

A PROJECT ON

“ONLINE EXAMINATION PORTAL”

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC



CENTER FOR DEVELOPMENT OF ADVANCE COMPTING
HYDERABAD

SUBMITTED BY:

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UNDER THE GUIDENCE OF:

Mr. Ramu P.
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CERTIFICATE

This is to certify that the project work under the title 'Online Examination Portal' is done by Abhishek Rajendra Thoke,NAME-2,NAME--- in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

Mr. RAMU P.
Project Guide

Date:

ACKNOWLEDGEMENT

A project usually falls short of its expectation unless aided and guided by the right persons at the right time. We avail this opportunity to express our deep sense of gratitude towards Mr. RAMU P. (Project Coordinator, CDAC ,Hyderabad.) .

We are deeply indebted and grateful to them for their guidance, encouragement and deep concern for our project. Without their critical evaluation and suggestions at every stage of the project, this project could never have reached its present form.

Last but not the least we thank the entire faculty and the staff members of Center for Development of Advance Computing, Hyd. for their support.

Abhishek Rajendra Thoke
Member-2
Member-3

DAC March-2023 Batch,
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1. INTRODUCTION TO PROJECT

The web based “Online Examination Portal” project is an attempt to stimulate the basic concepts of Examination Conduction. The system enables the candidate to do the things such as search for Company as per job preference and can give exam scheduled by Company for which the candidate has applied Companies can post a job as per their requirements.

The system provides Candidates a Quick Search facility that provides them details of the jobs posted by companies and list of candidates applied for the job to the companies. To apply and post job you need to login into your account.

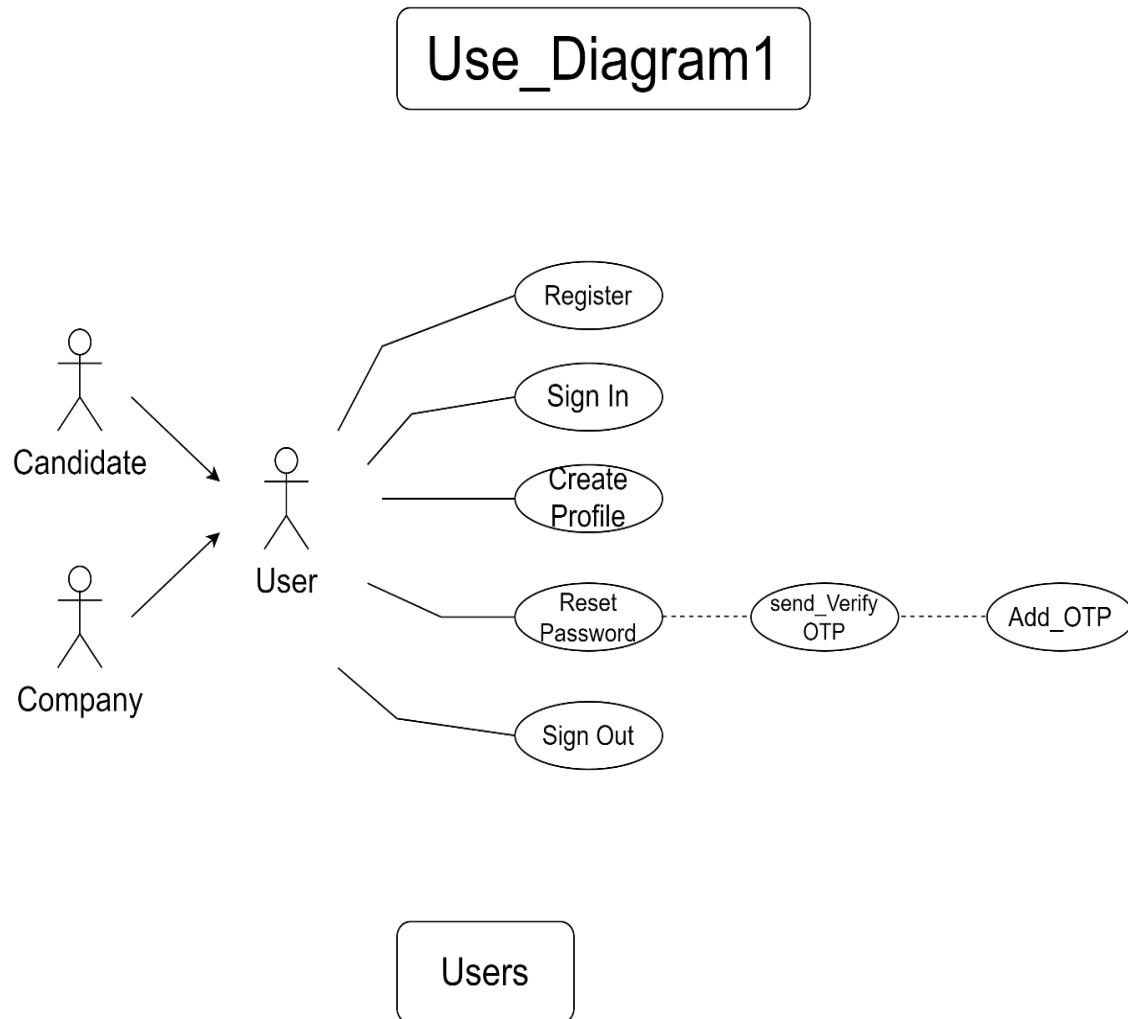
The system allows the Company to send an email to candidates that have applied for their job regarding their selection for the examination and the scheduled Date & time of the exam. The system will display all the candidates and companies to each other.

Here we provided quick search facility which displays number of vacancies available for particular company and for particular job. Based on vacancies and requirements the candidates can apply for the company.

Company will check for the candidates applied for the job they have posted. They will notify all Candidates regarding the update about the scheduling of exam, Company will conduct the exam and the candidates will appear for the exam. Based on the candidate's performance in the examination the further decision will be taken by the company regarding their recruitment of the candidates.

2.REQUIREMENTS

2.1 FUNCTIONAL REQUIREMENTS



2.1 User

The Candidate and Company both will be called the ‘user’, will be presented with five common choices by the system, as the first step in the interaction between System and them. A user can choose one of these and his choice would be governed by whether he is a registered as Candidate or as a Company. The terms ‘registered candidate’ and ‘registered company’ are described below.

A candidate who has applied for the job or the company have already posted a job or conducted an exam regarding the recruitment earlier would have been given a user id and a password. This 'personal information' would be hence forth referred to as 'profile'. Such a user with a profile in DB-user shall be called a 'registered user'. A registered user can use the functioning by logging into the system.

A new user, on the other hand, would have to register himself with the system by providing personal information, with help of this new user will becomes a registered user.

2.2 Registration and creation of user profile

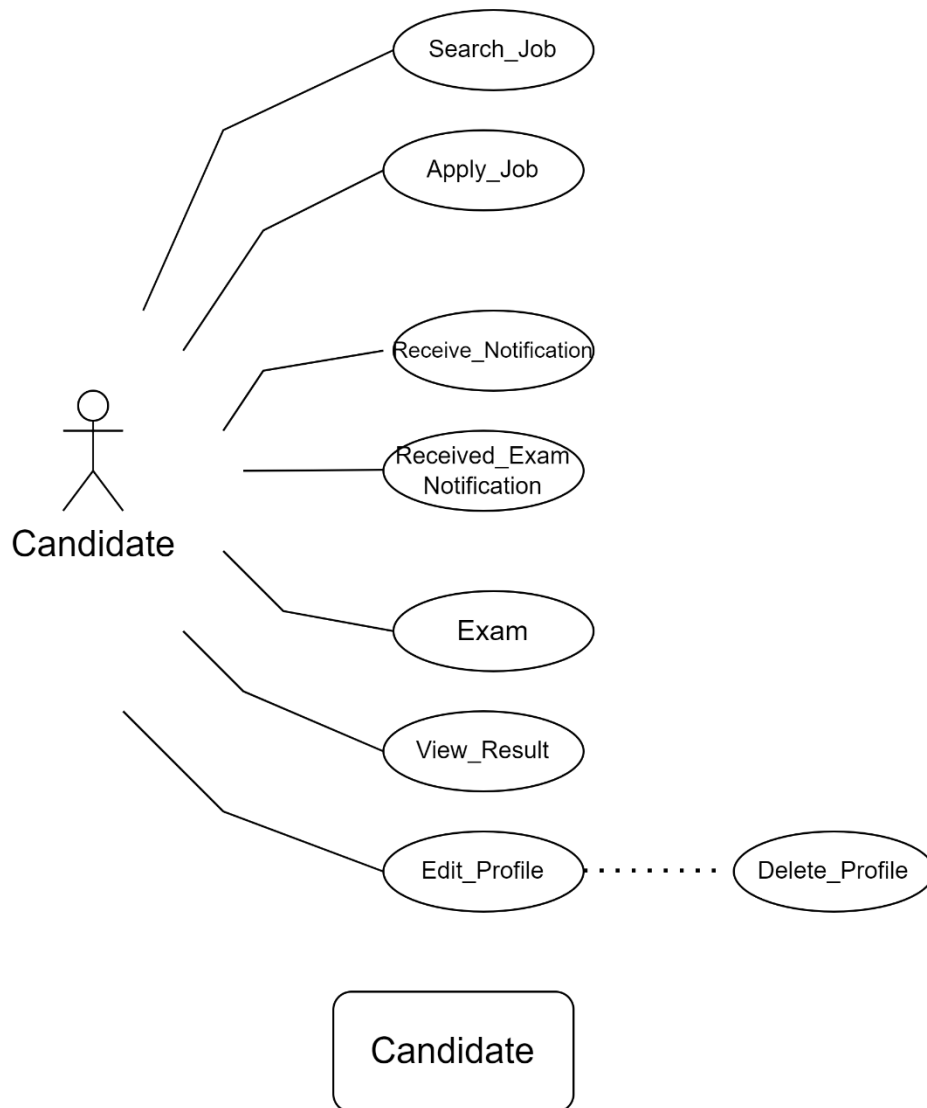
The system shall require a user to register, in order to carry out the Exam and Job application functionalities. It will ask the user for the following information at the least – a user name, an address, a city, a state, a pin code, an Email, a Mobile No, a password, a Confirm Password, Date of Birth, Gender, Highest Qualification – for the candidate. For company an additional detail such as Contact person, company website will be asked. The system will ask user it's role at the time of Registration as well.

Based on the role chosen by the user the distribution is done internally. That is if user have selected

- a) Candidate Role
- b) Company Role

In case user choses a) option – user has registered himself as candidate he can search and see the jobs created by companies also, candidate can apply for the suitable jobs.

In case user chose b) option – user has registered himself as Company
He can post Jobs as per the requirement and can conduct exam.



2.2.1 Search Job

The above mentioned is the functionality provided by system for the candidate only. Here candidate can search for the available jobs suitable for his profile that is academics and experience level.

2.2.2 Apply Job

Candidate can choose any job best suited for him and can apply for it.

2.2.3 Receive Notification

Once a candidate applies for a job, company posted that job will look for the candidate list and will send them all a notification regarding their selection for the examination.

2.2.4 Receive Exam Notification

Candidate selected for the examination will receive a notification regarding the exact date and time of the examination.

2.2.5 Appearing for Exam

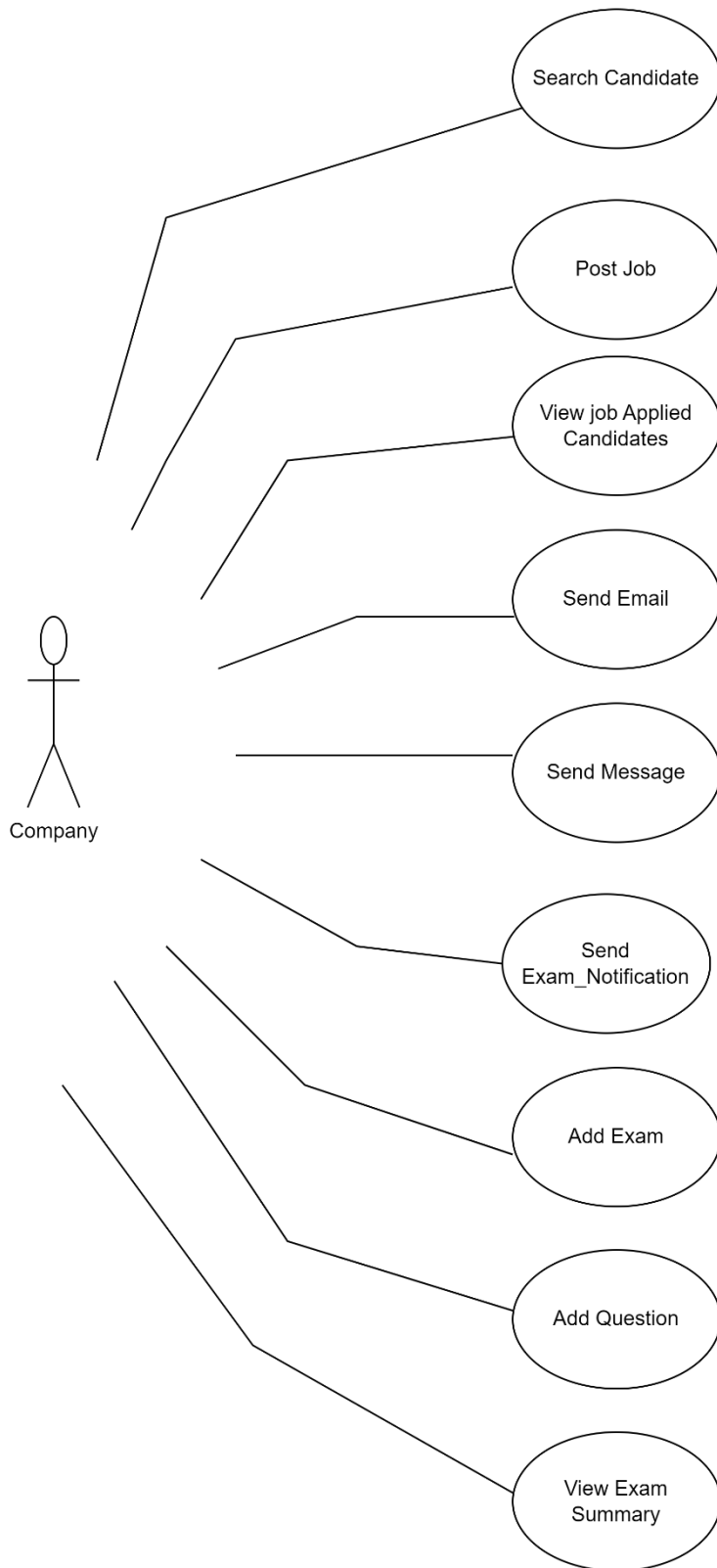
Candidate can appear for the exam scheduled by the company.

2.2.6 View Result

Candidate can view result of the same examination he has given.

2.2.7 Edit / Delete Profile

Candidate can update/ delete his profile at any instant of time, after deletion the details of the profile will be deleted from the database and user will not be able to use the system.



Company

2.3.1 Search for Candidate

Company can post a job and ask for candidates to apply for it.

Company can view the list of candidates applied for the job. Company can also search for the candidate in their list.

2.3.2 Post Job

Company can post a job as per its requirement.

2.3.3. View Applied Candidate List

Company can view the detailed list of candidates applied to the job with their names, contact no, email id.

2.3.4. Send Email

Company can send email to the selected candidates based on the emails they have provided at the time of registration.

2.3.5. Send Message

Company can send Message to candidates regarding their exam schedule.

2.3.6. Send Exam Notification

Company can send an exam notification to the candidates prior to the scheduled exam date and time.

2.3.7. Add Exam

As per the requirement mentioned in the job, Company can schedule an exam with the difficulty as per the job requirement knowledge level, it might be easy, medium or difficult.

2.3.8. Add Question

Company can add specific questions to the exams, they are stored in the Database for time being and can be fetched and will be displayed to the candidate as the part of exam as and when scheduled.

2.3.9. View Exam summary

Company can view the summary of marks gained by the candidates and the top performers in the same exam, based on which they can take decision regarding the further recruitment process.

ADMIN :

Here no admin role is specified since, there will be direct communication between candidate and company and hence no middleware or third person involvement will be required.

2.2 NON FUNCTIONAL REQUIREMENTS

2.2.1 Interface

Go to Appendix B for user interfaces

2.2.2 Performance

- **Number of Concurrent Users:**
ARS shall be able to handle at least 1000 transactions/inquiries per second
- **Booking of Tickets:**
The system is susceptible to any temporary server failure since it uses the strong feature of Hibernate. Hence the examination will be continued even if the sever gets disconnected in between the examination.

2.2.3 Constraint

ARS shall be able to handle at least 1000 transactions/inquiries per second

2.2.4 Other Requirements:

- **Hardware Interfaces**

The SPMS is expected to function on Intel PIII 900 MHz Processor equivalent or above, 128 MB RAM, 20 GB HDD.

- **Software Interfaces**

The SPMS shall work on MS Windows operating systems family (MS Windows 98, MS Windows NT Workstation, MS Windows 2000, MS Windows XP). It configures to work with Oracle database. This System works on Apache Tomcat server. It uses browser IE 5.0 & above. It uses IIS 5.0 server.

3. DESIGN

3.1 Database Design

The following table structures depict the database design.

Table1: Registration

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
3	UserID	Number	4	0
0	Name	Varchar	70	0
0	Address	Varchar	45	0
0	City	Varchar	45	1
0	State	Varchar	45	1
0	pin code	Varchar	10	1
0	mobile	Varchar	15	1
0	Email_id	Varchar	30	1
0	password	Varchar	256	1
0	DOB	DATE		0
0	gender	Char	1	0
0	Contact_person	Varchar	70	0
0	Comp_website	Varchar	100	1
1	role	Varchar	45	0
1	User_type	number		0
0	Qualification_details	Varchar	100	0

Table2: User Type

3	Id	Number	4	0
0	userType	Varchar	30	1

Table3: Notification

3	ID	Number	4	0
0	User_id	Number		1
0	C_msg	Varchar	45	1
0	Msg_datetime	DateTime		1

Table4: Question

3	ID	Number	4	0
3	User_id	Number	4	0
0	Question	Varchar	256	1
0	Option_a	Varchar	45	1
3	Option_b	Varchar	45	0
0	Option_c	Varchar	45	1
0	Option_d	Varchar	45	1
0	Option_e	Varchar	45	1
0	Correct_ans	Varchar	45	1
0	X	Varchar	45	1
0	Y	Varchar	45	1
0	Z	Number	4	1

Table5: ApplyJob

3	Id	Number	4	0
0	User_id	Number	4	0
3	Job_id	Number	4	0
0	isApplied	TinyInt		0
0	ApplicationDate	Date		1
0	X	Varchar	45	1

Table6:Post Job

3	ID	Number	4	0
0	User-id	Number	4	1
0	Last_date	Date		1
0	Vacancy	Number	4	1
0	Skill	Varchar	100	1
0	Min_qualification	Varchar	20	1
0	Max_age	Number	4	1
0	Job_location	Varchar	45	1
0	Salary	Double		1
0	Working_hours	Number	4	1
0	Description	Varchar	256	1

Table7:Result

3	Id	Number	4	0
0	User_id	Number	4	0
3	ques_id	Number	4	0
0	Selected_ans	Varchar	4	0
0	X	Varchar	45	1
0	Y	Varchar	45	1

Table8:Password history

3	Id	Number	4	0
0	User_id	Number	4	0
3	Old_Password	Varchar	256	0
0	Last_modified	Date		0

Table9:OTP details

3	Id	Number	4	0
0	User_id	Number	4	0
2	Otp_code	Varchar	6	0
0	Generated_on	Date		0
0	Expiry_time	Date		
0	isVerified	TinyINT		
0	X	Varchar	45	1
0	Y	Varchar	45	1

Table10:Exam

3	Id	Number	4	0
0	User_id	Number	4	0
3	Ques_id	Number	4	0
0	Exam_OTP	Varchar	6	0

E-R Diagram,Dataflow diagram and Class Diagram:

Go to Appendix A

4. CODING STANDARDS IMPLEMENTED

Naming and Capitalization

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e. capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

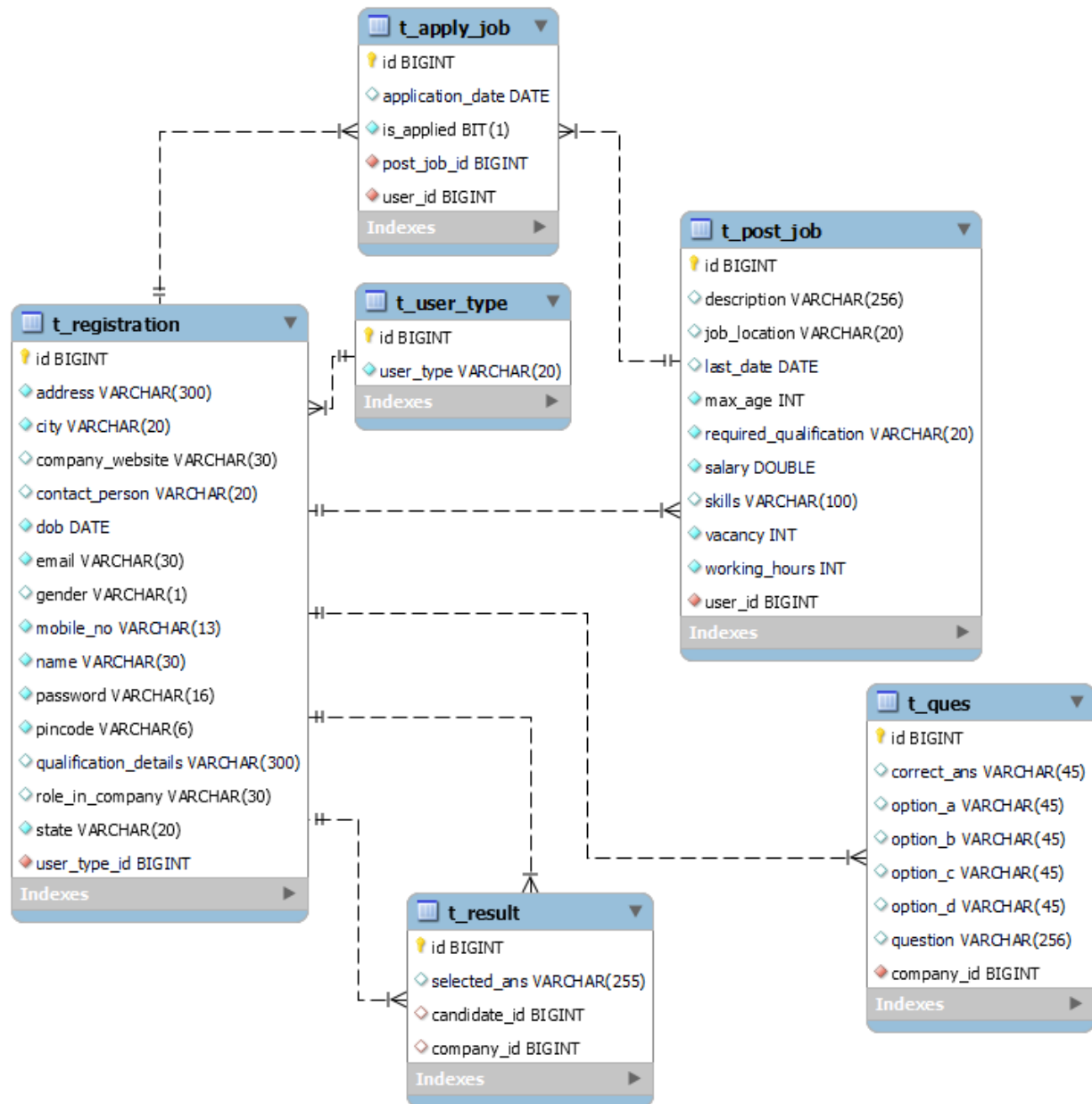
Identifier	Case	Examples	Additional Notes
Class	Pascal	EmailOTP, AppUser, BaseEntity	Class names should be based on "objects" or "real things" and should generally be nouns . No ‘_’ signs allowed. Do not use type prefixes like ‘C’ for class.
Method	Camel	getDetails, sendEmail	Methods should use verbs or verb phrases.
Parameter	Camel	name, address	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	Apply Job	Do not use the ‘_’ sign

Comments

- Comment each type, each non-public type member, and each region declaration.
- Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- Separate comments from comment delimiters (apostrophe) or // with one space.
- Begin the comment text with an uppercase letter.
- End the comment with a period.
- Explain the code; do not repeat it.

Appendix A

Class Diagram



Appendix B

Registration Page

The screenshot shows a web browser window with the title 'React App' and the address bar displaying 'localhost:3000/register'. The page content is centered and titled 'Register here'. It contains a registration form with the following fields: Name, address, City, State, Pincode, Email, Mobile no, Password, Confirm Password, Date of birth (with a date picker), Gender (radio buttons for Male, Female, Other), Contact_person, Company_website, Highest Qualification, and Register as (a dropdown menu). Below the form is a 'Register' button. A link 'Already User? click here to login' is positioned below the 'Register' button. The Windows taskbar at the bottom shows the search bar, various application icons, and system information: 28°C Mostly sunny, 11:30 AM, 29-08-2023.

React App x +

localhost:3000/register

Register here

Name:

address:

City:

State:

Pincode:

Email:

Mobile no:

Password:

Confirm Password:

Date of birth:

Gender: ☐ Male ☐ Female ☐ Other

Contact_person

Company_website

Highest Qualification

Register as:

[Already User? click here to login](#)

Type here to search 28°C Mostly sunny 11:30 AM 29-08-2023

Login Popup:

The screenshot shows a web browser window with the title 'React App' and the address bar displaying 'localhost:3000'. The page content is centered and contains a login form with the following fields: Email and Password. Below the Password field are two buttons: 'Log in' (blue) and 'Reset' (red). Below the buttons are two links: 'Click Here to Register' and 'Forget Password'. The Windows taskbar at the bottom shows the search bar, various application icons, and system information: 28°C Mostly sunny, 11:30 AM, 29-08-2023.

React App x +

localhost:3000

Email

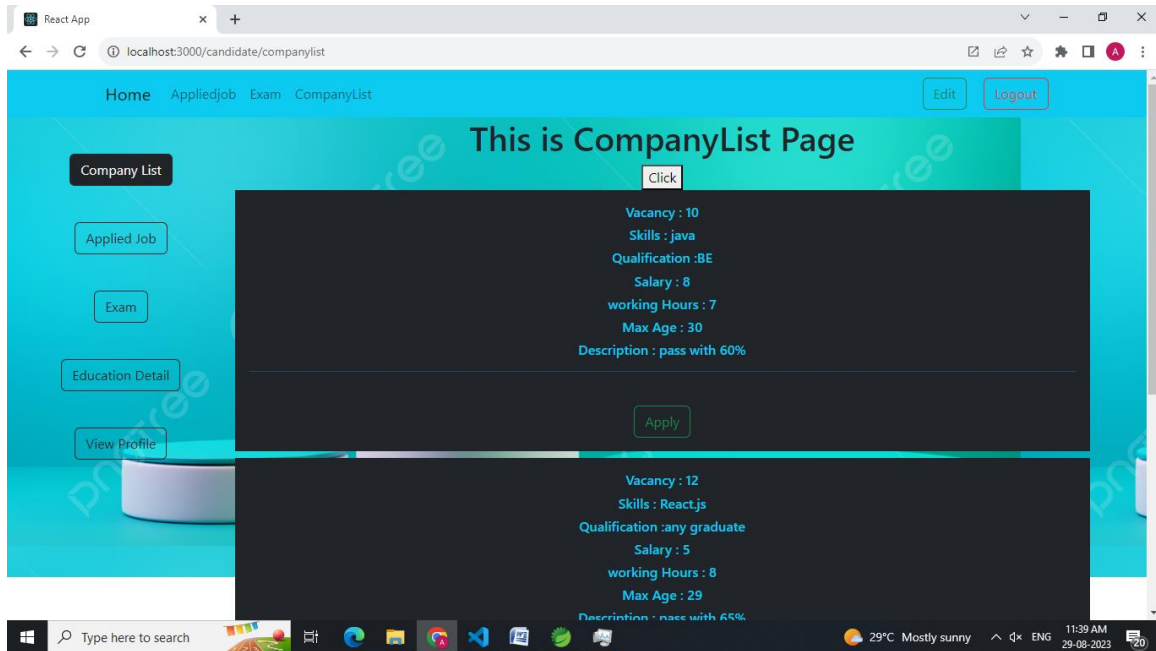
Password

[Click Here to Register](#)

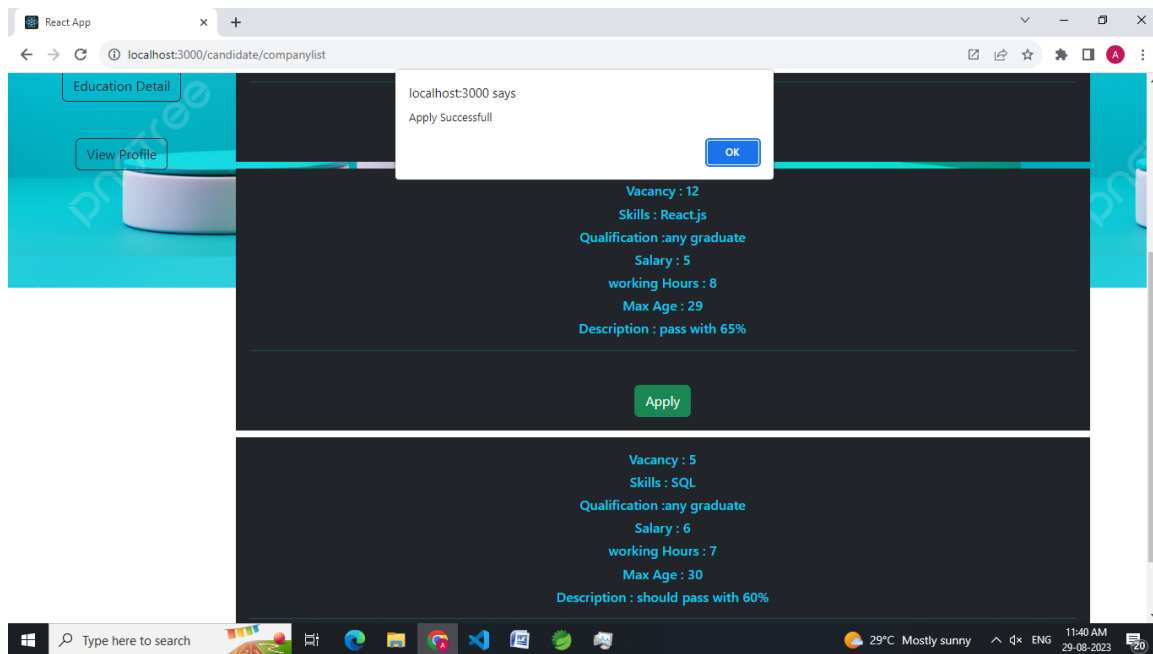
[Forget Password](#)

Type here to search 28°C Mostly sunny 11:30 AM 29-08-2023

Search Company/Job:



Apply Job:



Edit Candidate Profile:

React App

localhost:3000/candidate/edit

Home Appliedjob Exam CompanyList

Edit Logout

Company List

Applied Job

Exam

Education Detail

View Profile

Edit Your Profile

Name: akashy

address: karad

City: satara

State: MH

Pincode: 425315

Mobile no: 9876543210

Highest Qualification: DAC

Update

Type here to search

29°C Mostly sunny

11:35 AM 29-08-2023

Update Question:

React App

localhost:3000/company/questions

Home Addjob Set Questions Candidate List

Edit Logout

Applied Job Page

Question : Which of the following is not a valid access modifier in Java? Update

Question : what is jsx in react Update

Question : Which Java keyword is used to create a subclass from an existing class? Update

Add Jobs

Set Questions

Candidate List

Exam Conduct

View Profile

Questions

Type here to search

29°C Mostly sunny

11:32 AM 29-08-2023

Update Question:

The screenshot shows a web browser window with the URL `localhost:3000/company/setquestions`. The page has a navigation bar with links: Home, Addjob, Set Questions, and Candidate List. There are 'Edit' and 'Logout' buttons in the top right. The main content area is titled 'Set Question Paper' and features a sidebar with buttons: Add Jobs, Set Questions, Candidate List, Exam Conduct, View Profile, and Questions. The form itself has the following fields:

Question :	<input type="text"/>
Option a:	<input type="text"/>
Option b:	<input type="text"/>
Option c:	<input type="text"/>
Option d:	<input type="text"/>
Option e:	<input type="text"/>
Correct Answer :	<input type="text" value="Select Answer"/>

A 'Submit' button is located at the bottom right of the form.

EditCompanyProfile:

The screenshot shows a web browser window with the URL `localhost:3000/company/edit`. The page has a navigation bar with links: Home, Addjob, Set Questions, and Candidate List. There are 'Edit' and 'Logout' buttons in the top right. The main content area is titled 'Edit Your Profile' and features a sidebar with buttons: Add Jobs, Set Questions, Candidate List, Exam Conduct, View Profile, and Questions. The form itself has the following fields:

Name :	<input type="text" value="HR1"/>
address :	<input type="text" value="ameerpeth"/>
City :	<input type="text" value="Hyd"/>
State :	<input type="text" value="Telangna"/>
Pincode :	<input type="text" value="456123"/>
Mobile no :	<input type="text" value="7412589630"/>
Highest Qualification :	<input type="text" value="Phd"/>

An 'Update' button is located at the bottom of the form.

Add JOB:

The screenshot shows a web browser window with the URL `localhost:3000/company/addjob`. The page has a navigation bar with links: Home, Addjob, Set Questions, and Candidate List. There are 'Edit' and 'Logout' buttons in the top right. The main content area is titled 'Add Job' and features a sidebar with buttons: Add Jobs, Set Questions, Candidate List, Exam Conduct, View Profile, and Questions. The form fields are as follows:

Require Skill :	<input type="text" value="SQL"/>
Job Description:	<input type="text" value="should pass with 60%"/>
Require Qualification :	<input type="text" value="any graduate"/>
Vacancy :	<input type="text" value="5"/>
Job Location :	<input type="text" value="Remote"/>
Salary :	<input type="text" value="6"/>
Working hours :	<input type="text" value="7"/>
Max Age :	<input type="text" value="30"/>
Last Date :	<input type="text" value="23-08-2023 11:32 AM"/>

A 'Submit' button is located at the bottom center of the form.

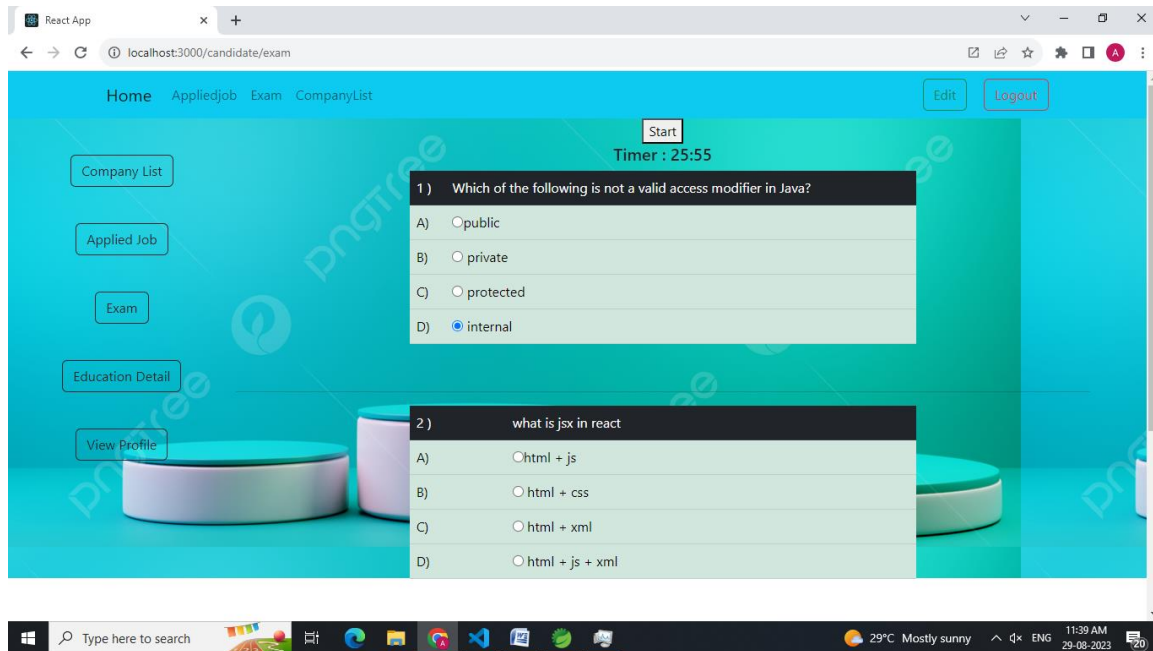
Set a Question:

The screenshot shows a web browser window with the URL `localhost:3000/company/setquestions`. The page has a navigation bar with links: Home, Addjob, Set Questions, and Candidate List. There are 'Edit' and 'Logout' buttons in the top right. The main content area is titled 'Set Question Paper' and features a sidebar with buttons: Add Jobs, Set Questions, Candidate List, Exam Conduct, View Profile, and Questions. The form fields are as follows:

Question :	<input type="text"/>
Option a:	<input type="text"/>
Option b:	<input type="text"/>
Option c:	<input type="text"/>
Option d:	<input type="text"/>
Option e:	<input type="text"/>
Corrcrt Answer :	<input type="text" value="Select Answer"/>

A 'Submit' button is located at the bottom center of the form.

Take Exam:



7.REFERENCES:

<http://www.google.com>

<https://www.testportal.net/>

<https://www.conductexam.com/>

<https://www.yoctel.com/online-exam-website-portal>

<https://joinsuperset.com/student.html>

<https://www.speedexam.net/>

<https://exam.net/>