balancing

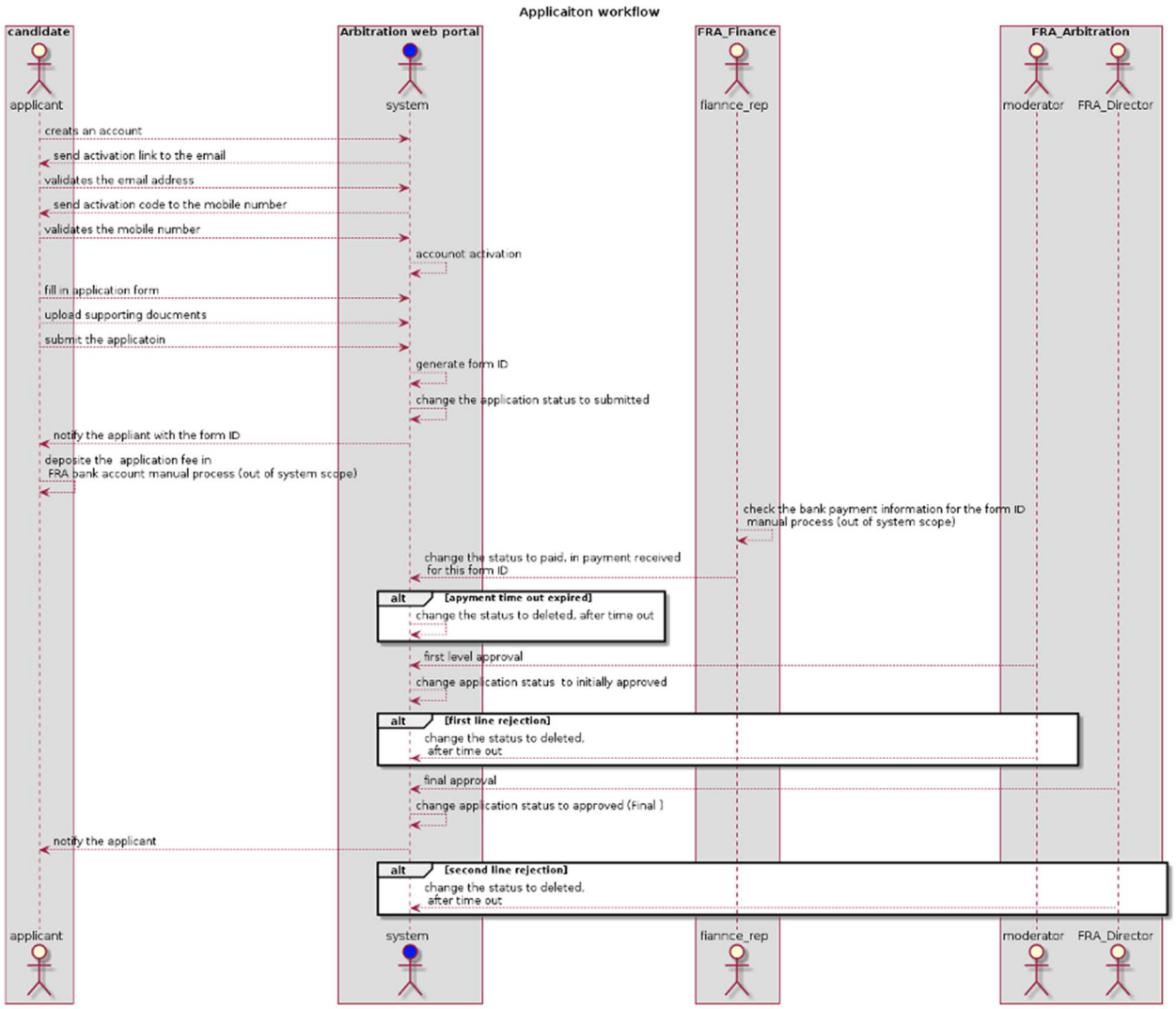
Service / Server (two servers)	Backend server
Criteria	Load balance HTTPs
Backup server	Yes (active/active)
Persistence of session	No

10. MAIN SYSTEM USE CASES

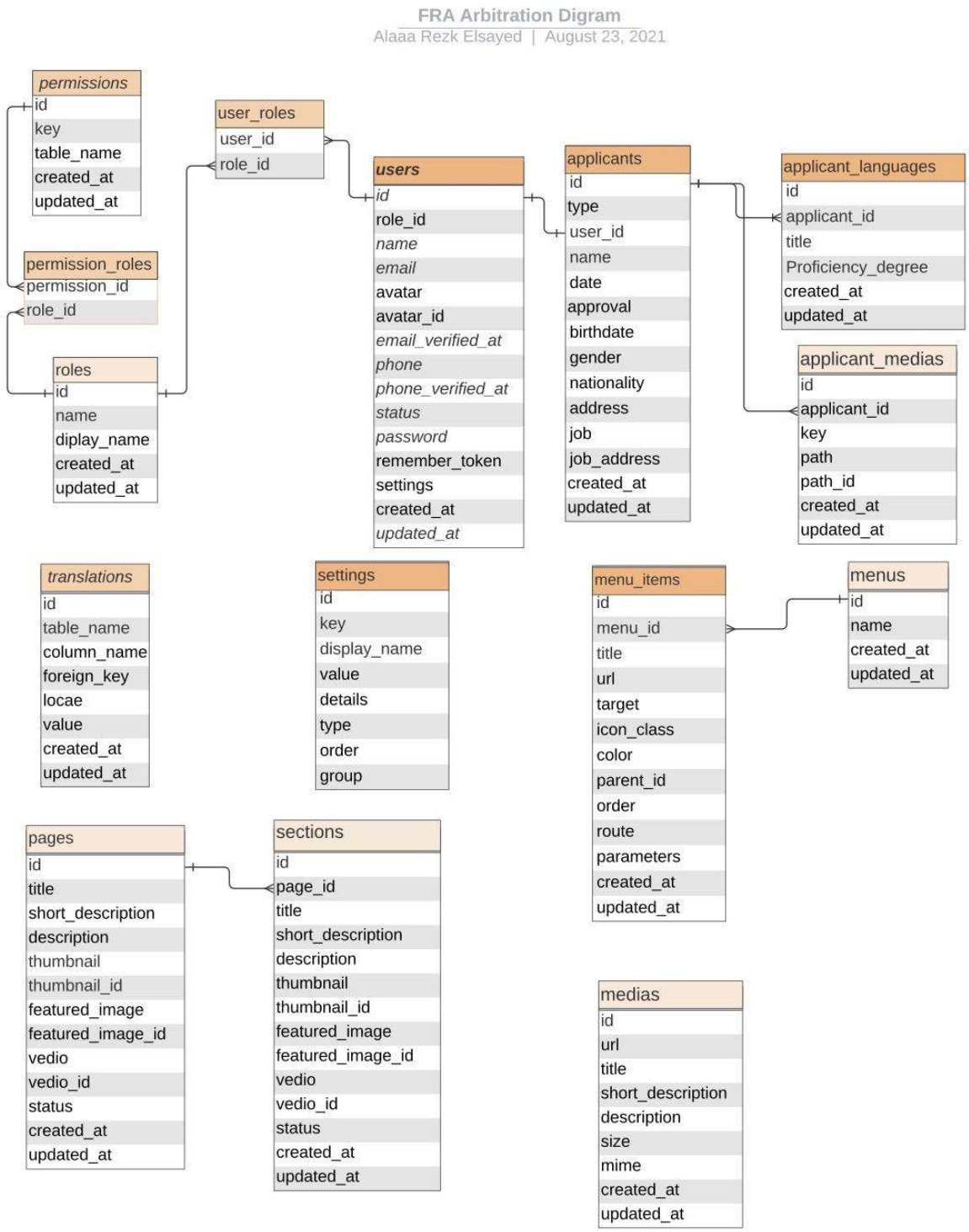
	Use case	Actor	Comments
1	create an account/validate contacts	Applicant	Application creates his own account using his ID number or passport number (foreigners) , both email and mobile number must be validated before he can create/submit an application
2	Submit an application	Applicant	Applicant goes through a step by step application form; he can save the form and return later on. Supporting documents to be uploaded for each application step. Application to be submitted after all steps and uploads completed
3	First level application review	System moderator	The system moderator review the application and submitted documents then can approve or reject as the first level approval
4	Second level application review	FRA Director	The system moderator review the application and submitted documents then can approve or reject as the second and final level approval
5	Change the payment status to paid	Finance user	The FRA Finance department gets the payment information from the bank and checks for the relevant payment and form ID. Users from the finance team will be able to change the application status to “paid” for a specific form (based on the form ID) but he cannot change it once more.
6	Manage system accounts	System admin	He can create/delete system accounts for other users.
7	view all applications /statistics	Moderator/director/read only users	View all applications. Browse/Search applications via applicant ID number, form ID, Payment status
8	Send notifications	FRA portal (system actor)	Via email and/or SMS
9	Manage own account	All human actors expect applicant	Only to change to reset (forget) password. For applications: ID number cannot be changed

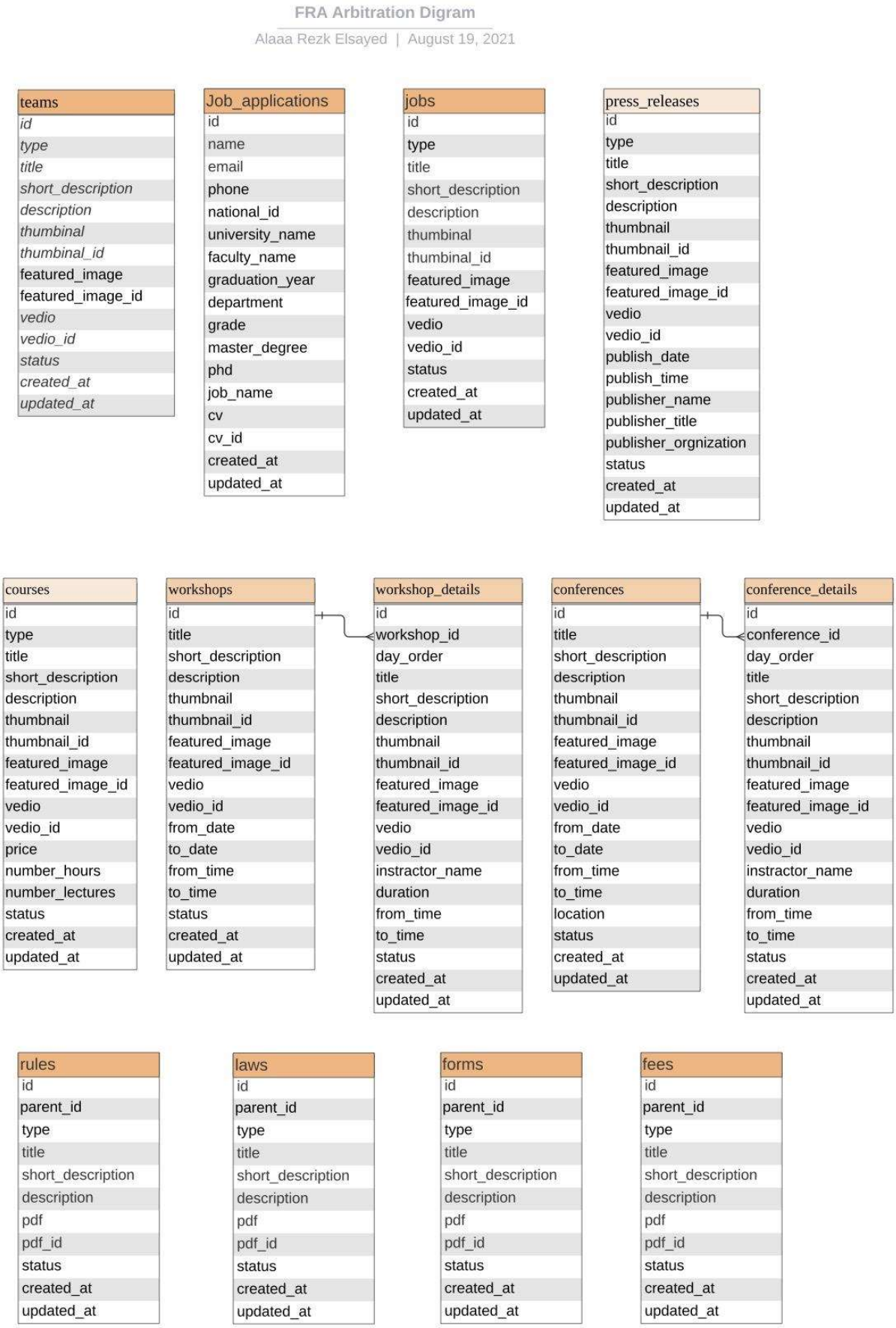

Use case Diagram
«system»
system
UC7
send notifications
activation code/OTP
«human»
System Administrator
UC5
Manage system accounts
«human»
Moderator
UC2
fisrt lelvel application review
«human»
Read only user
UC6
view all accplicatoins/statistics
UC8
manage own account
«human»
FRA_Director
UC3
final application review
«human»
Finance user
UC4
change payment status to paid
«human»
Applicant
UC0
create an account/validate contacts
UC1
submite an application

The below figure summarizes the procedure for the work flow for submitting an application



11. DATABASE DIAGRAM




FRA Arbitration Digram
Alaaa Rezk Elsayed | August 19, 2021
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status
created_at
updated_at

12. TECHNOLOGY STACK

I. PHP 8 (latest version)
II. Laravel 8 (Latest version)
III. Lumen 8 (Latest version)
IV. Mysql 8 (latest stable version)
V. Admin dashboard using Nova (https://nova.laravel.com/)
VI. HTML 5 Responsive design