Information system: E-Agent

(Project for Systems III)

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Definition of the Problem:

In the modern-day world, young people are striving to get famous, which is not an easy and fair process. Many talented people lack the connections, social position, and finances to promote themselves to the television industry. The majority of the current well-known actors are people who had enough money to hire agents, to pay for acting schools, or just simply had acquaintances or relatives in the show business. That gives an unfair disadvantage to the rest of the pursuing actors, left with either being extras or with no jobs at all.

Searching for an acting job can be a long and demanding process. The opportunities of the actors are often enclosed by their current location, social predisposition, and finances. Maybe someone is the perfect match for a role in a movie shot in a different continent, but it is most likely that this person won't even hear about that casting. It is necessary that these people are provided with a service that opens possibilities worldwide.

Real-life castings are conducted by posting ads and people showing up on the auditions. That process is quite vague. It is difficult to search for applicants that meet all of the requirements because the casting agencies can't manually pick out suitable candidates from a list of details about that person. Since both sides are affected by this problem, it would be helpful to have a system that can help, and save time. Such a system would open possibilities to a much bigger population, and bring more diversity into the cinematic universe.

As a project for Systems 3, I want to develop an information system that can help actors from all over the world publish their information, and companies to post casting ads. This system aims also to connect actors with potential employers and provide easy and fast communication.

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*Disclaimer: The male pronoun is used throughout the whole document to simplify writing, but it does not exclude nor discriminate females.

Functional and non-functional requirements of a new system:

Functional Requirements:

The system should enable the following functionalities:

1. The system should enable users to create a profile by registering and after that to log in to their profiles. We have 2 different types of users: Actors and Employers.

2. The system should enable a separate page for actors. The Actors page allows browsing for job posts, and viewing the requirements.

3. The system should enable a separate page for employers. The Employers page allows browsing for actors, viewing their profile pictures and additional information.

4. The actors are able to upload additional information if they wish to. They get to choose what type of information they enter.

5. The employers are able to post ads for jobs, with the name of the job, the deadline for application, other info and additional requirements for the job.

6. The system must enable actors to post portfolio pictures to their profiles to help find jobs easier.

7. The system should allow any data to be edited or deleted.

Non-Functional Requirements:

The system should enable the following functionalities:

1. The system must be able to support up to 5000 registering users per minute.
2. The system must allow up to 10000 applications per minute.
3. The system should be accessible from every web browser (Google Chrome, Safari, Mozilla Firefox…)
4. The system manages personal information and privacy. Log-ins and data exchanges must be encrypted.
5. Data should be stored up to 12 months(after an outstretched amount of inactivity, profiles are automatically deleted).
6. The server must ensure non-stop runnability and access with downtime at most 5%.
7. The system recognizes two types of users: actors and providers(people providing jobs such as directors, filmmakers, or HR employees).
8. The system should be accessible as a website (with the possibility of developing a mobile application). No installments are required.
9. The system uses a database for storing, sorting and accessing data.

Feasibility Study:

As a solution to the problem, I propose a system that will enable users to post information on their profiles, from personal basic information and physical traits to professional achievements and previous acting roles. As for the other end, the companies can post ads with a list of all necessary qualifications for such roles. Such a system will match all the job posts to the actors that satisfy their requirements.

Speaking of difficulties with implementing this system, the most challenging part is matching all the information from both parties, to find the matches. In cases where there is no perfect match, the system should match up the candidates that meet the most requirements. This information system should include a database, storing all the information, a web server, and a website with forms for information submission, and ad posting. Ideally, the system will include a chat option, such that not only it makes the matches, but it allows them to communicate too. Other functionalities that should be present are profile registrations and encrypted logins. For an easy and pleasant experience for the users, a simplistic graphical user interface is something necessary, nothing too complicated, but also with good design.

Regarding privacy, the submission of the information and all the data has to be encrypted, and such information not visible to everyone. The actors' data will only be visible to that user (unless they chose to make it public) and to the production companies after they matched up with that actor. As for the data that the companies submit, it should be visible to everyone. With all these requirements, the system should not be financially demanding, if the consumerization is not high.

This information system will be free of charge, to whoever wants to use it. It is socially acceptable, as long as no one posts offensive content and information (in case someone does, these profiles would be taken down). It also promotes connections and promotions with the included chat options. In addition, it financially helps actors, as it is a time saver for the filming companies. All of this stated above should allow for a better quality of movies, easier castings, and bringing opportunities around the world.

Logical Design:

Table 1: Matrix User role / functions

Function	Actors	Employers
Register	Yes	Yes
Log in/Log out	Yes	Yes
Post ads	No	Yes
Post additional requirements	No	Yes
Post portfolio pictures	Yes	No
Post additional information	Yes	No
Browsing ads	Yes	No
Browsing actors	No	Yes

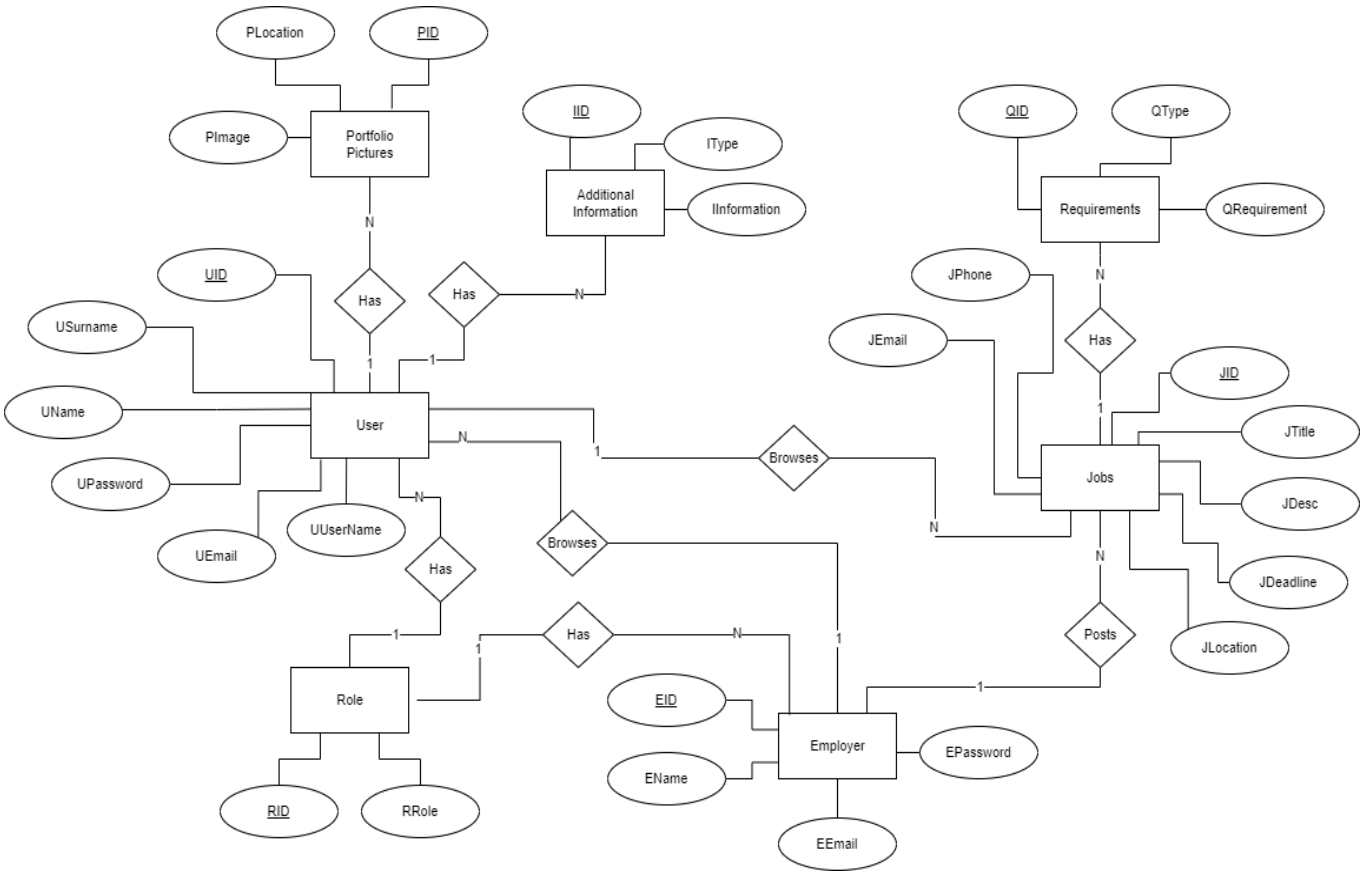
Table 2 : Data Dictionary

Entity	Description	Attribute	Type	Description of Attribute
User	A user of the system	UID	int	Identity of the User
		RRole	enum	Type of user: Actor or Employer
		UUserName	varchar(255)	Chosen Username
		UEmail	varchar(255)	Email of the User
		UName	varchar(255)	Name of the User
		USurname	varchar(255)	Surname of the User
		UPassword	varchar(255)	Chosen Password
Role	Role Information	RID	enum	Role ID
		RRole	enum	Type of role
Employer	Information stored about the Employer	EID	int	Identification of the Employer
		RID	int	User role
		EEmail	varchar(255)	Email
		EPassword	varchar(255)	Chosen Password
		EName	varchar(255)	Name of the production company
Jobs	Job Posts	JID	int	Identification number of the job post
		EID	int	Identification of the employer who created the job post
		JTitle	varchar(255)	Title of the movie/show
		JDesc	text	Short Description of the job
		JLocation	varchar(255)	Location of the job
		JDeadline	date	Deadline for applying for the job
		JPhone	varchar(255)	Phone for more info

		JEmail	varchar(255)	Email for CV Submissions
Additional_Information	Additional information about the user	IID	int	Identification of the additional information
		UID	int	The user with the UID that it belongs to
		IType	varchar(255)	Type of information
		IInformation	varchar(255)	The actual info
Portfolio_Pictures	Pictures of the user	PID	int	Identification of the picture
		UID	int	The user with the UID that it belongs to
		PPicture	varchar(255)	Title of picture
		PLocation	varchar(255)	Location of picture upload
Requirements	Additional Requirements for a Job	QID	int	Identification of the additional requirement
		EID	int	Identification of employer that posted the job
		JID		Identification of the Job post
		QType	varchar(255)	Type of requirement
		QRequirement	varchar(255)	Requirement

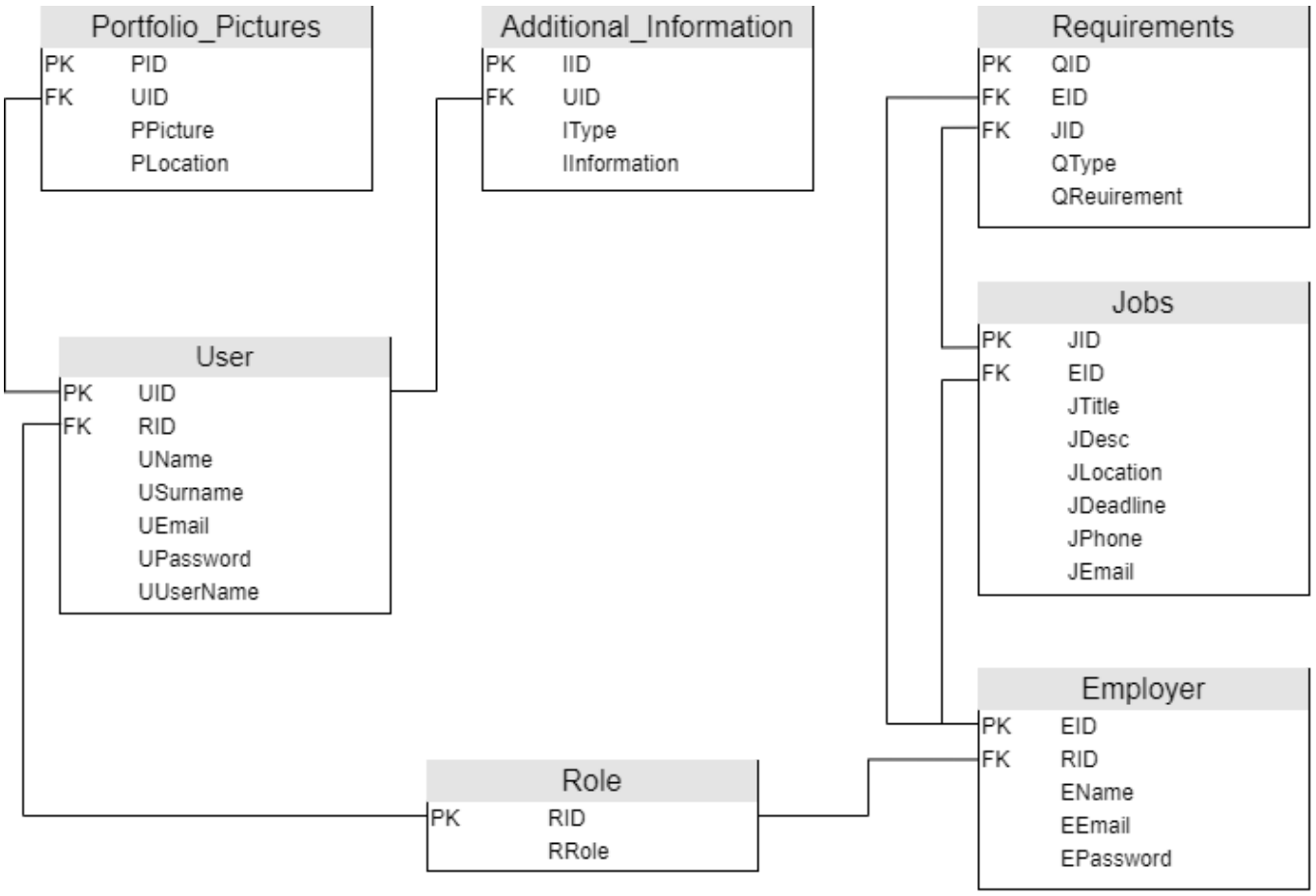
Entity Relational Diagram (ERD):

Figure 1: Entity relationship diagram.



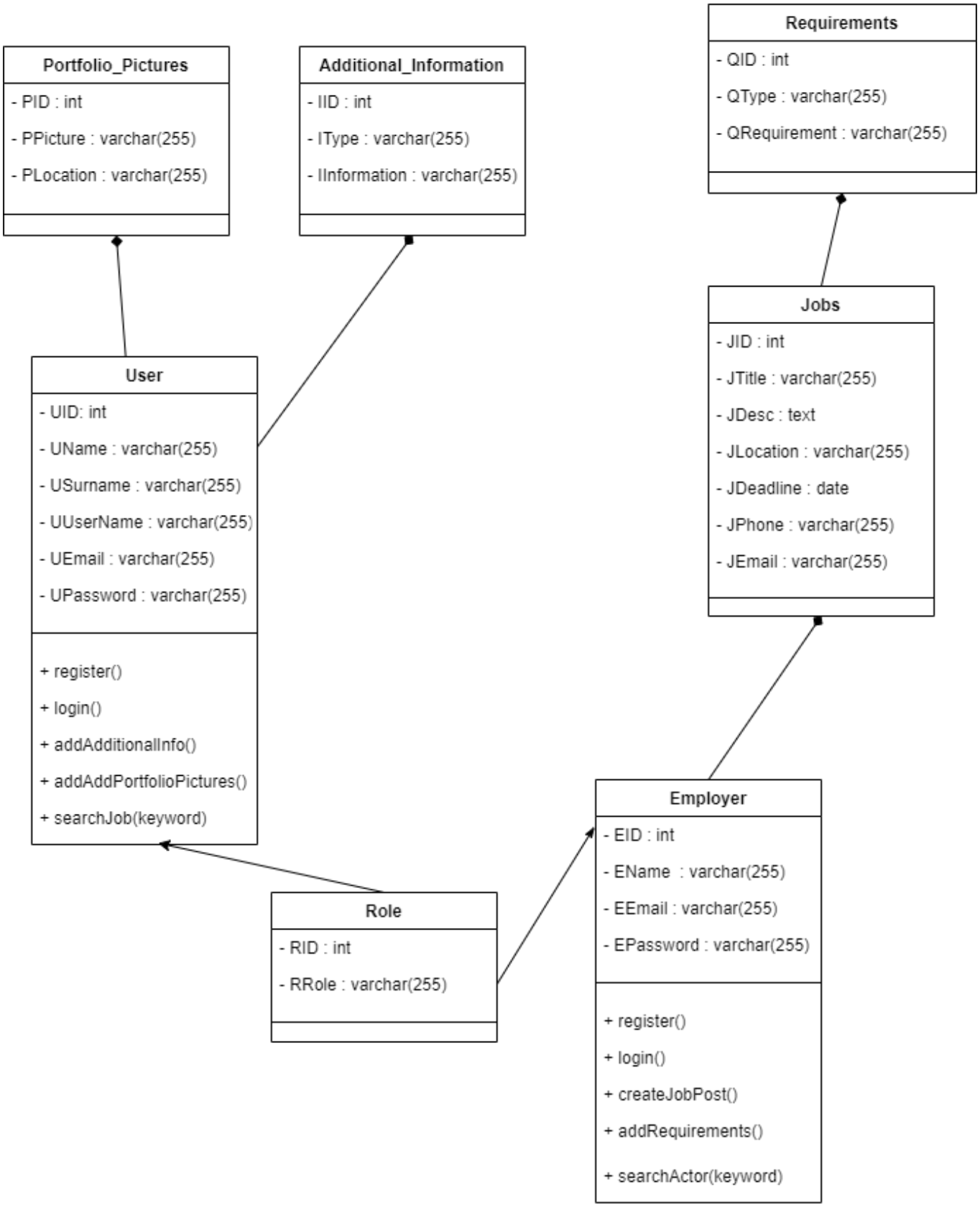
Relational Model:

Figure 2: Relational Model



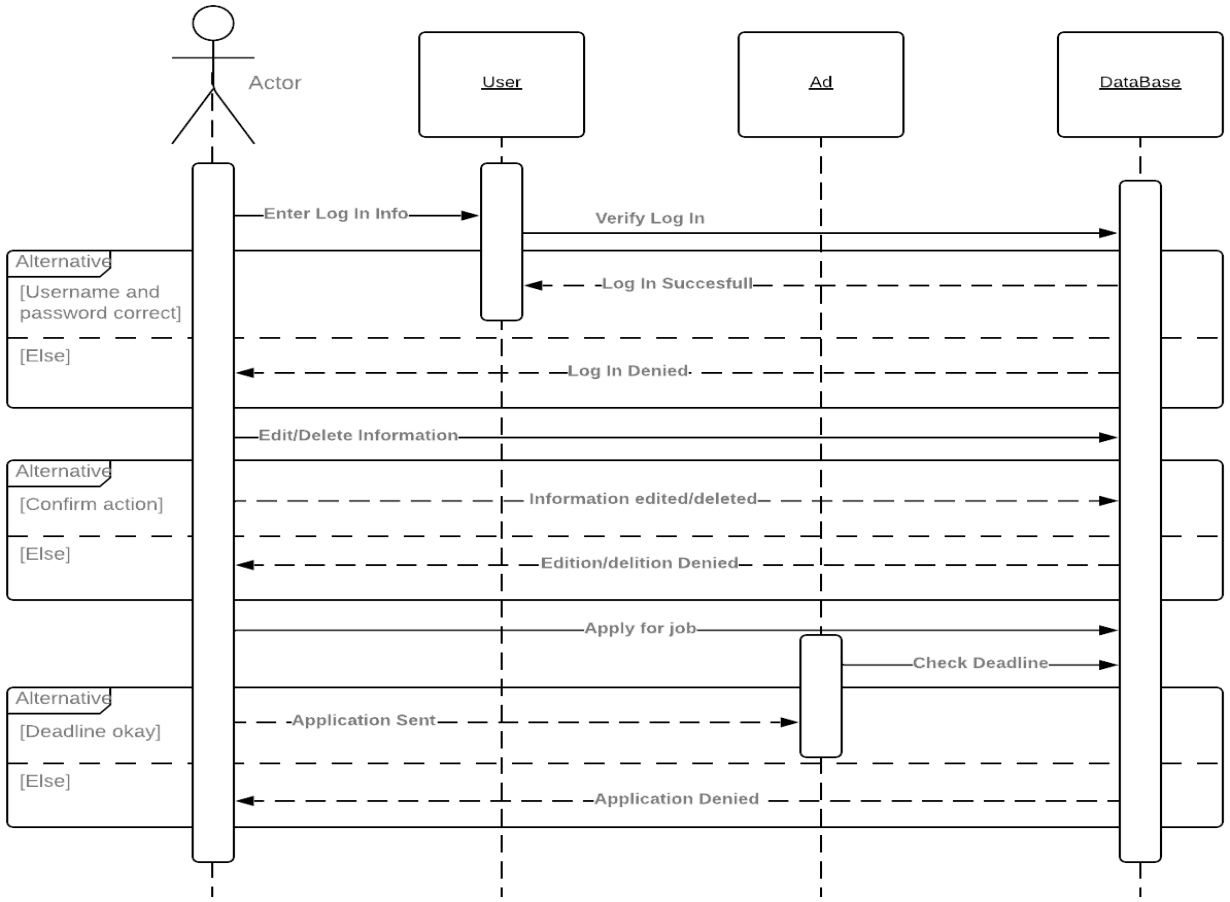
UML Class DIagram:

Figure 3: UML Class Diagram



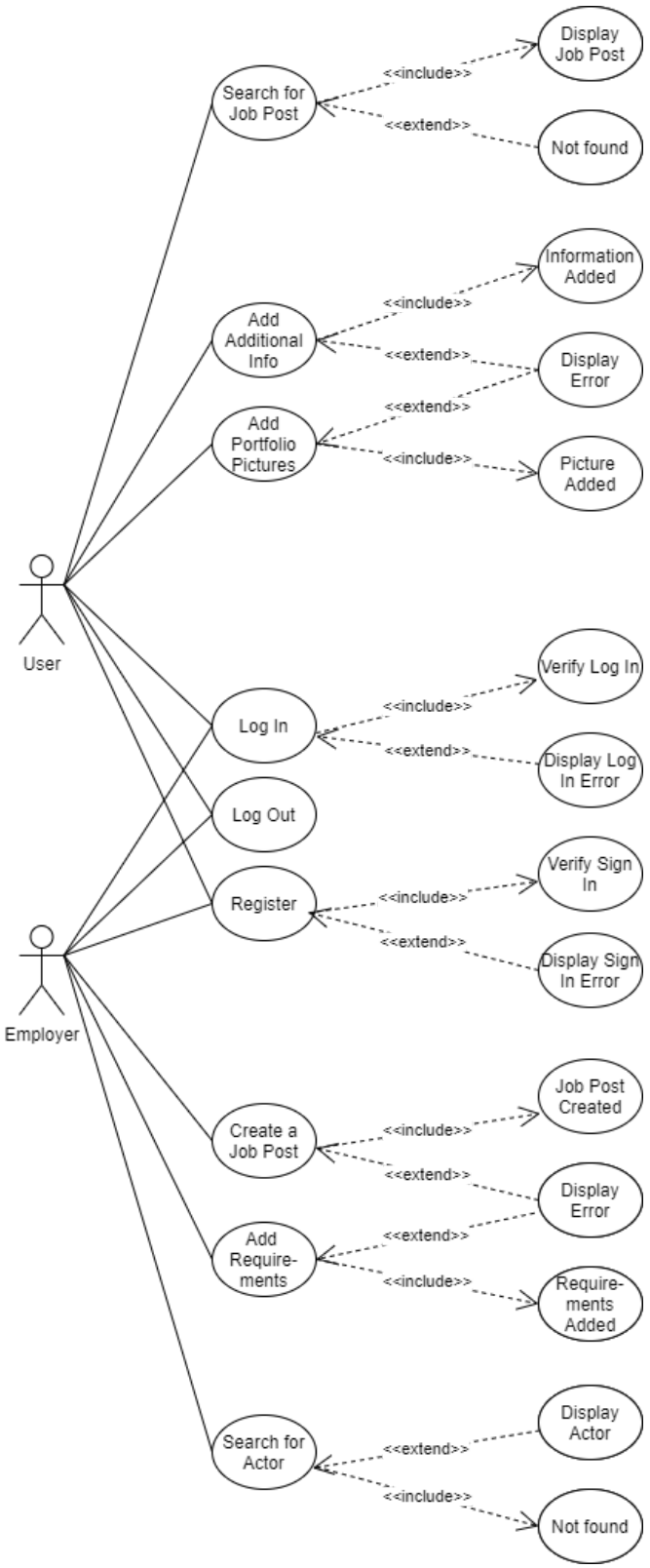
UML Sequence DIagram:

Figure 4: UML Sequence DIagram for Actors applying for ads, and editing/deleting their information



UML Use Case Diagram:

Figure 5: UML Use Case Diagram



Physical Design Phase:

Physical Data Model:

Figure 6: Physical Data Model