



## **Individual Assignment**

**Enterprise Programming for Distributed Application (052024-KGT)**

### **Part 2**

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**HAND-IN DATE: 31st August 2024**

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**INTAKE: APD3F2405SE**

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## Introduction

This project consists of an employment system for the company APU. The primary objective of this project is to create a robust, scalable, and user-friendly employment management platform that can handle various tasks such as job postings, applications, user management, and feedback processing. The system is intended to streamline the employment process, making it easier for employers to post job vacancies, employees to apply for jobs, and administrators to manage the overall system efficiently. Some key features found in the system include:

- **User Management:** The system supports multiple user roles (Admin, Employer, Employee), each with specific functionalities and access levels. This allows for a tailored user experience depending on the user's role within the system.
- **Job Posting and Application:** Employers can post job vacancies, and employees can apply for these jobs through a streamlined interface. The system also tracks applications, allowing both employers and employees to manage and review job applications effectively.
- **Feedback and Notifications:** The platform enables employers to provide feedback on employees, which can be managed by administrators. Notifications are also sent to users to keep them informed about important events, such as job application status updates or feedback received.
- **Security and Data Integrity:** The system ensures that all user data is securely stored and managed. Role-based access control is implemented to ensure that sensitive information is accessible only to authorized users.

The system utilizes a three-tier architecture to ensure modularity and scalability. The system was made for 3 main user roles which are Admin, Employer and Employees. Each contain their own different functionalities and access privileges. The project is implemented using a three-tier architecture:

### 1. Presentation Tier:

- **JSP Pages:** These pages serve as the user interface, allowing users to interact with the system. Different pages are designed for different roles (Admin, Employer, Employee), and include features like login, registration, and dashboard views.
- **Servlets:** These act as controllers that process user requests from the JSP pages, invoke the appropriate business logic, and return responses back to the user.

### 2. Business Tier:

- **Facade Classes:** These classes encapsulate the business logic of the application. They interact with the entity classes to perform CRUD (Create, Read, Update, Delete) operations.
- **Entity Classes:** These classes represent the data model, corresponding to database tables. They hold the attributes and relationships that define how data is stored and managed.

### 3. Database Tier:

- **Database:** This tier consists of the actual database where all the data is stored. Entity classes map directly to database tables, ensuring data is persisted and retrieved efficiently.

## System Architecture

The diagram below provides a visual representation of the interaction between the three tiers of the system:

### 1. Presentation Tier:

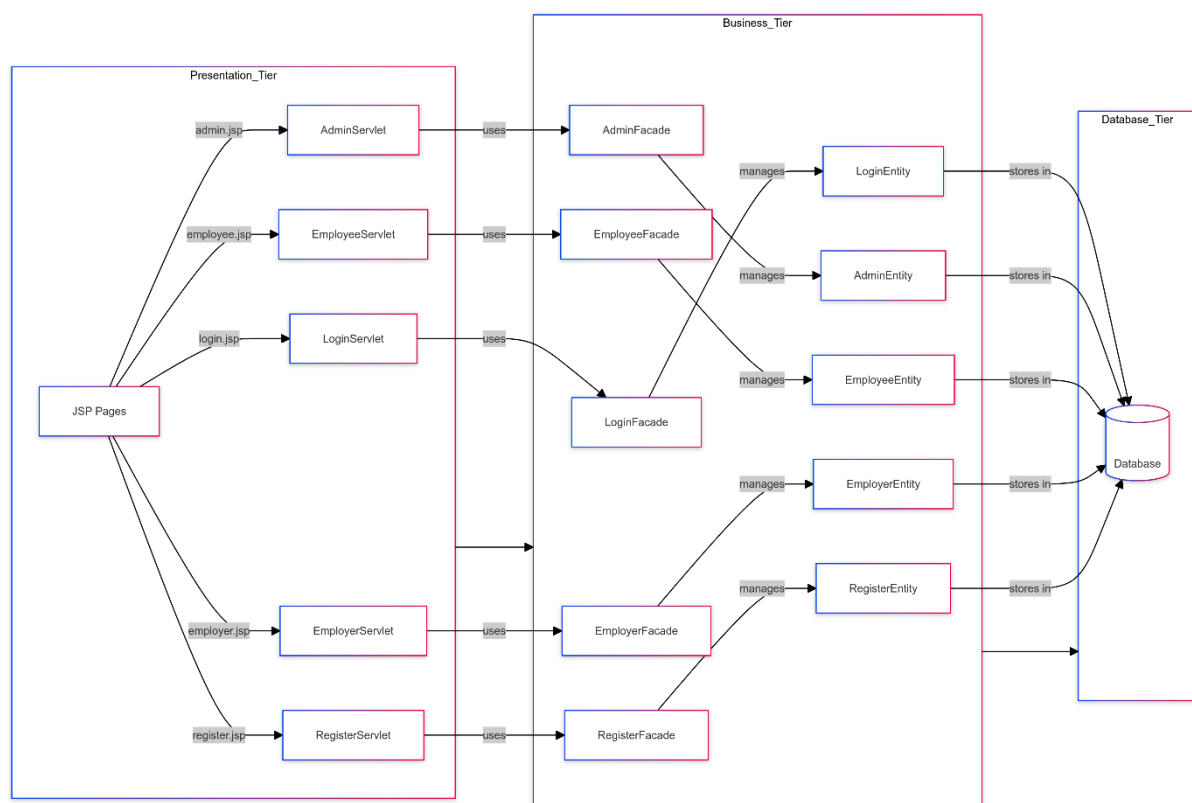
- The JSP pages are the entry point for user interactions. For example, a user might visit login.jsp to access the system.
- The JSP pages communicate with the corresponding servlets (e.g., LoginServlet) that handle user requests.

### 2. Business Tier:

- The servlets interact with facade classes in the Business Tier. These facades handle the business logic and interact with the entity classes.
- Each facade class (e.g., LoginFacade) corresponds to a specific entity (e.g., LoginEntity), encapsulating operations like validating user credentials, retrieving user information, or managing sessions.

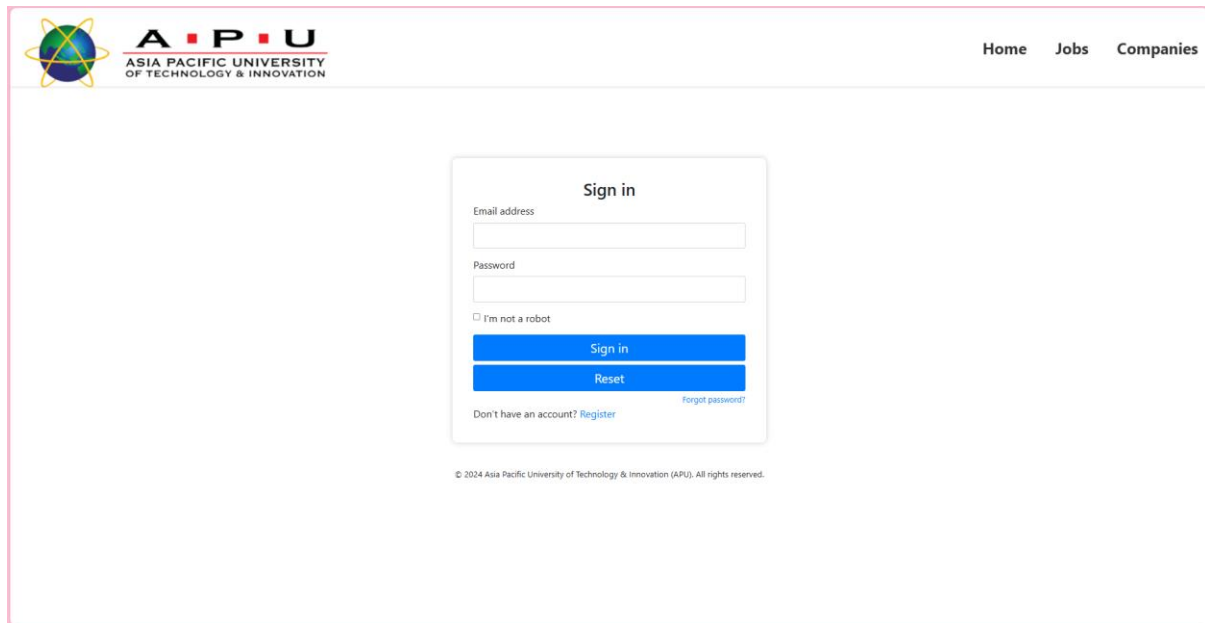
### 3. Database Tier:

- The entity classes in the Business Tier interact with the Database Tier. They represent the structure of the database tables (e.g., AdminEntity, EmployerEntity), ensuring data is stored, updated, and retrieved as needed.
- The diagram shows how these entities are connected to the database, ensuring data integrity and consistency across the application.



# User Manual

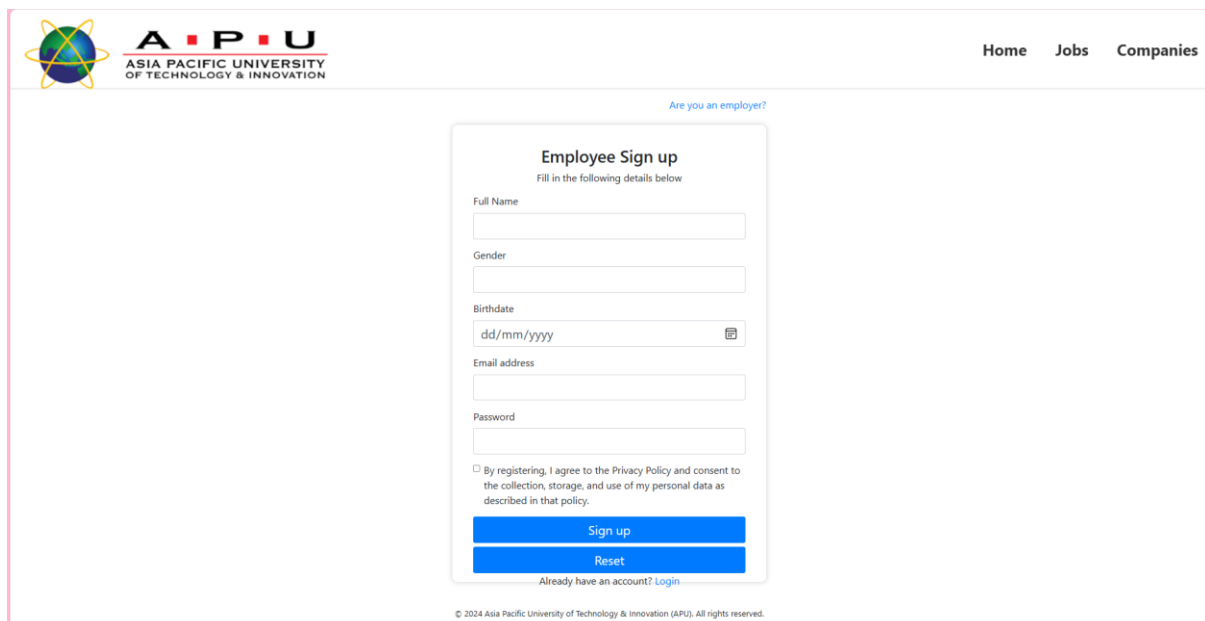
## 1. First Page – Login Page



The screenshot shows the login page of the Asia Pacific University of Technology & Innovation (APU). The page features the APU logo and name in the top left corner, and navigation links for Home, Jobs, and Companies in the top right corner. The main content area is titled "Sign in" and contains a form with the following fields: "Email address" and "Password". Below these fields is a checkbox labeled "I'm not a robot". There are two blue buttons: "Sign in" and "Reset". At the bottom of the form, there is a link "Don't have an account? Register" and a link "forgot password?". The footer of the page states "© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved."

The first page it loads is the login page where the user will be able to click on Register if they do not already have an existing account.

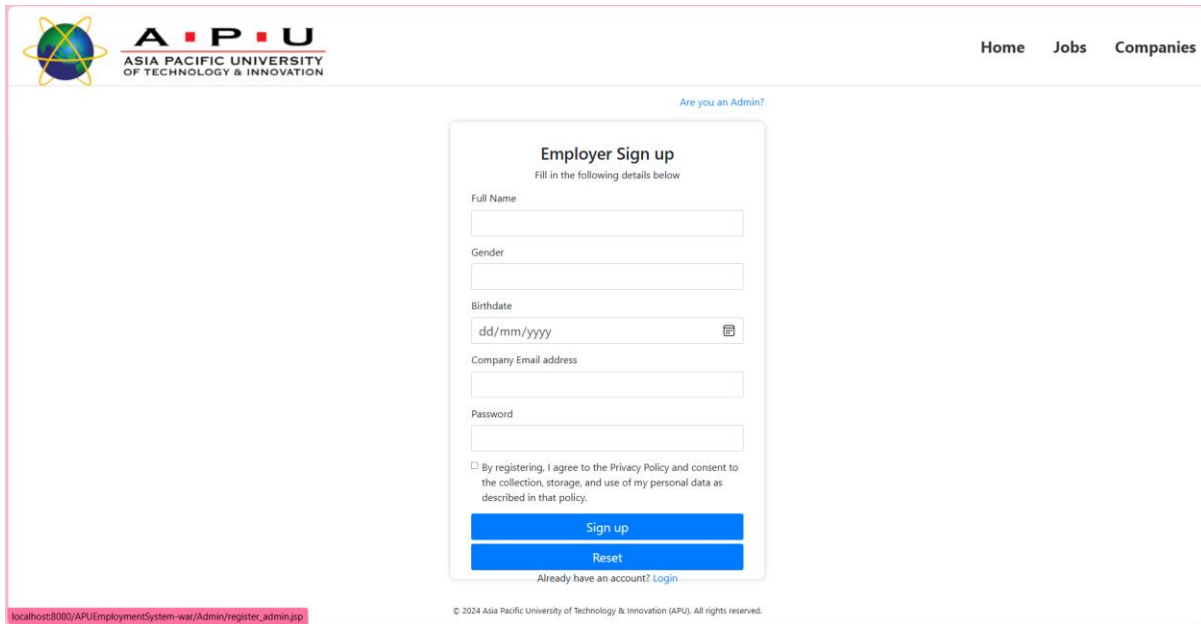
## 2. Registration for Employee



The screenshot shows the "Employee Sign up" page of the Asia Pacific University of Technology & Innovation (APU). The page features the APU logo and name in the top left corner, and navigation links for Home, Jobs, and Companies in the top right corner. The main content area is titled "Employee Sign up" and contains a form with the following fields: "Full Name", "Gender", "Birthdate" (with a date picker), "Email address", and "Password". Below these fields is a checkbox labeled "By registering, I agree to the Privacy Policy and consent to the collection, storage, and use of my personal data as described in that policy." There are two blue buttons: "Sign up" and "Reset". At the bottom of the form, there is a link "Already have an account? Login". The footer of the page states "© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved."

On the registration for employee page the user gets the option to either decide whether they want to continue as an employee or sign up to be an Employer or Corporate Customer.

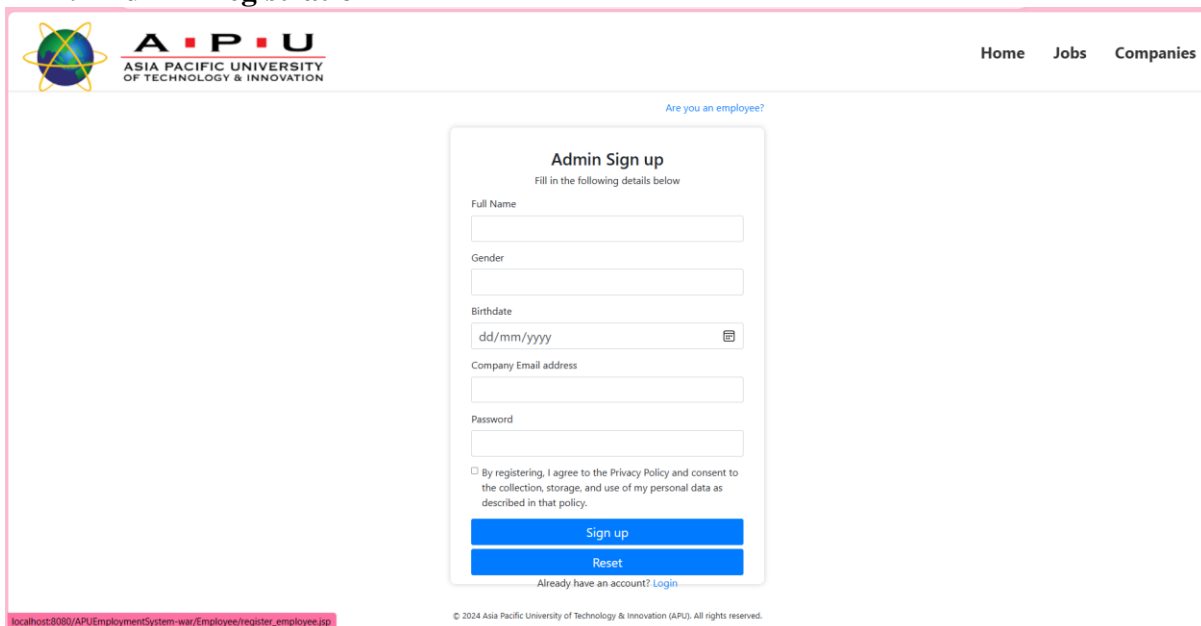
### 3. Employer Registration



The screenshot shows the 'Employer Sign up' form on the Asia Pacific University of Technology & Innovation (APU) website. The form is titled 'Employer Sign up' and includes the instruction 'Fill in the following details below'. The fields are: Full Name, Gender, Birthdate (with a date picker showing 'dd/mm/yyyy'), Company Email address, and Password. Below the fields is a checkbox for 'By registering, I agree to the Privacy Policy and consent to the collection, storage, and use of my personal data as described in that policy.' At the bottom of the form are two blue buttons: 'Sign up' and 'Reset'. A link 'Already have an account? Login' is located below the 'Reset' button. The website header includes the APU logo, the text 'ASIA PACIFIC UNIVERSITY OF TECHNOLOGY & INNOVATION', and navigation links 'Home', 'Jobs', and 'Companies'. The footer shows the URL 'localhost:8080/APUEmploymentSystem-war/Admin/register\_admin.jsp' and the copyright notice '© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.'

Here the user can register to be an employee or decide whether they need an Admin account.

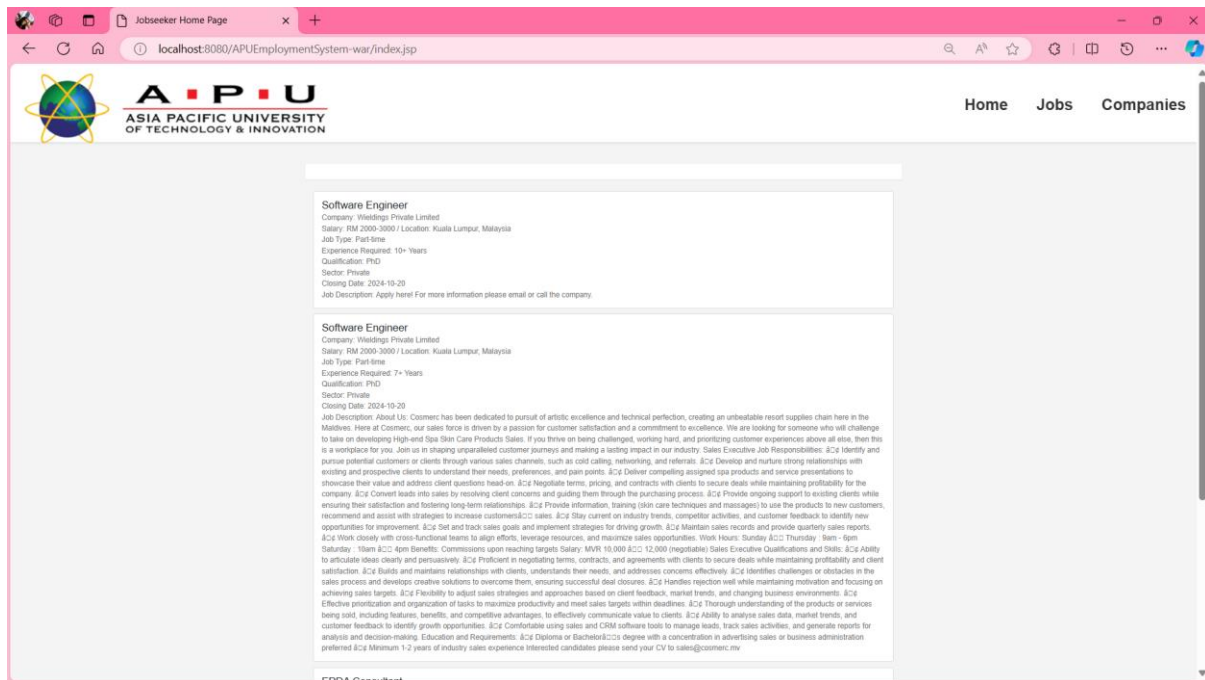
### 4. Admin Registration



The screenshot shows the 'Admin Sign up' form on the Asia Pacific University of Technology & Innovation (APU) website. The form is titled 'Admin Sign up' and includes the instruction 'Fill in the following details below'. The fields are: Full Name, Gender, Birthdate (with a date picker showing 'dd/mm/yyyy'), Company Email address, and Password. Below the fields is a checkbox for 'By registering, I agree to the Privacy Policy and consent to the collection, storage, and use of my personal data as described in that policy.' At the bottom of the form are two blue buttons: 'Sign up' and 'Reset'. A link 'Already have an account? Login' is located below the 'Reset' button. The website header includes the APU logo, the text 'ASIA PACIFIC UNIVERSITY OF TECHNOLOGY & INNOVATION', and navigation links 'Home', 'Jobs', and 'Companies'. The footer shows the URL 'localhost:8080/APUEmploymentSystem-war/Employee/register\_employee.jsp' and the copyright notice '© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.'

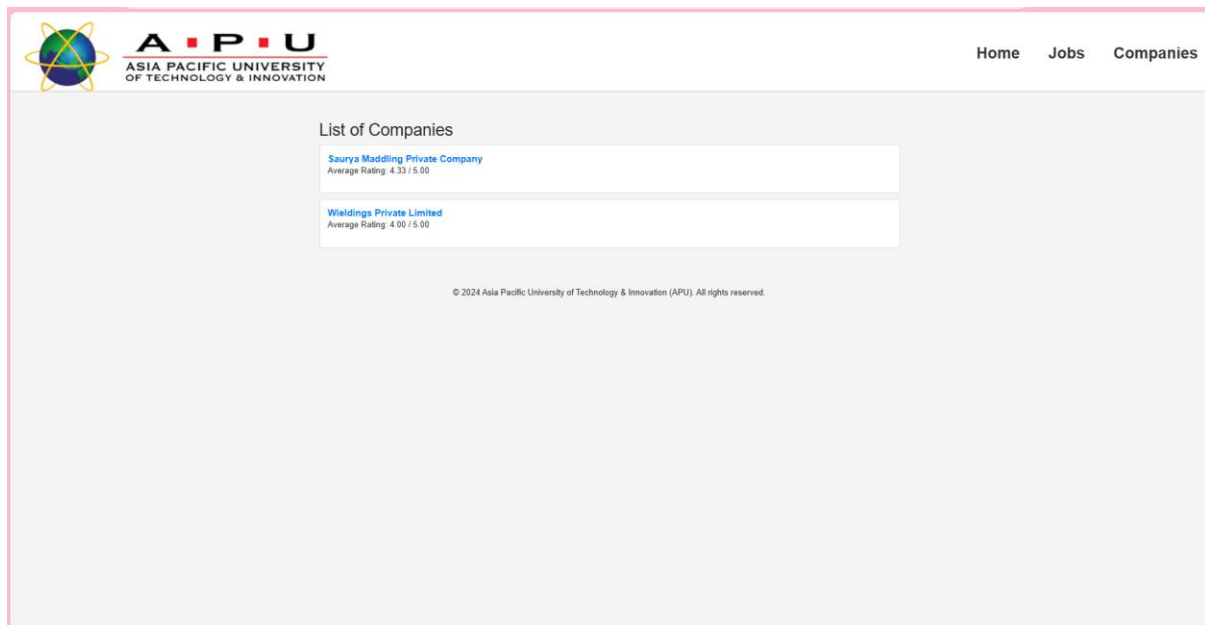
The admin can register for a new account here by filling in the blanks and submitting.

## 5. Jobs Page



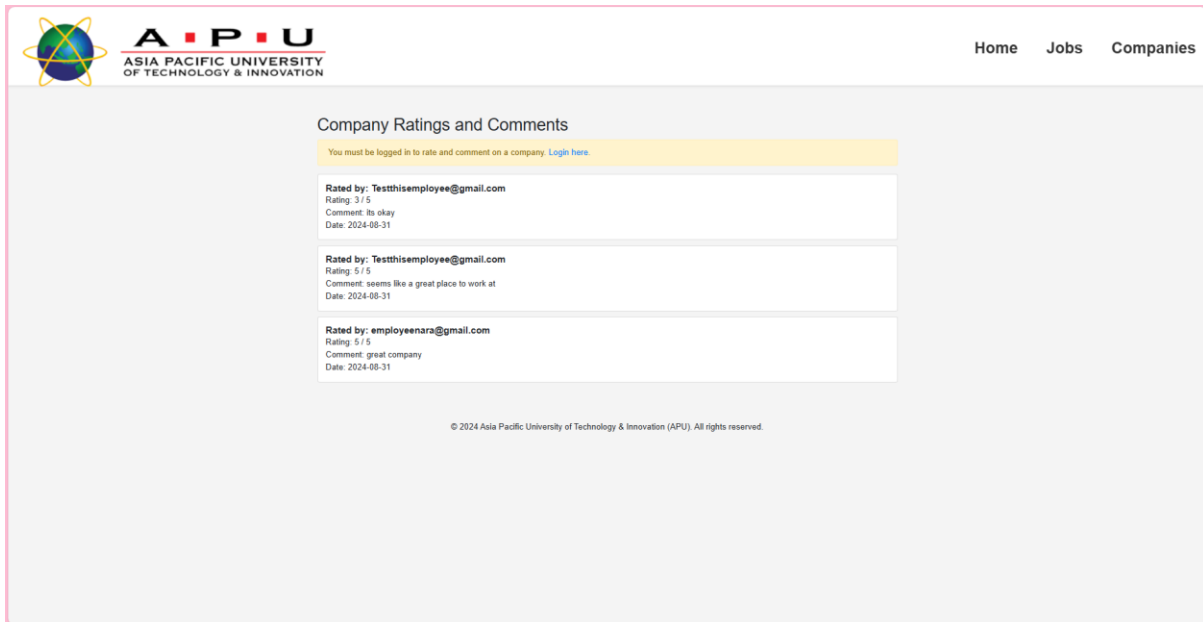
Before logging in this the view all users can see of the Job listings.

## 6. Companies Page



Here the user can view the list of companies who have posted vacancies and their general ratings.

## 7. Company Ratings and Comments



Company Ratings and Comments

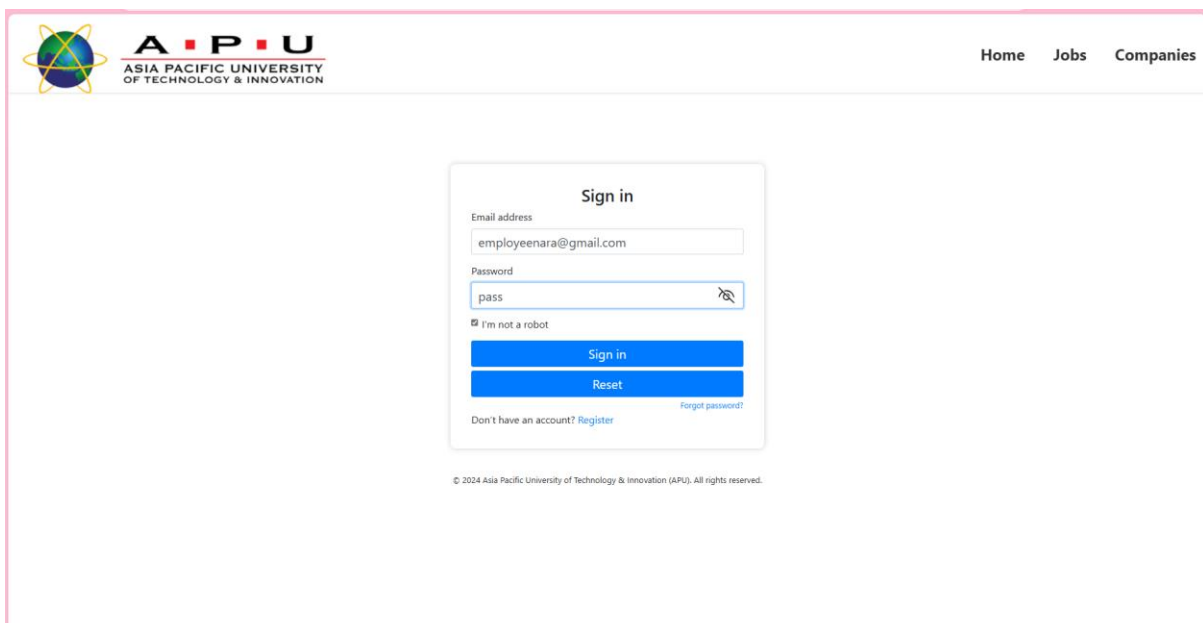
You must be logged in to rate and comment on a company. [Login here](#)

Rated by: Testthisemployee@gmail.com Rating: 3 / 5 Comment: its okay Date: 2024-08-31
Rated by: Testthisemployee@gmail.com Rating: 5 / 5 Comment: seems like a great place to work at Date: 2024-08-31
Rated by: employeenara@gmail.com Rating: 5 / 5 Comment: great company Date: 2024-08-31

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Once the user clicks on a company name, it will show the previous comments and ratings left by other users. If the user wants to post their own ratings and comments they will have to first log in to proceed.

## 8. Sign in



Sign in

Email address  
employeenara@gmail.com

Password  
pass

☒ I'm not a robot

[Sign in](#) [Reset](#) [Forgot password?](#)

Don't have an account? [Register](#)

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The user has to sign in to their account through here to access the features.



## 9. Jobseeker Dashboard

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Home Jobs Companies Logout

### Jobseeker Dashboard

**Manage Profile**  
Edit your profile.  
[Go to Profile](#)

**View Application History**  
Check the history of your job applications.  
[Go to Application History](#)

**View Notifications**  
See all of your notifications here.  
[Go to Notifications](#)

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Once the jobseeker is logged in they are able to see their dashboard consisting of the option to either manage their profile, view their application history or view their notifications. To apply for jobs they have to click on the Jobs of the header.

## 10. Profile Edit

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Home Jobs Companies Logout

### Edit Profile

Username:

Gender:

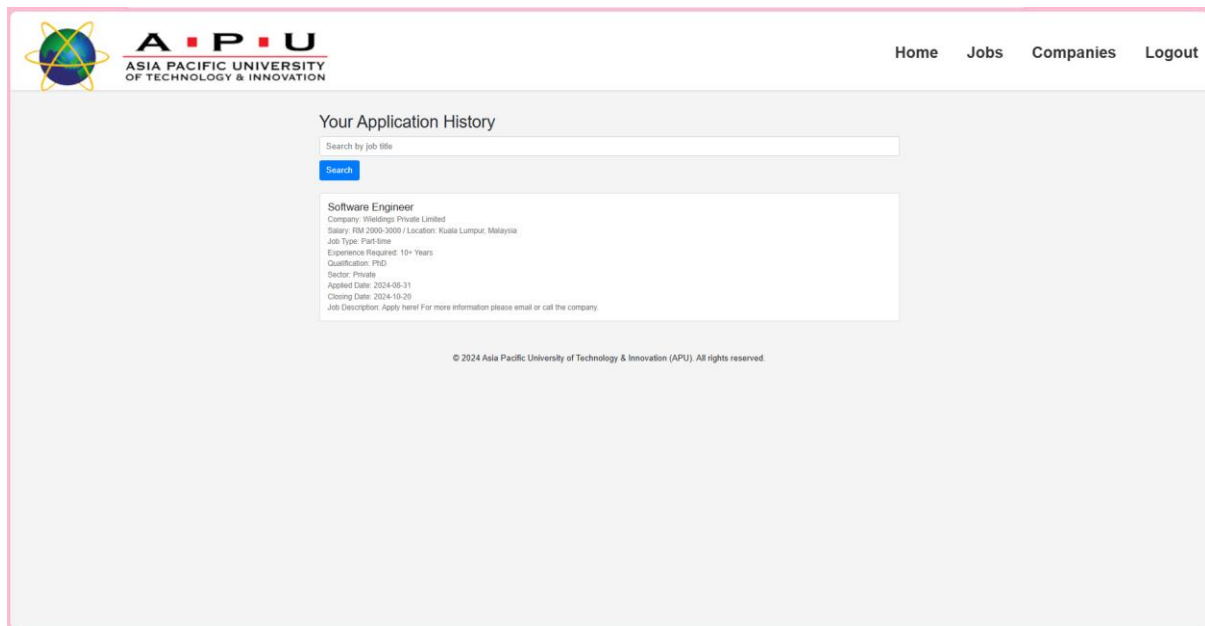
Birthdate:

Password:  
  
Leave blank if you don't want to change your password.

[Update Profile](#)

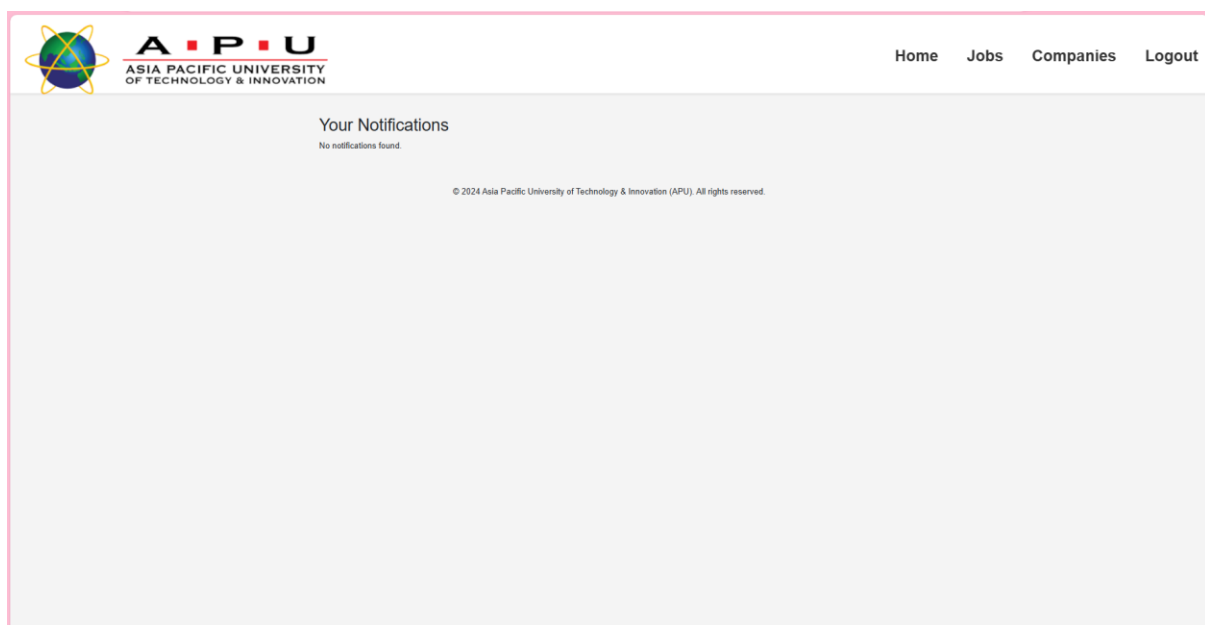
All users have the options to edit their profile details here.

## 11. Application History




The jobseeker is able to view their past applied job listings here.

## 12. Notifications



The jobseeker will be able to view all of their notifications here such as warnings, when they get shortlisted or when they get the job confirmation as well.

13. Job Applications



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HomeJobsCompaniesLogout

company. *APU* Convert leads into sales by resolving client concerns and guiding them through the purchasing process. *APU* Provide ongoing support to existing clients while ensuring their satisfaction and fostering long-term relationships. *APU* Provide information, training (skin care techniques and massages) to use the products to new customers, recommend and assist with strategies to increase customers' sales. *APU* Stay current on industry trends, competitor activities, and customer feedback to identify new opportunities for improvement. *APU* Set and track sales goals and implement strategies for driving growth. *APU* Maintain sales records and provide quarterly sales reports. *APU* Work closely with cross-functional teams to align efforts, leverage resources, and maximize sales opportunities. Work Hours: Sunday 8:00 - 10:00 AM; Monday - Friday 9:00 AM - 6:00 PM; Saturday - 10:00 AM - 4:00 PM. Benefits: Commissions upon reaching targets Salary: MYR 10,000 - 12,000 (negotiable) Sales Executive Qualifications and Skills: *APU* Ability to articulate ideas clearly and persuasively. *APU* Proficient in negotiating terms, contracts, and agreements with clients to secure deals while maintaining profitability and client satisfaction. *APU* Builds and maintains relationships with clients, understands their needs, and addresses concerns effectively. *APU* Identifies challenges or obstacles in the sales process and develops creative solutions to overcome them, ensuring successful deal closures. *APU* Handles rejection well while maintaining motivation and focusing on achieving sales targets. *APU* Flexibility to adjust sales strategies and approaches based on client feedback, market trends, and changing business environments. *APU* Effective prioritization and organization of tasks to maximize productivity and meet sales targets within deadlines. *APU* Thorough understanding of the products or services being sold, including features, benefits, and competitive advantages, to effectively communicate value to clients. *APU* Ability to analyse sales data, market trends, and customer feedback to identify growth opportunities. *APU* Comfortable using sales and CRM software tools to manage leads, track sales activities, and generate reports for analysis and decision-making. Education and Requirements: *APU* Diploma or Bachelor's degree with a concentration in advertising sales or business administration preferred. *APU* Minimum 1-2 years of industry sales experience Interested candidates please send your CV to [sales@cosmeinc.my](mailto:sales@cosmeinc.my)

Apply for this jobRate This job


EPDA Consultant

Company: Saurya Madding Private Company  
Salary: RM 8000-8000 / Location: Kuala Lumpur, Malaysia  
Job Type: Full-time  
Experience Required: 8+ Years  
Qualification: PhD  
Sector: Private  
Closing Date: 2024-10-20

Job Description: MOOCHU Holidays Maldives, winner of SATTA 2019 and 2018ACU's prestigious Leading Tour Operator of Maldives award, Oiled 100-leading companies award 2016, 2017 & 2018 is hiring Job Title: SALES & MARKETING EXECUTIVE Scope of work: *APU* To manage sales activity for MOOCHU customers in consultation with the Chief Operating Officer. *APU* Respond promptly to reservations, bookings and drive sales. *APU* Communicate and assist customers with professionalism to deliver a high-quality service. *APU* Identifying potential clients in local markets and developing relationships with them. *APU* Negotiate with resort/hotel properties regarding their special offers / discount programs. *APU* To manage and administer record keeping and other administrative functions. Competences *APU* Completed AL, *APU* 2-3 yearsACU work experience in the field. *APU* Competent in use of MS Office package and especially MS Excel *APU* Excellent command of written and spoken English language *APU* Competitive reworking skills *APU* Strong organizational, planning and time management skill Remuneration: MYR 10,000 + Sales Commission. Notes: Applications will only be considered from candidates currently residing in the Maldives. Interested candidates can submit CVs and relevant documents to [hr@moochu.com.my](mailto:hr@moochu.com.my) by 5 September 2024. For inquiries, kindly contact the HR department at +960 382 8175. Only shortlisted candidates will be invited for an interview.

Apply for this jobRate This job

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HomeJobsCompaniesLogout

Application submitted successfully!

Software Engineer

Company: Weldings Private Limited  
Salary: RM 2000-3000 / Location: Kuala Lumpur, Malaysia  
Job Type: Part-time  
Experience Required: 10+ Years  
Qualification: PhD  
Sector: Private  
Closing Date: 2024-10-20

Job Description: Apply here! For more information please email or call the company.

Apply for this jobRate This job

Software Engineer

Company: Weldings Private Limited  
Salary: RM 2000-3000 / Location: Kuala Lumpur, Malaysia  
Job Type: Part-time  
Experience Required: 7+ Years  
Qualification: PhD  
Sector: Private  
Closing Date: 2024-10-20

Job Description: About Us: Cosmeinc has been dedicated to pursuit of artistic excellence and technical perfection, creating an unbeatable resort supplies chain here in the Maldives. Here at Cosmeinc, our sales force is driven by a passion for customer satisfaction and a commitment to excellence. We are looking for someone who will challenge to take on developing High-end Spa Skin Care Products Sales. If you thrive on being challenged, working hard, and prioritizing customer experiences above all else, then this is a workplace for you. Join us in shaping unparalleled customer journeys and making a lasting impact in our industry. Sales Executive Job Responsibilities: *APU* Identify and pursue potential customers or clients through various sales channels, such as cold calling, networking, and referrals. *APU* Develop and nurture strong relationships with existing and prospective clients to understand their needs, preferences, and pain points. *APU* Deliver compelling assigned spa products and service presentations to showcase their value and address client questions head-on. *APU* Negotiate terms, pricing, and contracts with clients to secure deals while maintaining profitability for the company. *APU* Convert leads into sales by resolving client concerns and guiding them through the purchasing process. *APU* Provide ongoing support to existing clients while ensuring their satisfaction and fostering long-term relationships. *APU* Provide information, training (skin care techniques and massages) to use the products to new customers, recommend and assist with strategies to increase customers' sales. *APU* Stay current on industry trends, competitor activities, and customer feedback to identify new opportunities for improvement. *APU* Set and track sales goals and implement strategies for driving growth. *APU* Maintain sales records and provide quarterly sales reports. *APU* Work closely with cross-functional teams to align efforts, leverage resources, and maximize sales opportunities. Work Hours: Sunday 8:00 - 10:00 AM; Monday - Friday 9:00 AM - 6:00 PM; Saturday - 10:00 AM - 4:00 PM. Benefits: Commissions upon reaching targets Salary: MYR 10,000 - 12,000 (negotiable) Sales Executive Qualifications and Skills: *APU* Ability to articulate ideas clearly and persuasively. *APU* Proficient in negotiating terms, contracts, and agreements with clients to secure deals while maintaining profitability and client satisfaction. *APU* Builds and maintains relationships with clients, understands their needs, and addresses concerns effectively. *APU* Identifies challenges or obstacles in the sales process and develops creative solutions to overcome them, ensuring successful deal closures. *APU* Handles rejection well while maintaining motivation and focusing on achieving sales targets. *APU* Flexibility to adjust sales strategies and approaches based on client feedback, market trends, and changing business environments. *APU*

Apply for this jobRate This job

The jobseeker is able to now have the option to apply for jobs and review them as well.

## 14. Rate the Job Listing

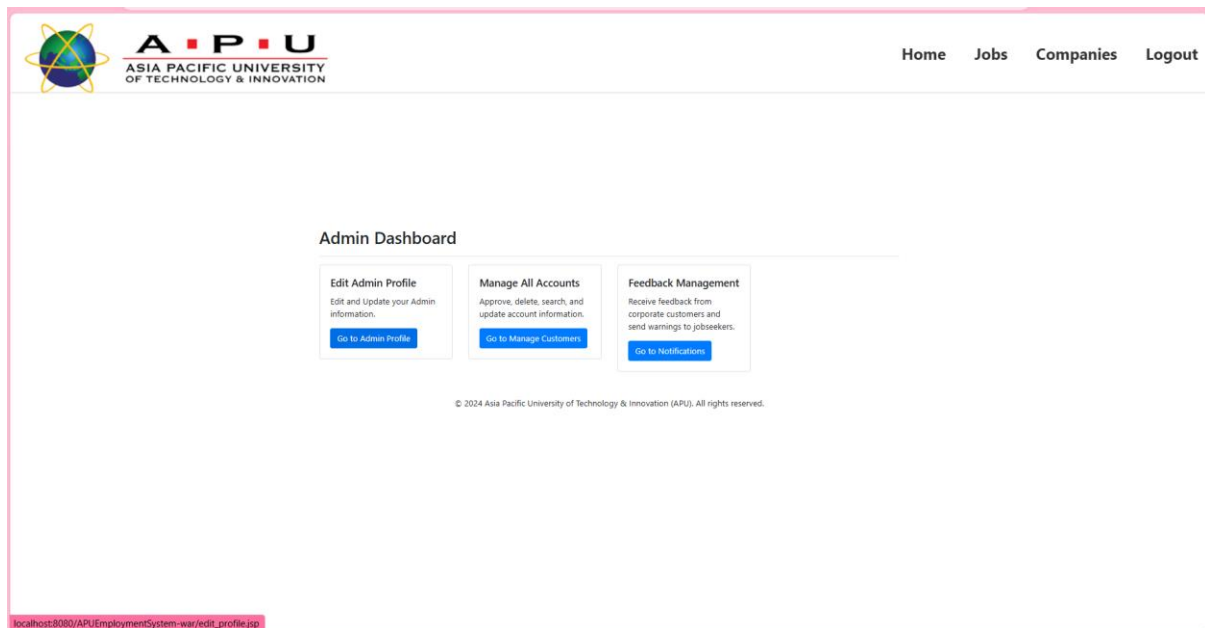
The screenshot shows the 'Submit Rating for Job' form on the APU website. The form is titled 'Submit Rating for Job' and includes a 'Rating:' dropdown menu with '1 - Very Poor' selected. Below the rating is a 'Comment:' text area with the placeholder 'Enter your comment here...'. A green 'Submit Rating' button is at the bottom of the form. The website header includes the APU logo and navigation links: Home, Jobs, Companies, and Logout. The footer contains the copyright notice: '© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.'

The screenshot shows the 'Company Ratings and Comments' section on the APU website. It features a 'Rate This Company' button and a list of three ratings and comments. Each entry includes the user's email, the rating, the comment, and the date. The website header includes the APU logo and navigation links: Home, Jobs, Companies, and Logout. The footer contains the copyright notice: '© 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.'

Rated by	Rating	Comment	Date
Testthisemployee@gmail.com	3 / 5	its okay	2024-08-31
Testthisemployee@gmail.com	5 / 5	seems like a great place to work at	2024-08-31
employeenara@gmail.com	5 / 5	great company	2024-08-31

The jobseeker is able to submit ratings for both the job listings and the company as well after logging in.

## 15. Admin Dashboard



Once the admin logs into their account they are taken to the admin dashboard where they have the option to edit their admin profile, manage all accounts, and manage feedbacks and warnings.

## 16. Search & Manage Accounts

[Go to Home](#)

### Search & Manage Accounts

Role:

Username:

Gender:

Email:

Birthdate:

Password:

[Search](#) [Add New Customer](#)

**Results**

Email	Username	Gender	Birthdate	Role	Password	Actions
aishathshafa7@gr	Aishath Shafa Saud	Femu	07/03/2001	Admin	pass	<a href="#">Edit</a> <a href="#">Delete</a>
maryameafa@ap	Mariyam Eafa Nash	Femu	22/10/1997	Admin	pass	<a href="#">Edit</a> <a href="#">Delete</a>
ajouathmalakia@ba	Ajouath Malakia Ibra	Femu	14/10/2012	Emplo	pass	<a href="#">Edit</a>


---

**Results**

Email	Username	Gender	Birthdate	Role	Password	Actions
<input type="text" value="aishathshafa7@g"/>	<input type="text" value="Aishath Shafa Saud"/>	<input type="text" value="Fem:"/>	<input type="text" value="07/03/2001"/>	<input type="text" value="Admi"/>	<input type="text" value="pass"/>	<input type="button" value="Update"/> <input type="button" value="Delete"/>

The admin has the ability to search for any account and edit, delete, or even add new information here. Once the admin is done with their work, they can go back home from the home button at the top.

## 17. Feedback Management



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[Home](#)
[Jobs](#)
[Companies](#)
[Logout](#)

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**Admin - Feedback Management**

Employer	Employee	Feedback Type	Message	Status	Date	Actions
asiyathmalakaibrahimmanik@gmail.com	Testthisemployee@gmail.com	Complaint	This user keeps adding false ratings.	Pending	2024-08-31	<input type="button" value="Send Warning"/>
asiyathmalakaibrahimmanik@gmail.com	Testthisemployee@gmail.com	Complaint	This user won't stop their false ratings.	Pending	2024-08-31	<input type="button" value="Send Warning"/>

**Sent Warnings**

To	Message	Date
Testthisemployee@gmail.com	Warning: This user keeps adding false ratings.	2024-08-31
Testthisemployee@gmail.com	Warning: This user keeps adding false ratings.	2024-08-31
Testthisemployee@gmail.com	Warning: This user keeps adding false ratings.	2024-08-31
Testthisemployee@gmail.com	Warning: This user won't stop their false ratings.	2024-08-31
null	Warning: null	2024-08-31
Testthisemployee@gmail.com	Warning: This user keeps adding false ratings.	2024-08-31

The admin is able to view all of the complaints made by the corporate customers here and issue warnings to the employee's. The admin is also able to view all of the warnings they have previously sent out. Once a warning has been issues 3 times, the employee account is automatically deleted.

## 18. Employer / Corporate Customer Dashboard

**Corporate Customers Dashboard**

**Manage Profile**  
Edit your profile.  
[Go to Profile](#)

**Post New Vacancies**  
Post new job postings.  
[Post new Job Vacancies](#)

**Shortlist Applicants**  
Shortlist applicants for interview.  
[Go to Shortlisting Applicants](#)

**View Application History**  
Check the history of your job applications.  
[Go to Application History](#)

**Send Feedback to Admin**  
Send complaints to Admin.  
[Go to Feedback](#)

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localhost:8080/APU/EmploymentSystem-war/Employer/employer\_dashboard.jpg

Once the corporate customer logs in from their account they are able to see their dashboard where it has the option to either manage their profile, post a new vacancy, shortlist applicants, view post histories and send feedback to admin.

## 19. Post New Vacancy

**Post a Job Vacancy**

Company Name:

Job Title:

Salary Range:

Job Type:

Qualification:


Location:

Experience:

Sector:

Job Description:

Closing on:



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HomeJobsCompaniesLogout

Job Title:

Salary Range:

RM10000 - 11999

Job Type:

Full-time

Qualification:

Advanced Diploma

Location:

Male

Experience:

1 - 2 years

Sector:

Private

Job Description:

Closing on:


dd/mm/yyyy

Post Vacancy

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The customer is able to post a new job vacancy here by filling out the required details and submitting it.

20. Applicants List



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Applicants List

ID	Applicant Name	Birthdate	Gender	Email	Job ID	Applied Date	Actions
752	Test This Employee	2000-03-01	Male	Testthisemployee@gmail.com	101	2024-08-31	<div>Shortlist</div> <div>Confirm Job</div>
1301	Nara Smith Lucky	2002-02-01	Female	employeenara@gmail.com	1	2024-08-31	<div>Shortlist</div> <div>Confirm Job</div>
1401	Nara Smith Lucky	2002-02-01	Female	employeenara@gmail.com	151	2024-08-31	<div>Shortlist</div> <div>Confirm Job</div>
251	Test This Employee	2000-03-01	Male	Testthisemployee@gmail.com	151	2024-08-30	<div>Shortlist</div> <div>Confirm Job</div>
252	Test This Employee	2000-03-01	Male	Testthisemployee@gmail.com	101	2024-08-30	<div>Shortlist</div> <div>Confirm Job</div>

The customer is able to view the list of applicants who applied to which job and shortlist them or confirm the job for them here.



21. Posting History



**A.P.U.**  
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HomeJobsCompaniesLogout

Your Posting History

Search by job title

Search

Software Engineer

Company: Weldings Private Limited

Salary: RM 2000-3000 / Location: Kuala Lumpur, Malaysia

Job Type: Part-time

Experience Required: 10+ Years

Qualification: PhD

Sector: Private

Closing Date: 2024-10-20

Job Description: Apply here! For more information please email or call the company.

UpdateDelete

Software Engineer

Company: Weldings Private Limited

Salary: RM 2000-3000 / Location: Kuala Lumpur, Malaysia

Job Type: Part-time


Experience Required: 7+ Years

Qualification: PhD

Sector: Private

Closing Date: 2024-10-20

Job Description: About Us: Cosmerc has been dedicated to pursuit of artistic excellence and technical perfection, creating an unbeatable resort supplies chain here in the Maldives. Here at Cosmerc, our sales force is driven by a passion for customer satisfaction and a commitment to excellence. We are looking for someone who will challenge to take on developing High-end Spa Skin Care Products Sales. If you thrive on being challenged, working hard, and prioritizing customer experiences above all else, then this is a workplace for you. Join us in shaping unparalleled customer journeys and making a lasting impact in our industry. Sales Executive Job Responsibilities: <C> Identify and pursue potential customers or clients through various sales channels, such as cold calling, networking, and referrals. <C> Develop and nurture strong relationships with existing and prospective clients to understand their needs, preferences, and pain points. <C> Deliver compelling assigned spa products and service presentations to showcase their value and address client questions head-on. <C> Negotiate terms, pricing, and contracts with clients to secure deals while maintaining profitability for the company. <C> Convert leads into sales by resolving client concerns and guiding them through the purchasing process. <C> Provide ongoing support to existing clients while ensuring their satisfaction and fostering long-term relationships. <C> Provide information, training (skin care techniques and massages) to use the products to new customers, recommend and assist with strategies to increase customers' sales. <C> Stay current on industry trends, competitor activities, and customer feedback to identify new opportunities for improvement. <C> Set and track sales goals and implement strategies for driving growth. <C> Maintain sales records and provide quarterly sales reports. <C> Work closely with cross-functional teams to align efforts, leverage resources, and maximize sales opportunities. Work Hours: Sunday <C> Thursday / 9am - 6pm. Salary: 1 Year <C> 4pm Benefits: Commissions upon reaching targets Salary: MYR 10,000 <C> 12,000 (negotiable) Sales Executive Qualifications and Skills: <C> Ability



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ASIA PACIFIC UNIVERSITY  
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Update Job Posting

Job Title:

Software Engineer

Company Name:

Weldings Private Limited

Salary Range:

RM 2000-3000

Job Type:

Part-time

Qualification:

PhD

Location:

Kuala Lumpur, Malaysia

Experience:

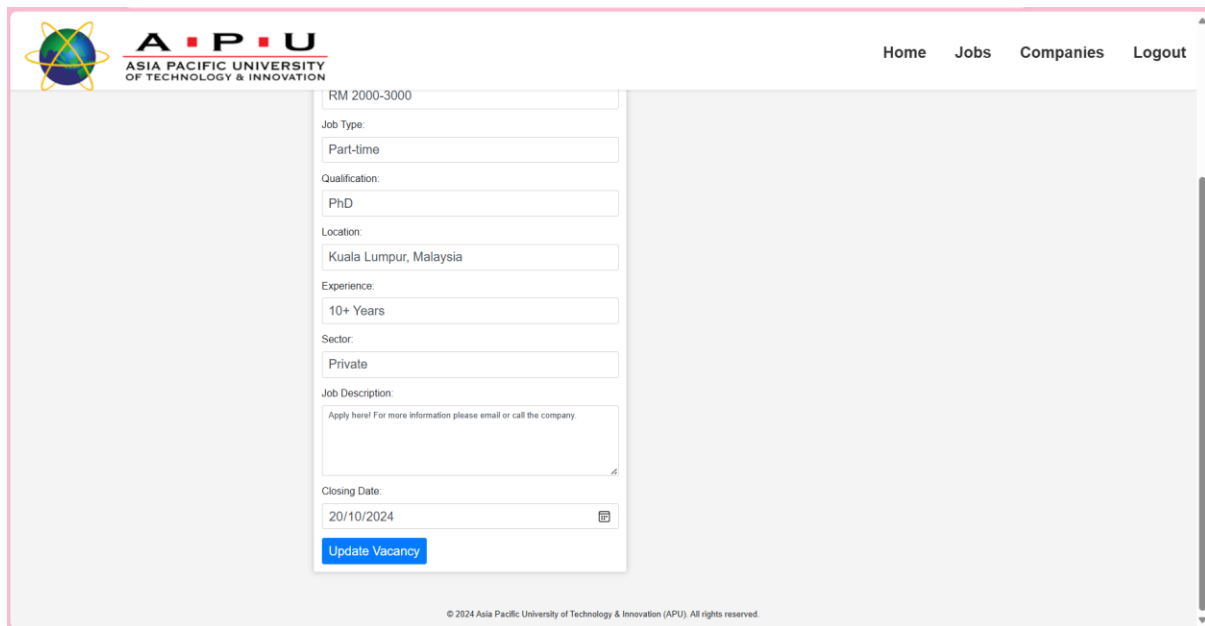
10+ Years

Sector:

Private

Job Description:

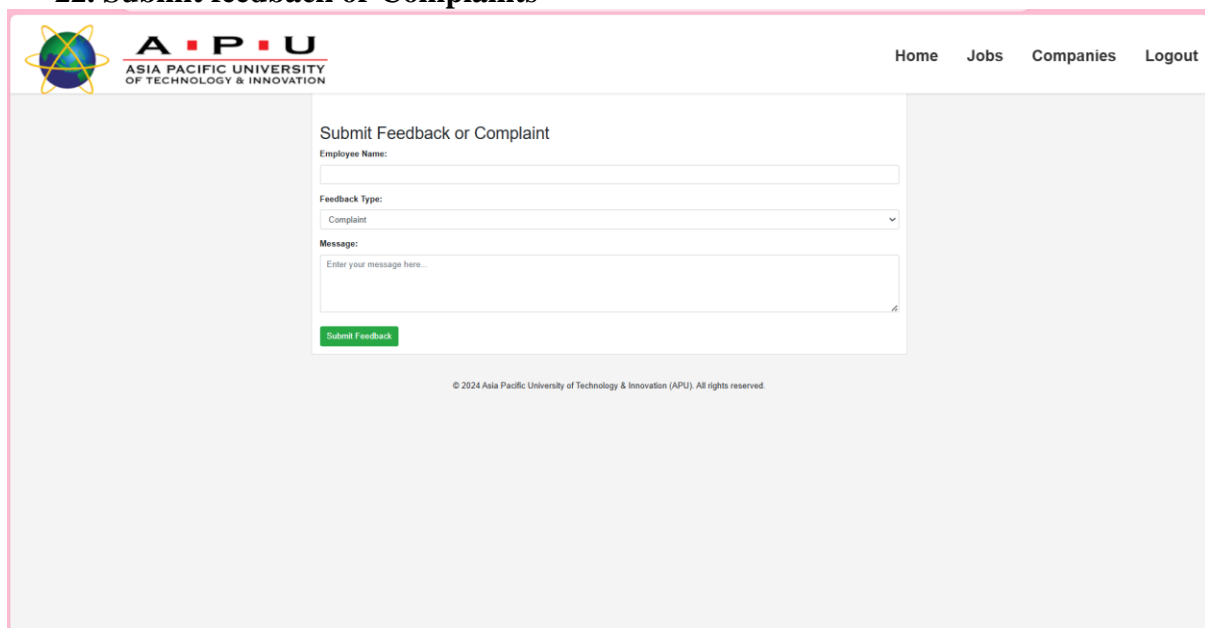
Apply here! For more information please email or call the company.



The screenshot shows the APU (Asia Pacific University of Technology & Innovation) Jobs page. The header includes the APU logo and navigation links: Home, Jobs, Companies, and Logout. The main content area displays a job listing form for a position with a salary range of RM 2000-3000. The form includes fields for Job Type (Part-time), Qualification (PhD), Location (Kuala Lumpur, Malaysia), Experience (10+ Years), Sector (Private), and Job Description. A closing date of 20/10/2024 is also shown, along with an 'Update Vacancy' button. The footer contains the copyright notice: © 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.

The customer is able to view their previous listings and edit or delete them here

## 22. Submit feedback or Complaints



The screenshot shows the APU Submit Feedback or Complaint form. The header includes the APU logo and navigation links: Home, Jobs, Companies, and Logout. The form is titled 'Submit Feedback or Complaint' and includes fields for Employee Name, Feedback Type (a dropdown menu with 'Complaint' selected), and Message. A green 'Submit Feedback' button is located at the bottom of the form. The footer contains the copyright notice: © 2024 Asia Pacific University of Technology & Innovation (APU). All rights reserved.

The customer is able to submit feedbacks or complaints to the admin by filling out the form on this page.

# Technical Explanation

## 1. Overview of Project Structure

### 1.1 Project Modules:

- **APUEmploymentSystem-ejb**: Contains the enterprise JavaBeans (EJB) module.
- **APUEmploymentSystem-war**: Contains the web application module.

### 1.2 Main Folders:

- **Source Packages**: Contains Java classes, including models and controllers.
- **Web Pages**: Contains JSP files for different user roles and other web-related resources.
- **Libraries and Configuration Files**: Contains dependencies and configuration settings for the project.

## 2. Design of Web Components

### 2.1 JSPs (JavaServer Pages):

#### 2.1.1 Admin Directory:

- **admin\_dashboard.jsp**: Renders the admin dashboard interface.
- **admin\_feedback\_management.jsp**: Manages feedback from users.

#### 2.1.2 Employee Directory:

- **application\_history.jsp**: Displays the job application history for an employee.
- **employee\_dashboard.jsp**: Provides an overview of the employee's dashboard.

#### 2.1.3 Employer Directory:

- **post\_vacancy.jsp**: Allows employers to post new job vacancies.
- **employer\_dashboard.jsp**: Provides employers with access to manage job postings and view applicants.

### 2.2 Servlets (Source Packages > controller):

#### 2.2.1 AdminFeedbackServlet.java:

- Handles HTTP requests related to feedback management by the admin.

#### 2.2.2 ApplyJobServlet.java:

- Manages the job application process for employees.

### 2.2.3 PostVacancyServlet.java:

- Allows employers to post new job vacancies.

## 2.3 Other Components:

### 2.3.1 CSS:

- **style.css**: Defines the styles and layouts used across the web pages.

### 2.3.2 JavaScript (JS):

- **app.js**: Contains JavaScript code that adds interactivity to the web pages.

### 2.3.3 Images:

- **logo.png**: The logo image used in the application.

## 3. Design of Business Tier (EJBs)

### 3.1 Entity Classes (model package):

#### 3.1.1 Applicants.java:

- Represents the Applicants table in the database.

#### 3.1.2 Vacancy.java:

- Represents job vacancies, with fields like job title, description, and associated employer.

### 3.2 Facade Classes (model package):

#### 3.2.1 ApplicantsFacade.java:

- Provides CRUD operations related to Applicants.

#### 3.2.2 VacancyFacade.java:

- Manages operations related to job vacancies.

## 4. System Architecture and Interconnection Among Tiers

### 4.1 Three-Tier Architecture:

#### 4.1.1 Presentation Tier:

- **Components:** JSP files, CSS, and JavaScript.
- **Role:** Handles the user interface and presentation logic.

#### 4.1.2 Business Tier:

- **Components:** EJBs, Facade classes.
- **Role:** Manages business logic and processes data.

#### 4.1.3 Database Tier:

- **Components:** Entity classes representing database tables.
- **Role:** Stores and manages application data.

## 5. Database Design

### 5.1 Entities and Tables:

#### 5.1.1 Applicants Table:

SELECT * FROM APP.APPLICA... X							
		Max. rows: 100	Fetched Rows: 5		Matching Rows:		
#	ID	NAME	BIRTHDATE	APPLIED_DATE	GENDER	EMAIL	JOBID
1		752 Test This Employee	2000-03-01	2024-08-31	Male	Testthisemployee@gmail.com	101
2		1301 Nara Smith Lucky	2002-02-01	2024-08-31	Female	employeeenara@gmail.com	1
3		1401 Nara Smith Lucky	2002-02-01	2024-08-31	Female	employeeenara@gmail.com	151
4		251 Test This Employee	2000-03-01	2024-08-30	Male	Testthisemployee@gmail.com	151
5		252 Test This Employee	2000-03-01	2024-08-30	Male	Testthisemployee@gmail.com	101

- **ID:** Primary key, unique identifier for each applicant.
- **NAME:** The full name of the applicant.
- **BIRTHDATE:** The applicant's date of birth.
- **APPLIED\_DATE:** The date when the applicant submitted their application.
- **GENDER:** The gender of the applicant.
- **EMAIL:** The applicant's email address.
- **JOBID:** Foreign key linking to the `VACANCY` table, representing the job the applicant applied for.

#### 5.1.2 Feedback Table:

#	ID	FROMEMPLOYER	ABOUTEMPLOYEE	FEEDBACKDATE	FEEDBACKTYPE	MESSAGE	STATUS
1		851 asiyathmalakabrahimmanik@gmail.com	Testthisemployee@gmail.com	2024-08-31	Complaint	This user keeps adding false ratings.	Pending
2		901 asiyathmalakabrahimmanik@gmail.com	Testthisemployee@gmail.com	2024-08-31	Complaint	This user won't stop their false ratings.	Pending

- **ID:** Primary key, unique identifier for each feedback entry.
- **FROMEMPLOYER:** The name or ID of the employer providing feedback.
- **ABOUTEMPLOYEE:** The name or ID of the employee the feedback is about.
- **FEEDBACKDATE:** The date when the feedback was given.
- **FEEDBACKTYPE:** The type or category of the feedback.
- **MESSAGE:** The feedback message or content.
- **STATUS:** The current status of the feedback (e.g., pending, resolved).
- **ADMINRESPONSE:** Any response or action taken by the admin regarding the feedback.

#### 5.1.3 MyCustomer Table:

#	EMAIL	BIRTHDATE	GENDER	PASSWORD	ROLE	USERNAME
1	aishathshafa7@gmail.com	2001-03-07	Female	pass	Admin	Aishath Shafa Saudulla
2	mariyameafa@apu.com.my	1997-10-22 00:00:00.0	Female	pass	Admin	Mariyam Eafa Nasheedd
3	asiyathmalakabrahimmanik@gmail.com	2012-10-14	Female	pass	Employer	Asiyath Malaka Ibrahim Mar
4	NaraSmith@gmail.com	2002-02-01	Female	defaultPassword	Staff	Nara Smith Lucky
5	BetaTestEmployee@gmail.com	2001-03-07	Male	pass	Employee	Beta Testing Unit
6	TesterEmployee@gmail.com	2001-05-02	Male	pass	Employee	Tester Employee
7	TesterStaff@gmail.com	1995-02-11	Male	defaultPassword	Staff	Tester Staff
8	Madilyn@gmail.com	1998-01-09	Female	defaultPassword	Employee	Employee Madilyn
9	IsmailHaisham@gmail.com	2002-09-01	Male	defaultPassword	Employer	Ismail Haisham
10	emoloveenara@gmail.com	2002-02-01 00:00:00.0	Female	pass	Employee	Nara Smith Lucky

- **EMAIL:** The email address of the customer.
- **BIRTHDATE:** The customer's date of birth.
- **GENDER:** The customer's gender.
- **PASSWORD:** The password for the customer's account.
- **ROLE:** The role of the user (e.g., admin, employer, employee).
- **USERNAME:** The username chosen by the customer.

#### 5.1.4 Notifications Table:

#	ID	FROMWHO	MESSAGE	WHATDATE	TOWHO
1	451	Employer	You have been shortlisted. You will receive an ...	2024-08-31 01:51:20.116	Testthisemployee@gmail.com
2	452	Employer	Congratulations! You have been offered the jo...	2024-08-31 01:51:26.446	Testthisemployee@gmail.com
3	453	Employer	You have been shortlisted. You will receive an ...	2024-08-31 01:51:51.319	Testthisemployee@gmail.com
4	501	Employer	You have been shortlisted. You will receive an ...	2024-08-31 01:55:56.746	Testthisemployee@gmail.com
5	502	Employer	Congratulations! You have been offered the jo...	2024-08-31 01:56:00.457	Testthisemployee@gmail.com
6	503	Employer	Congratulations! You have been offered the jo...	2024-08-31 01:56:08.449	Testthisemployee@gmail.com

- **ID:** Primary key, unique identifier for each notification.
- **FROMWHO:** The ID or name of the sender of the notification.
- **MESSAGE:** The content of the notification.
- **WHATDATE:** The date the notification was sent.
- **TOWHO:** The ID or name of the recipient of the notification.

#### 5.1.5 Ratings Table:

#	COMMENT	TOWHO	FROMWHO	WHATDATE	RATING	JOBID
1	its okay	Wieldings Private Limited	Testthisemployee@gmail.com	2024-08-31	4	101
2	its average	Wieldings Private Limited	Testthisemployee@gmail.com	2024-08-31	3	1
3	perfect listing	Wieldings Private Limited	Testthisemployee@gmail.com	2024-08-31	3	1
4	seems like a great place to work at	Saurya Madding Private Company	Testthisemployee@gmail.com	2024-08-31	5	
5	great!	Wieldings Private Limited	employeeera@gmail.com	2024-08-31	5	1
6	great company	Saurya Madding Private Company	employeeera@gmail.com	2024-08-31	5	

- **ID:** Primary key, unique identifier for each rating.
- **COMMENT:** Any comments associated with the rating.
- **TOWHO:** The ID or name of the person the rating is for.
- **FROMWHO:** The ID or name of the person giving the rating.
- **WHATDATE:** The date the rating was given.
- **RATING:** The rating value (e.g., 1-5 stars).
- **JOBID:** Foreign key linking to the VACANCY table, indicating the job related to the rating.

#### 5.1.6 Vacancy Table:

#	ID	CLOSINGDATE	COMPANYNAME	EXPERIENCE	JOBTITLE	JOBTYPE
1		1 2024-10-20	Wieldings Private Limited	10+ Years	Software Engineer	Part-time
2		101 2024-10-20	Wieldings Private Limited	7+ Years	Software Engineer	Part-time
3		151 2024-10-20	Saurya Madding Private Company	8+ Years	EPDA Consultant	Full-time

#	LOCATION	QUALIFICATION	SALARYRANGE	SECTOR	JOBDESCRIPTION	EMPLOYEREMAIL
1	Kuala Lumpur, Malaysia	PhD	RM 2000-3000	Private	Apply here! For more information please...	asiyathmalakabrahimmani@
2	Kuala Lumpur, Malaysia	PhD	RM 2000-3000	Private	About Us: Cosmerc has been dedicated t...	asiyathmalakabrahimmani@
3	Kuala Lumpur, Malaysia	PhD	RM 8000-9000	Private	MOODHU Holidays Maldives, winner of S...	asiyathmalakabrahimmani@

- **ID:** Primary key, unique identifier for each job vacancy.
- **CLOSINGDATE:** The date when the job application closes.
- **COMPANYNAME:** The name of the company offering the job.
- **EXPERIENCE:** The required experience level for the job.
- **JOBTITLE:** The title of the job position.
- **JOBTYPE:** The type of job (e.g., full-time, part-time).
- **LOCATION:** The location of the job.
- **QUALIFICATION:** The required qualifications for the job.
- **SALARYRANGE:** The salary range offered for the job.
- **SECTOR:** The sector or industry of the job.
- **JOBDESCRIPTION:** A detailed description of the job responsibilities.
- **EMPLOYEREMAIL:** The email address of the employer offering the job.

## 5.2 Relationships:

### 5.2.1 One-to-Many Relationship:

- **Between EMPLOYER and VACANCY:** One employer can post multiple vacancies.
- **Between VACANCY and APPLICANTS:** Each job can have multiple applicants.

### 5.2.2 Many to-Many Relationship:

- **Between APPLICANTS and VACANCY:** Managed through a join table (though not directly visible here), where multiple applicants can apply for multiple jobs.

## 5.3 Indexes and Foreign Keys:

### 5.3.1 Indexes:

- These are created on key columns (e.g., ID, JOBID) to improve the speed of data retrieval operations.

### 5.3.2 Foreign Keys:

- Ensures referential integrity between tables (e.g., JOBID in APPLICANTS table linking to VACANCY table).



## References

- admin. (2020, October 24). *Jsp Mysql Search Records*. Tutusfunny - Software Development Tutorials. <https://www.tutussfunny.com/jsp-mysql-search-records/>
- Tutus Funny. (2020, October 23). *Jsp Mysql Search Records*. YouTube. <https://www.youtube.com/watch?v=-XhHlWV8ymw>
- Yuli Vasiliev. (2009). *Beginning Database-Driven Application Development in Java EE*. Apress.