CHAPTER 1

INTRODUCTION

A Recruitment Management System (RMS) is a software application that automates and streamlines the recruitment process for organizations. It helps businesses to manage the entire hiring process, from posting job openings to tracking and evaluating job candidates. The main purpose of an RMS is to make the recruitment process more efficient and effective by repetitive tasks and providing a centralized location for all recruitment-related information.

Recruitment Management System Features are:

- Admin
  - Application
    - View
    - Edit
    - Delete
  - Vacancy
    - Availability
    - Status
    - Action
  - Status category
    - Interview steps
  - Users
    - View
  - Settings
- User
  - Vacancy list
    - Application form
      - First name
      - Last name
      - Gender
      - Mail
      - Contact
      - Address
      - Cover letter
      - Resume

1.1 Purpose

The main purpose of a Recruitment Management System (RMS) is to streamline the recruitment process for organizations. It helps businesses to manage the hiring process, from posting job openings to tracking job applicants. By providing a centralized platform for all recruitment-related information, RMS can help organizations to save time and money, and make more informed hiring decisions.

1.2 Scope

The application will help organizations to create and post job openings on various job boards and social media platforms. It enables organizations to review resumes, cover letters, and other application materials, as well as track the status of job applicants throughout the hiring process. RMS allows organizations to store data about their job applicants in one central place for easy retrieval, making it simpler to keep track of the recruitment process.

CHAPTER 2

SYSTEM REQUIREMENTS

The Software Requirements Specification is a document that describes the external requirement for any system. The Requirement analysis must identify the Requirements by takingto the clients and understanding their needs. The inputs are to be gathered from different resources; these inputs may be inconsistent. The Requirement phase translates the ideas in the minds of the clients into a formal document.

2.1 SOFTWARE REQUIREMENTS

Front End: JS, HTML, CSS, Bootstrap, PHP

Back End: MySQL, Xampp, Appache

Client OS: Window XP Or Higher

2.2 HARDWARE REQUIREMENTS

Processor: Intel Corei3

RAM: 4/8 GB RAM

System Type: 32/64 bit processor

Monitor: VGA compatible(CRT or LCD-TFT)

CHAPTER 3

FEASIBILITY STUDY

Feasibility study is conducted once the problem is clearly understood. Feasibility study isa high-level capsule version of the entire system analysis and design process. The objective is to determine quickly at a minimum expense how to solve a problem. The purpose of feasibility is not to solve the problem but to determine if the problem is worth solving.

The system has been tested for feasibility in the following points.

- Technical Feasibility
- Economic Feasibility
- Operational Feasibility.

3.1Technical Feasibility

This assessment is focused on gaining and understanding of the present technical resources of Recruitment Management System and their applicability in the proposed system. This was aimed at evaluating both hardware and software required for the new system. It also determined whether the current facilities were adequate for the new system implementation.

3.2Economic Feasibility

This assessment typically involved a cost-benefits analysis. Undoubtedly, the modern online recruitment management system was found economically feasible and no possibility of it outliving its usefulness soon. It included quantification and identification of all the benefits expected.

3.3Operational Feasibility

In this project, the admin will store all the details of each applicant and help him to keep track of data and store it decentralized. If there are any enquiries that particular contract can be known as per their requirements and necessaries.

CHAPTER 4

SYSTEM DESIGN

Design is the first step in the development phase for any techniques and principles for thepurpose of defining a device, a process or system in sufficient detail to permit its physical realization. Once the software requirements have been analyzed and specified the software design involves three technical activities-design, coding, implementation and testing that are required to build and verify the software. The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system. Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into are presentation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

4.1 Data Flow Diagram for Recruitment Management System

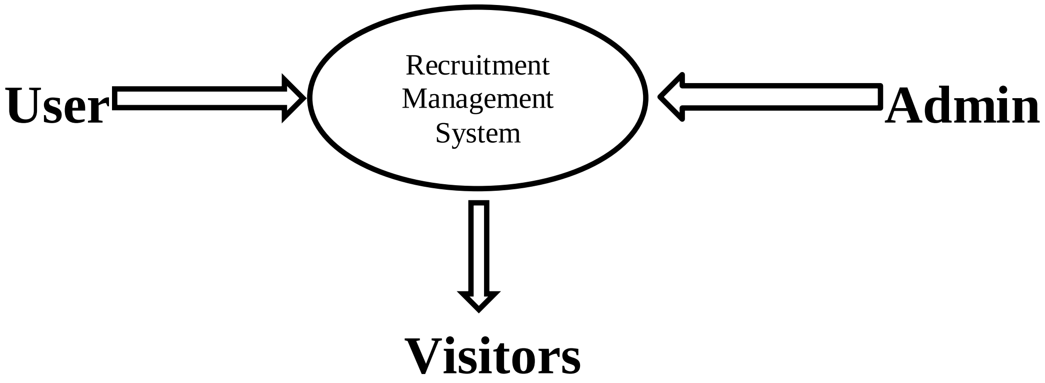

Figure 4.1: Data Flow Diagram for Recruitment Management System.

The Figure. 4.1 showcases the working of the project, the project has various functionality so in the figure all the features are working independently but all are linked with the main system.

4.2 Use Case Diagram for Admin

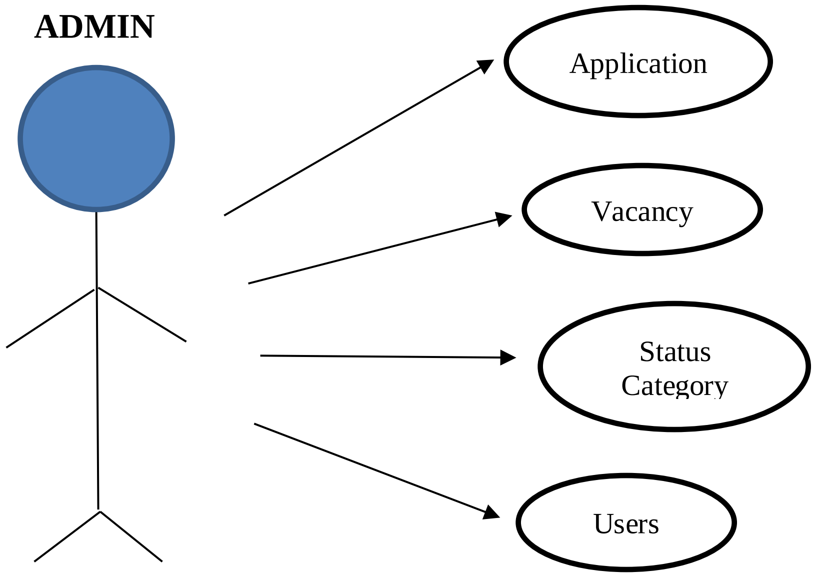

Figure 4.2: Use Case Diagram for Admin.

The Figure. 4.2 showcases the use case diagram for admin. The diagram states that the admin has authority to handle the entire application, he can manage the student, staff and feedback data and even perform a CRUD operation. In this mini project the file structure concept Indexing for the primary key is being used**.**

4.3 E R Diagram of Recruitment Management System

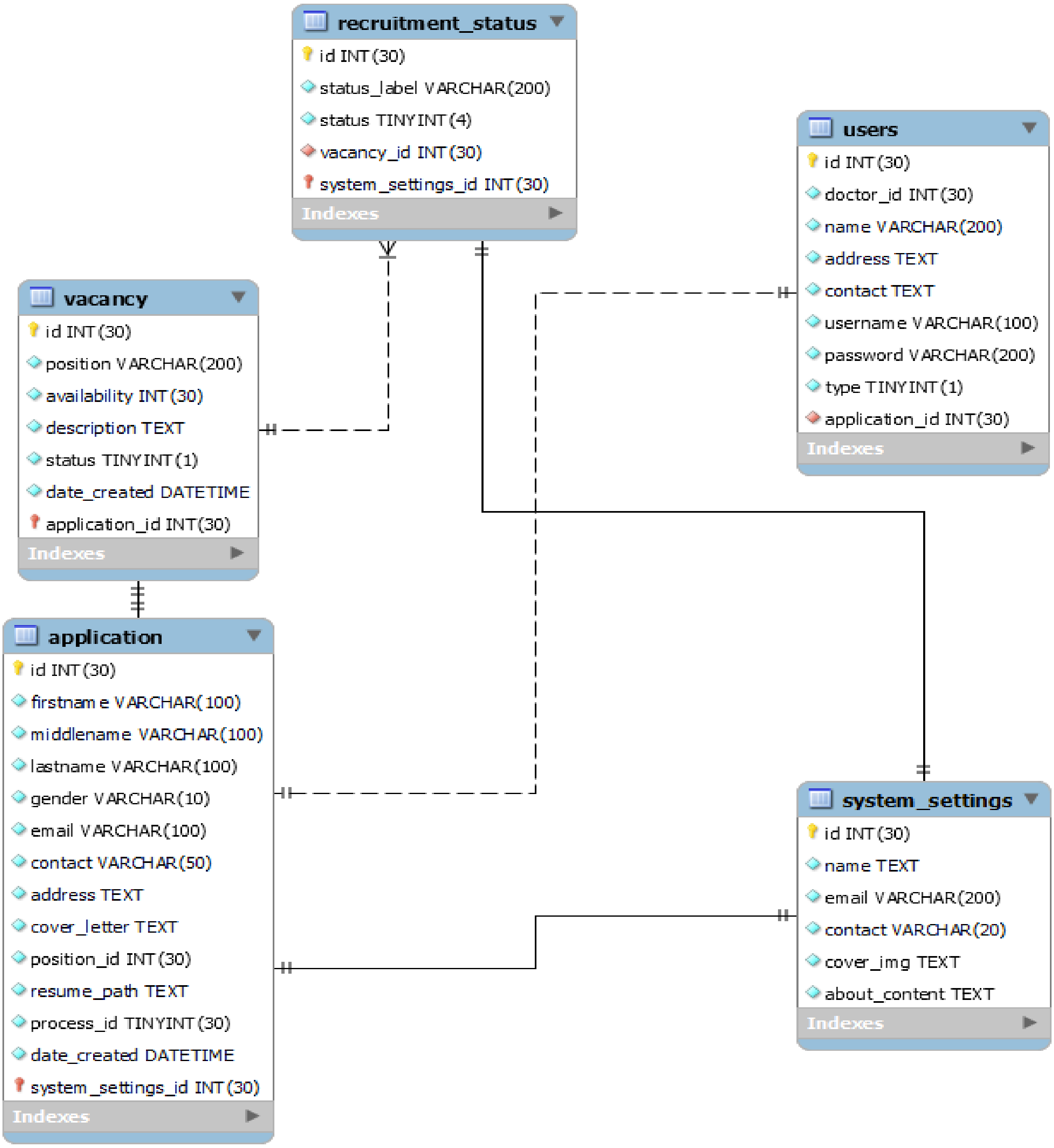

Figure 4.3: E R Diagram of Recruitment Management System

Figure 4.3 shows that admin will be an entity with attributes like application, vacancy, user, recruitment_status and system_settings. The application can be another entity with attributes like id, name, gender, contact, address etc.

4.4 Schema Diagram of Recruitment Management System

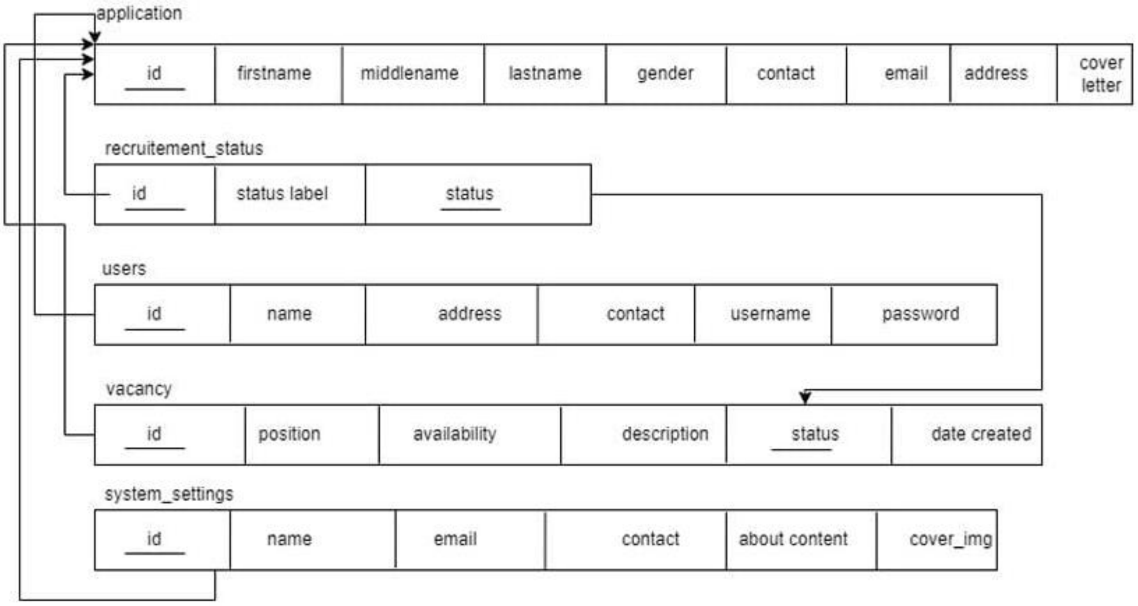

Figure 4.4: Schema Diagram of Recruitment Management System

Figure 4.4 shows the skeleton structure that represents the logical view of Recruitment Management System database. This defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on a data.

CHAPTER 5

IMPLEMENTATION

Implementation is the next process done after understanding the system design. Here we will use the technology to build this project. To understand clearly how implementation works we split it in two parts mainly.

- Front end Technology
- Back end Technology

5.1Front End Technology

In this sector we discuss on what kind of frontend tech is used to design the UI of the project and what are the language used to integrate it with the backend

5.1.1 HTML and CSS

HTML is the language for describing the structure of Web pages. HTML gives authors the means to:

- Publish online documents with headings, text, tables, lists, photos, etc.
- Retrieve online information via hypertext links, at the click of a button.
- Design forms for conducting transactions with remote services, for use in searching for information, making reservations, ordering products etc.

CSS is the language for describing the presentation of Webpages, including colors, layout and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based mark-up language.

5.1.2 Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS and JavaScript-based design templates for typography, forms, buttons, navigation and other interface components. In this project we are using Bootstrap5 todesign all the UI.

5.1.3 JavaScript

In this project we use the JavaScript mainly to connect the UI to the backend code of the project. JS is so advanced language that we can even use it to create the html elements and get the value of the HTML elements by using getElementById () value, this command will return the value present in that element of the HTML we will access it by passing the ID of that specific HTML element.

5.2 Back End Technology

Backend of the project is like the brain of the project. Here we code that functionality for the UI showcased to the user. In section we discuss the appropriate technology to be used to develop the project and keeping a good performance of the application.

5.2.1 MySQL

MySQL is based on the Structured Query Language (SQL), which is used to manage and manipulate relational databases. It is known for its reliability, flexibility, and ease of use, and it is supported by a large and active community of users and developers. One of the key features of MySQL is its support for scalability and high availability. MySQL also provides a variety of tools and utilities for managing and optimizing databases, such as the MySQL Workbench and the MySQL Enterprise Backup. It also supports several advanced features such as replication, partitioning and full-text search.

5.2.2 XAMPP

XAMPP web server solution stack package developed by Apache Friends. The acronym XAMPP stands for Apache, MariaDB, PHP and Perl. It is designed to make it easy to develop and test web applications on a local machine, without the need for a remote web server XAMPP includes the Apache HTTP Server, MariaDB (a fork of MySQL), PHP and Perl as well as some additional tools such as the phpMyAdmin database management tool and the FileZilla FTP server. It allows developers to test their code and applications locally before deploying them to a live server. It is widely used for web development and testing purposes.

CHAPTER 6

SYSTEM TESTING

Testing is the process of executing a program to find errors. A good test has the high probability of finding an undiscovered error. A test is vital to the success of the system. System test makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved.

6.1 Test Cases

Table 6.1: Unit testing for User Authentication

SL No.	Input	Expected Output	Actual Output	Remarks
1	Enter the valid credentials	Redirect to the dashboard	Redirect to dashboard	Pass
2	Enter the invalid credentials	Alert “Wrong Credentials”	Redirect to the dashboard	Fail

Table 6.1is the test case for user authentication. Firstly, valid credentials are passed and noted the possible outcome in the data in the table. Secondly gave the wrong credentials to check the working of the systemin the table, system has identified that invalid credentials and give the error message stating “Wrong credentials”.

Table 6.2: Unit testing for Insertion of Application Data

SL No.	Input	Expected Output	Actual Output	Remarks
1	Enter the application details	Application Successfully submitted.-	Application successfully submitted	Pass
2	Enter the existing applicant details	Alert “Applicant already exists”	Alert “Applicant already exists”	Pass
3	Enter the name of the applicant with a digit in it	Alert “Invalid name format”	Application Successfully Submitted	Fail

Table 6.2 show test case the test case for insertion of staff data, whenever a new data is added, it will be stored in the database. If the details entered is same as the details of an existing staff, it will throw the error message “User already existing”. The system will validate the new applicant details based on the email id given by the admin.

Table 6.3: Unit Testing for Insertion of Application

SL No.	Input	Expected Output	Actual Output	Remarks
1	Enter the applicant details	Application successfully submitted	Application successfully submitted	Pass
2	Enter the existing applicant details	Application already exists	Application successfully submitted	Fail
3	Enter the name of the applicant with a digit in it	Alert “Invalid Name format”	Application successfully submitted	Fail

Table 6.3 show cases the test cases for insertion of the applicant details, when a new data is added it will be stored in the data base whereas if a new detail added is same as the details of an existing applicant, it will throw the error message “Application already exists”. The system will validate the new student details based on the email id given by the user.

Table 6.4: Testing for Removing Applicant Data

SL No.	Input	Expected Output	Actual Output	Remarks
1	Enter the valid applicant ID	Applicant data removed successfully	Applicant data removed successfully	Pass
2	Enter the invalid applicant ID	Alert “Applicant ID doesn’t exist”	Applicant data removed successfully	Fail

Table6.4 shows the test cases for the removal of applicant details, if an applicant detail is removed from the database, it will update the index file also. if remove the details of a non-existing applicant, it will throw the error message “Applicant ID does not exist”. The system will validate the student details based on the applicant id generated by the system.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

7.1 Conclusion

Recruitment Management System has been designed and tested. Integrating features of all the software components used have developed in it. With the help of growing technology, the project has been successfully implemented. Project will reduce the human effort and make the task of admin and users easier. It is efficient to use and easy to work on it. Thus, keeping in mind, the advantages and applications.

7.2 Future Enhancement

This project can be further enhanced by adding cloud server like Firebase, AWS. Using Real time server aspects like authentication, management of multiple applicants can be done precisely.

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[1] David G Collings, Geoff Lancaster, “E-Recruitment: The Role of Internet In Recruitment”, International Journal Of Human Resource Management, 2004.

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[3] Paul Iles, Chris Brewster, “The Impact of Recruitment Management Systems on The Recruiting Process”, International Journal of Human Resource Management, 2009.

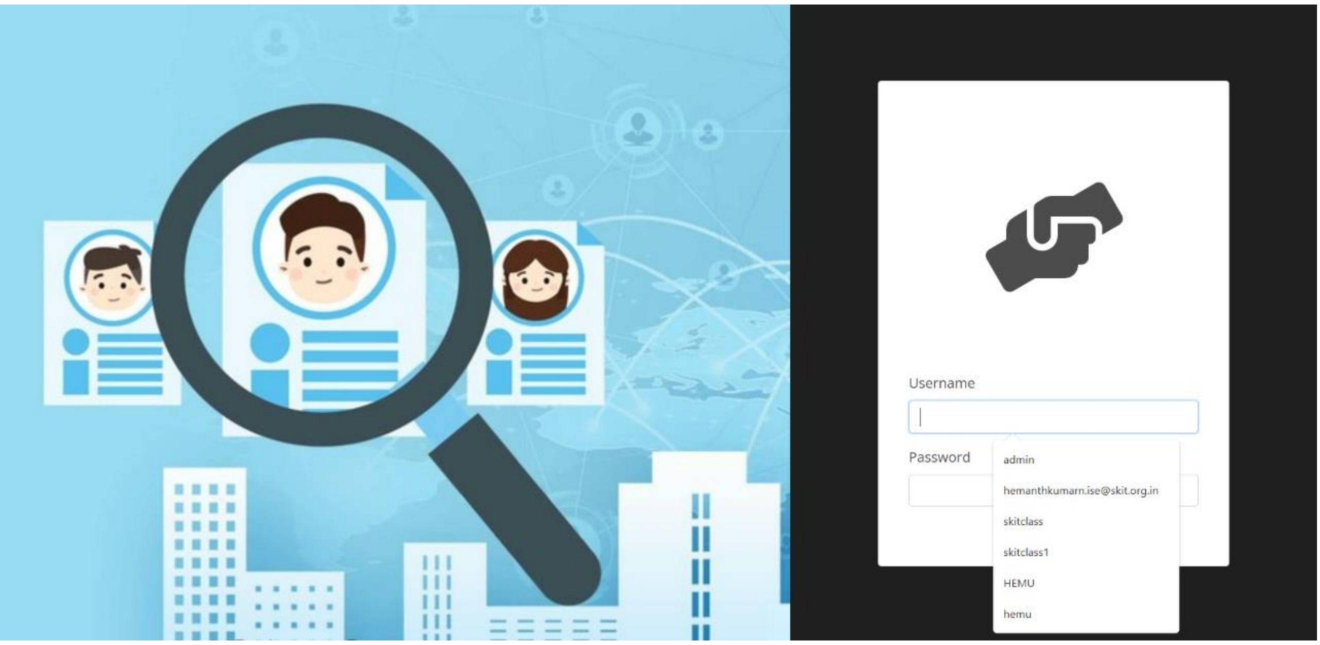
[4] Mark D Silzer, John D Hausberg, “The Role of Recruitment Management Systems In The Hiring Process”, Journal Of Applied Psychology, 2010.

[5] John W Bourdeau, Peter M Ramstad, “The Effect of Recruitment Management Systems On Time-To-Hire and Cost-Per-Hire”, Journal Of Management Of Management Information Systems, 2011.

[6] John Sullivan, Elaine Orler, “The Role of Recruitment Management Systems in The Candidate Experience”, Journal of Employment Research, 2012.

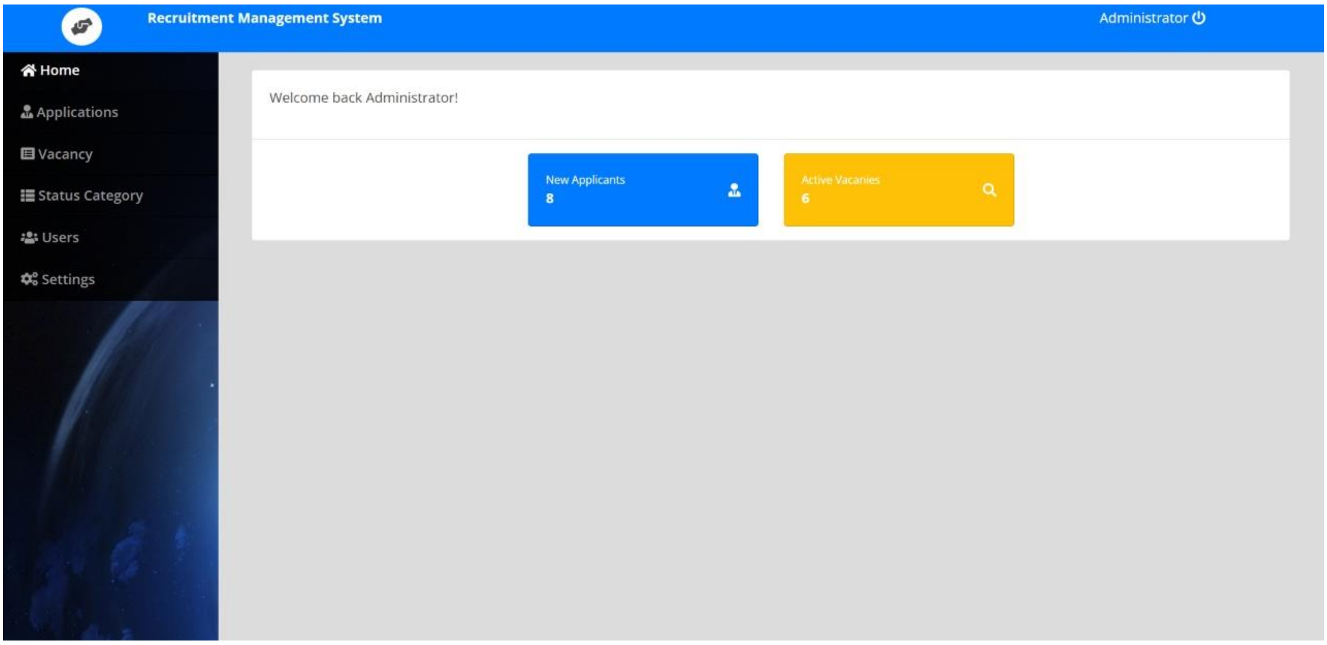
APPENDIX

A- SNAPSHOTS



A.1: Admin Login

A.1 shows the view when the admin logins to the Recruitment Management System.



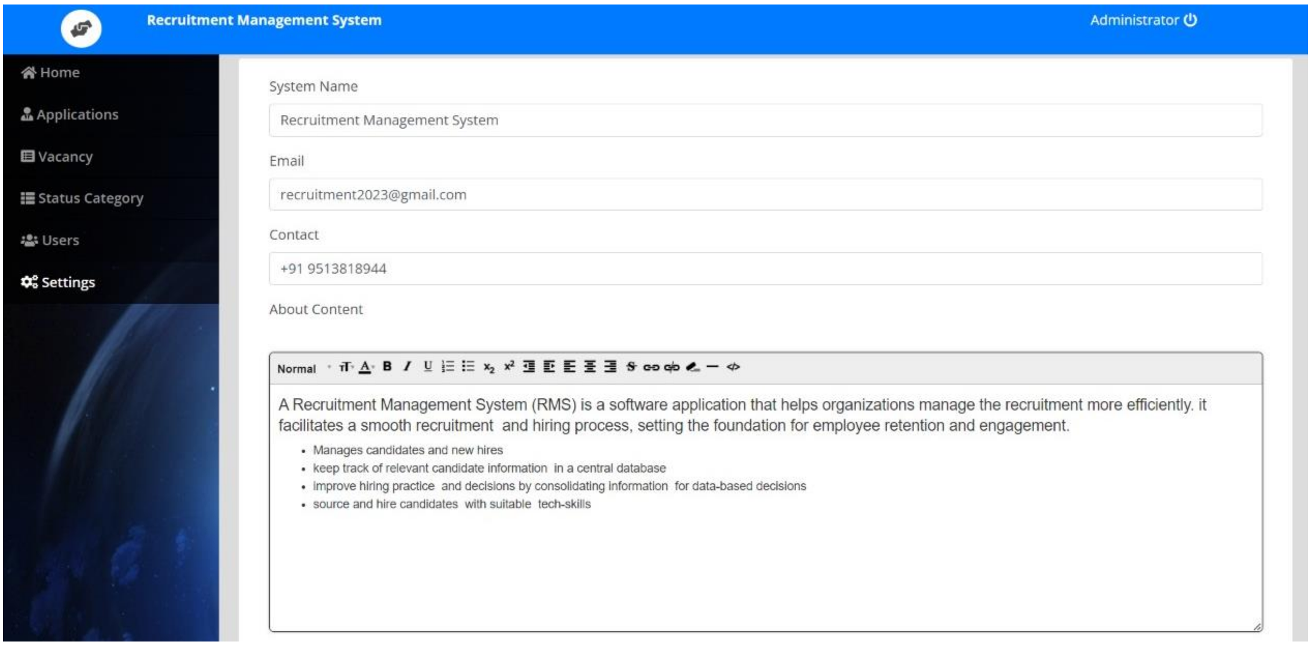
Welcome back Administrator!

New Applicants
8

Active Vacanies
6

A.2: Admin Dashboard

A.2 shows the dashboard for the admin after login.



System Name

Recruitment Management System

Email

recruitment2023@gmail.com

Contact

+91 9513818944

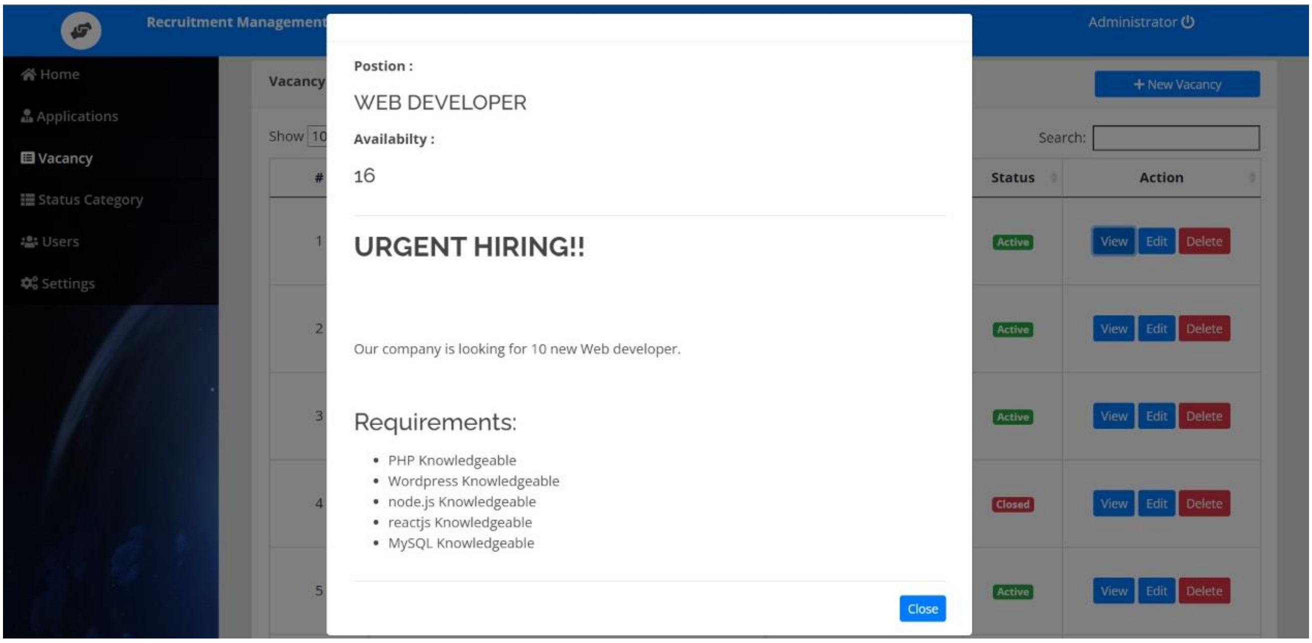
About Content

A Recruitment Management System (RMS) is a software application that helps organizations manage the recruitment more efficiently. it facilitates a smooth recruitment and hiring process, setting the foundation for employee retention and engagement.

- Manages candidates and new hires
- keep track of relevant candidate information in a central database
- improve hiring practice and decisions by consolidating information for data-based decisions
- source and hire candidates with suitable tech-skills

A.3: Settings

A.3 shows that Admin can changes the System Name, Email, Contact and Contents on the home page.



Postion :

WEB DEVELOPER

Availabilty :

16

URGENT HIRING!!

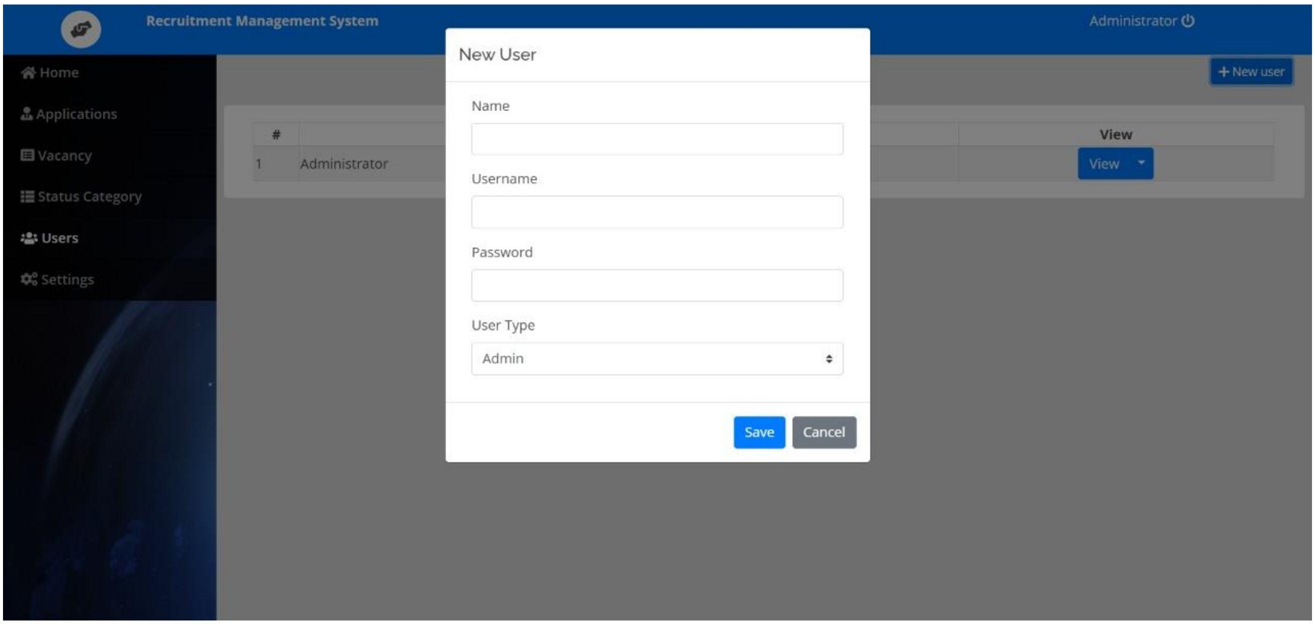
Our company is looking for 10 new Web developer.

Requirements:

- PHP Knowledgeable
- Wordpress Knowledgeable
- node.js Knowledgeable
- reactjs Knowledgeable
- MySQL Knowledgeable

A.4: Position View

A.4 shows the requirements for the particular position for the company.



New User

Name

Username

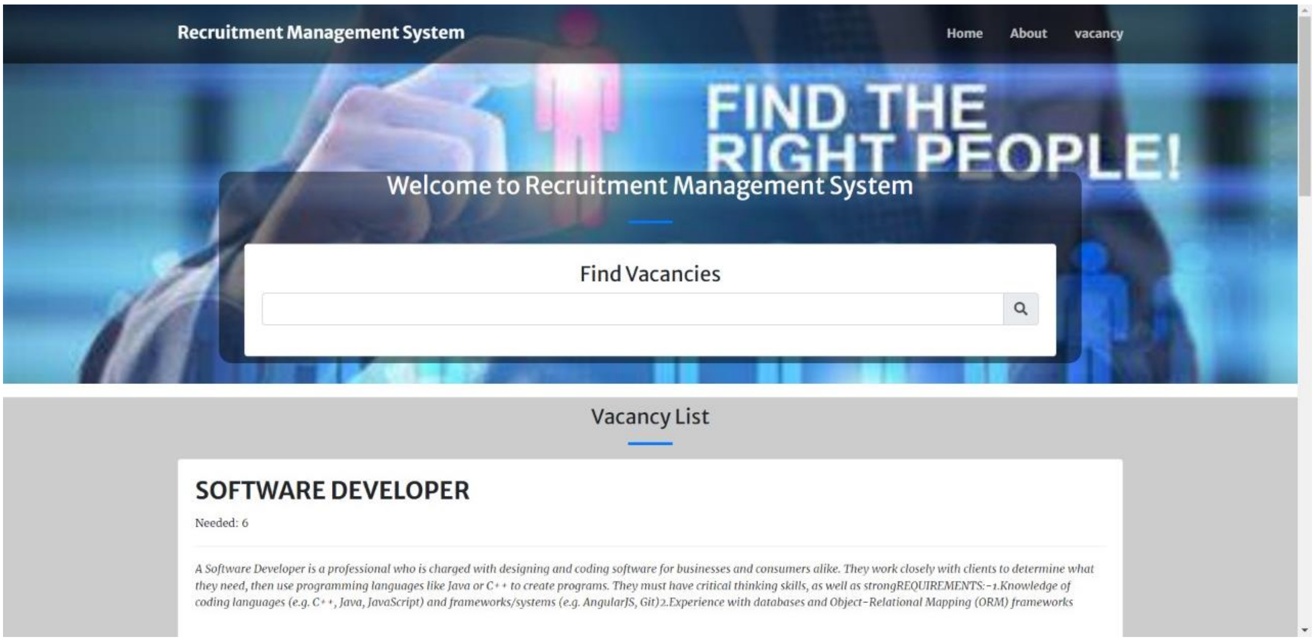
Password

User Type: Admin

#		View
1	Administrator	View

A.5: Create New Users Through Admin

A.5 shows the creation of other admins through the main admin.


Recruitment Management System
Home
About
vacancy
FIND THE RIGHT PEOPLE!
Welcome to Recruitment Management System
Find Vacancies
Vacancy List

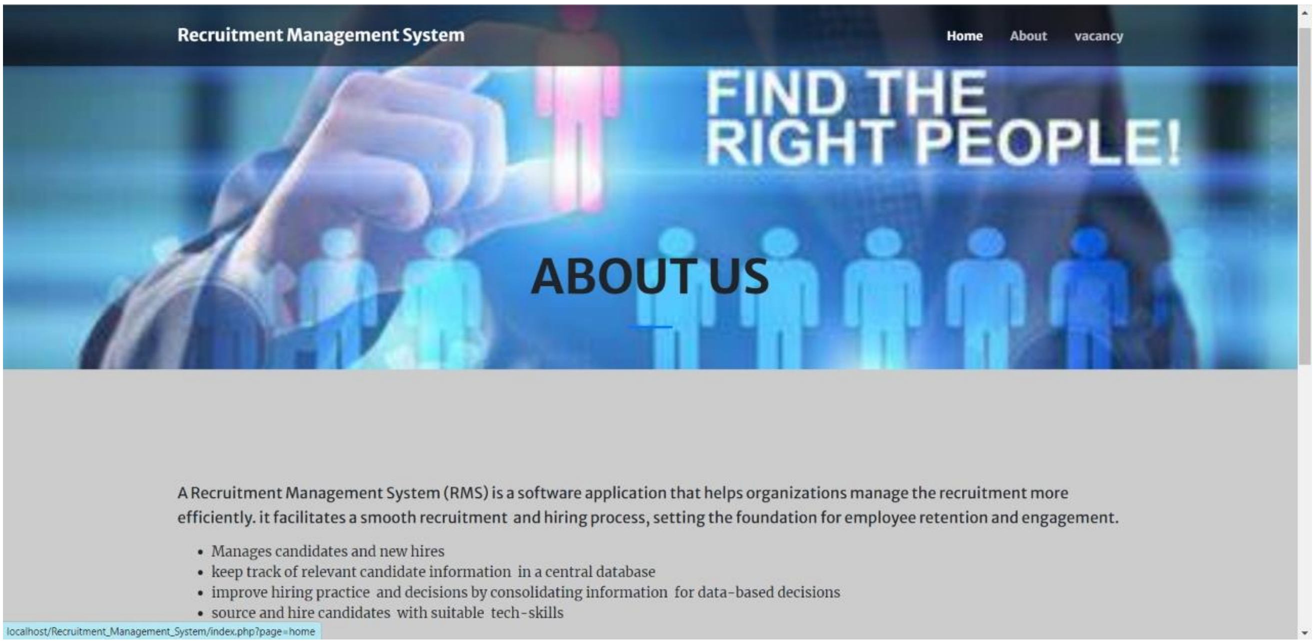
SOFTWARE DEVELOPER

Needed: 6

A Software Developer is a professional who is charged with designing and coding software for businesses and consumers alike. They work closely with clients to determine what they need, then use programming languages like Java or C++ to create programs. They must have critical thinking skills, as well as strongREQUIREMENTS:-1.Knowledge of coding languages (e.g. C++, Java, JavaScript) and frameworks/systems (e.g. AngularJS, Git)2.Experience with databases and Object-Relational Mapping (ORM) frameworks

A.6: Applicant Home Page

A.6 shows the home page of the applicant where the user can search for vacancies.



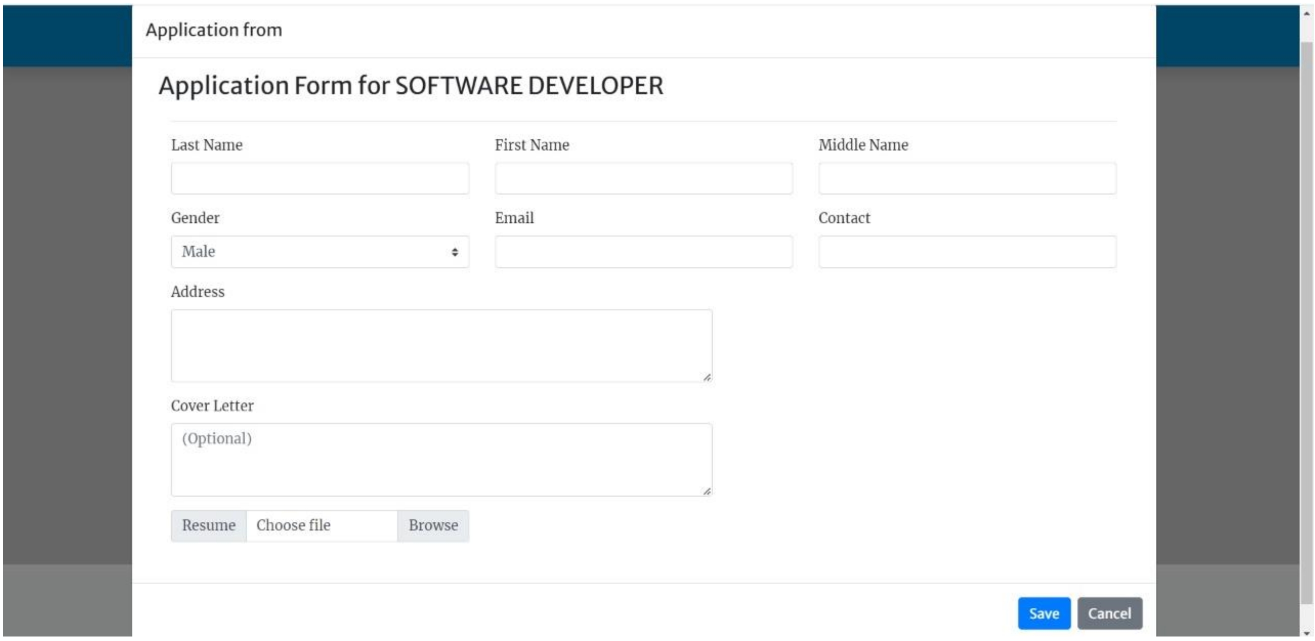
A Recruitment Management System (RMS) is a software application that helps organizations manage the recruitment more efficiently. it facilitates a smooth recruitment and hiring process, setting the foundation for employee retention and engagement.

- Manages candidates and new hires
- keep track of relevant candidate information in a central database
- improve hiring practice and decisions by consolidating information for data-based decisions
- source and hire candidates with suitable tech-skills

localhost/Recruitment_Management_System/index.php?page=home

A.7: About Us

A.7 gives the user information about the recruitment and its management.


Application from

Application Form for SOFTWARE DEVELOPER

Last Name	First Name	Middle Name
Gender	Email	Contact
Male		

Address

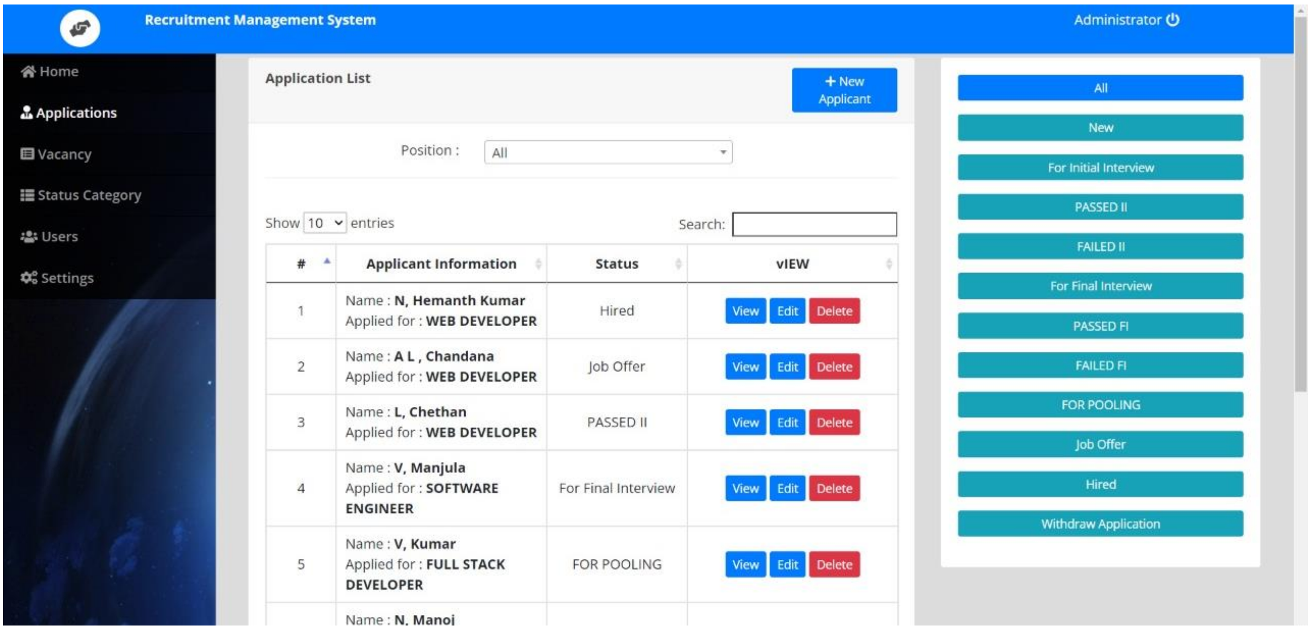
Cover Letter

(Optional)

Resume Choose file Browse

A.8: Application Form

A.8 shows the application form for the user and asks for the user details.



Application List

Position : All

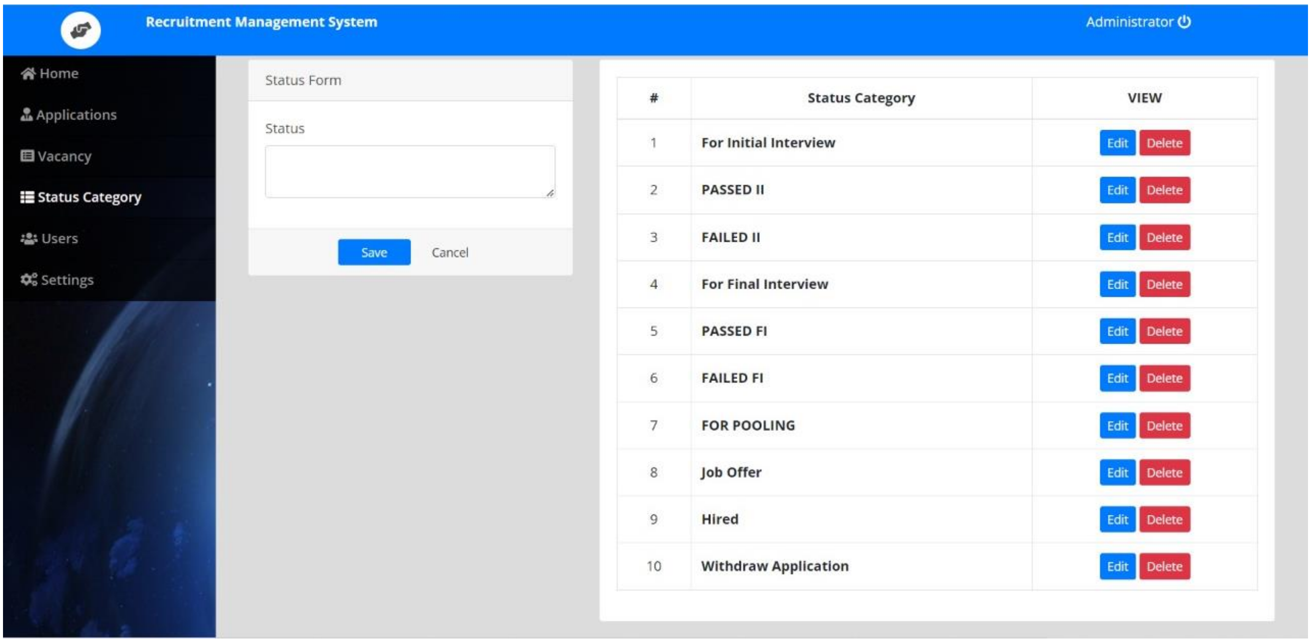
Show 10 entries

Search:

#	Applicant Information	Status	vIEW
1	Name : **N, Hemanth Kumar** Applied for : **WEB DEVELOPER**	Hired	View Edit Delete
2	Name : **A L , Chandana** Applied for : **WEB DEVELOPER**	Job Offer	View Edit Delete
3	Name : **L, Chethan** Applied for : **WEB DEVELOPER**	PASSED II	View Edit Delete
4	Name : **V, Manjula** Applied for : **SOFTWARE ENGINEER**	For Final Interview	View Edit Delete
5	Name : **V, Kumar** Applied for : **FULL STACK DEVELOPER**	FOR POOLING	View Edit Delete
	Name : **N, Manoj**		

A.9: Application List

A.9 shows all the applications received from the users.



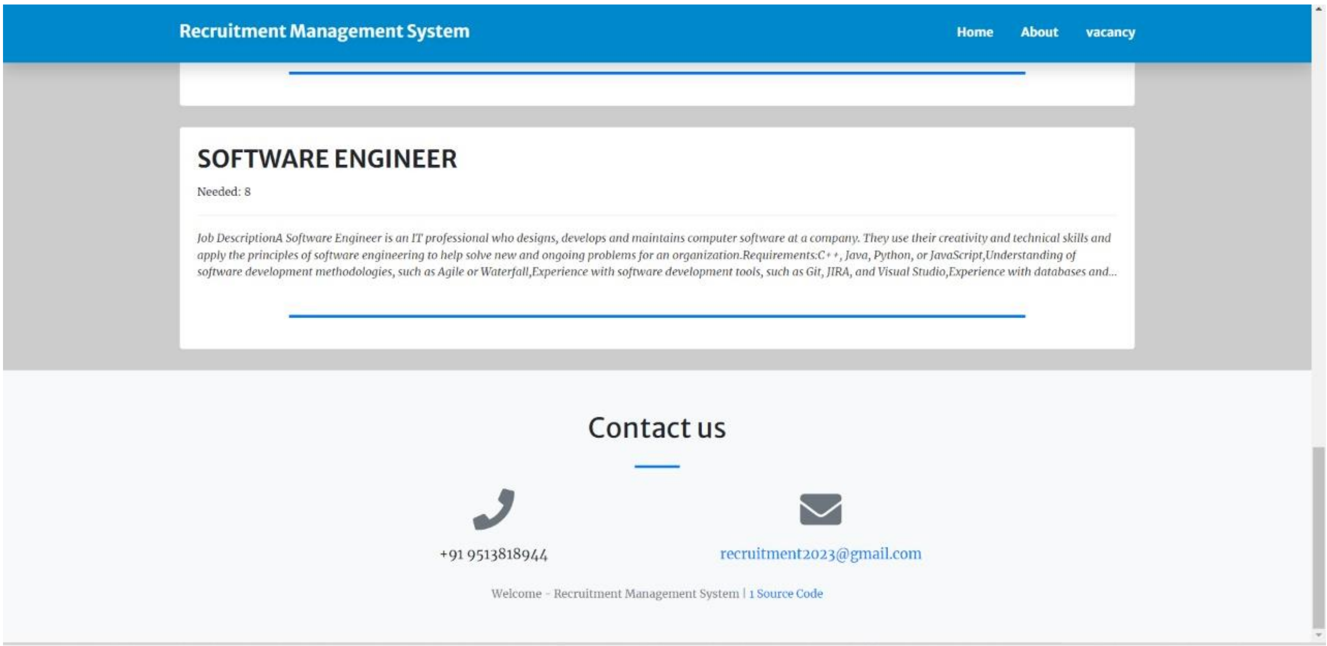
Status Form

Status

#	Status Category	VIEW
1	**For Initial Interview**	Edit Delete
2	**PASSED II**	Edit Delete
3	**FAILED II**	Edit Delete
4	**For Final Interview**	Edit Delete
5	**PASSED FI**	Edit Delete
6	**FAILED FI**	Edit Delete
7	**FOR POOLING**	Edit Delete
8	**Job Offer**	Edit Delete
9	**Hired**	Edit Delete
10	**Withdraw Application**	Edit Delete

A.10: Status Category

A.10 shows the status of the applications received.



SOFTWARE ENGINEER

Needed: 8

Job DescriptionA Software Engineer is an IT professional who designs, develops and maintains computer software at a company. They use their creativity and technical skills and apply the principles of software engineering to help solve new and ongoing problems for an organization.Requirements:C++, Java, Python, or JavaScript,Understanding of software development methodologies, such as Agile or Waterfall,Experience with software development tools, such as Git, JIRA, and Visual Studio,Experience with databases and...

Contact us

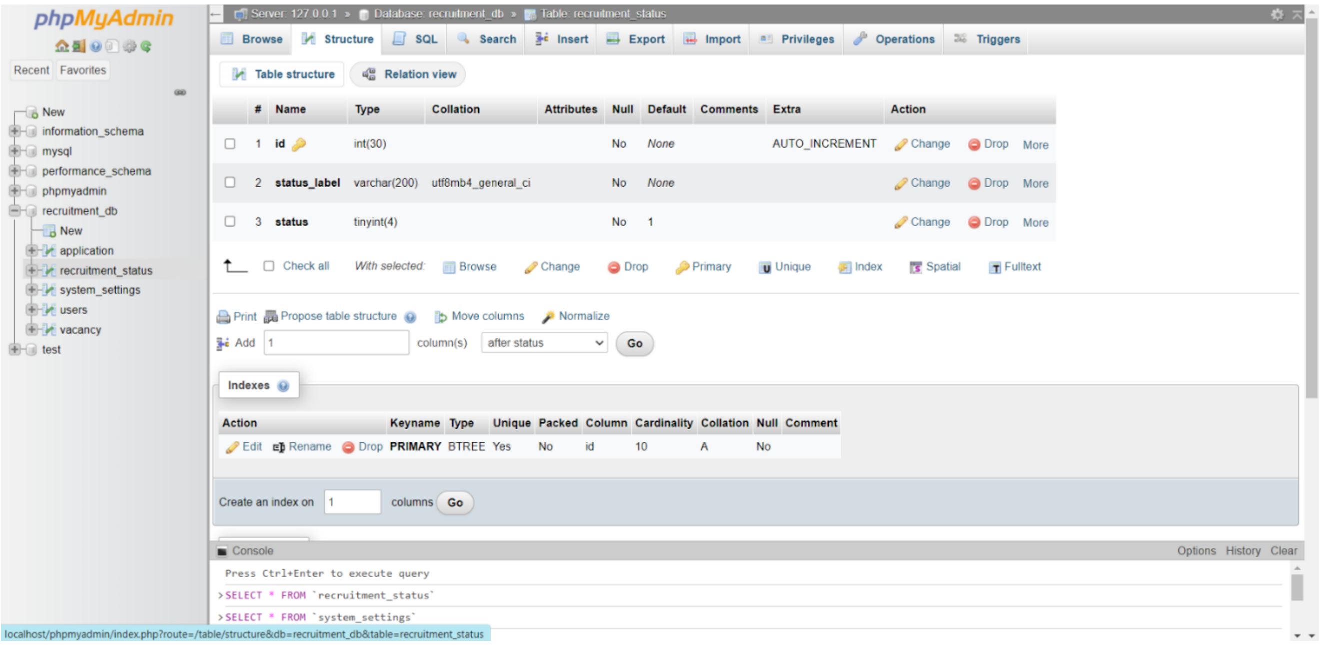
+91 9513818944

recruitment2023@gmail.com

Welcome - Recruitment Management System | 1 Source Code

A.11: Contact Us

A.11 gives the information for contact.



	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
□	1	**id**	int(30)			No	*None*		AUTO_INCREMENT	Change Drop More
□	2	**status_label**	varchar(200)	utf8mb4_general_ci		No	*None*			Change Drop More
□	3	**status**	tinyint(4)			No	1			Change Drop More

□ Check all *With selected:* Browse Change Drop Primary Unique Index Spatial Fulltext
Print Propose table structure Move columns Normalize

Add 1 column(s) after status Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Rename Drop	**PRIMARY**	BTREE	Yes	No	id	10	A	No	

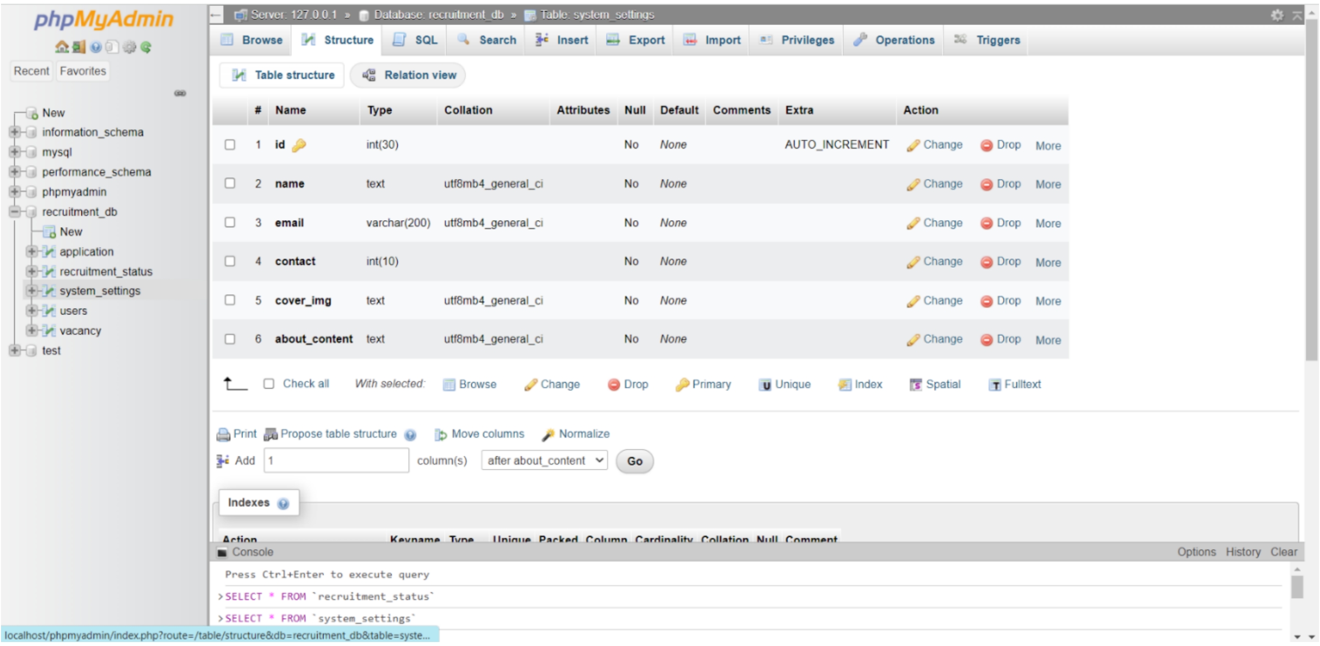
Create an index on 1 columns Go

```
Press Ctrl+Enter to execute query
>SELECT * FROM `recruitment_status`
>SELECT * FROM `system_settings`
```

localhost/phpmyadmin/index.php?route=/table/structure&db=recruitment_db&table=recruitment_status

A.12: Recruitment

A.12 shows the attributes of the recruitment table along with the datatypes.


phpMyAdmin
Recent Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
recruitment_db
New
application
recruitment_status
system_settings
users
vacancy
test
Server: 127.0.0.1 » Database: recruitment_db » Table: system_settings
Browse Structure SQL Search Insert Export Import Privileges Operations Triggers
Table structure Relation view
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext
Print Propose table structure Move columns Normalize
Add 1 column(s) after about_content Go
Indexes
Console
Options History Clear

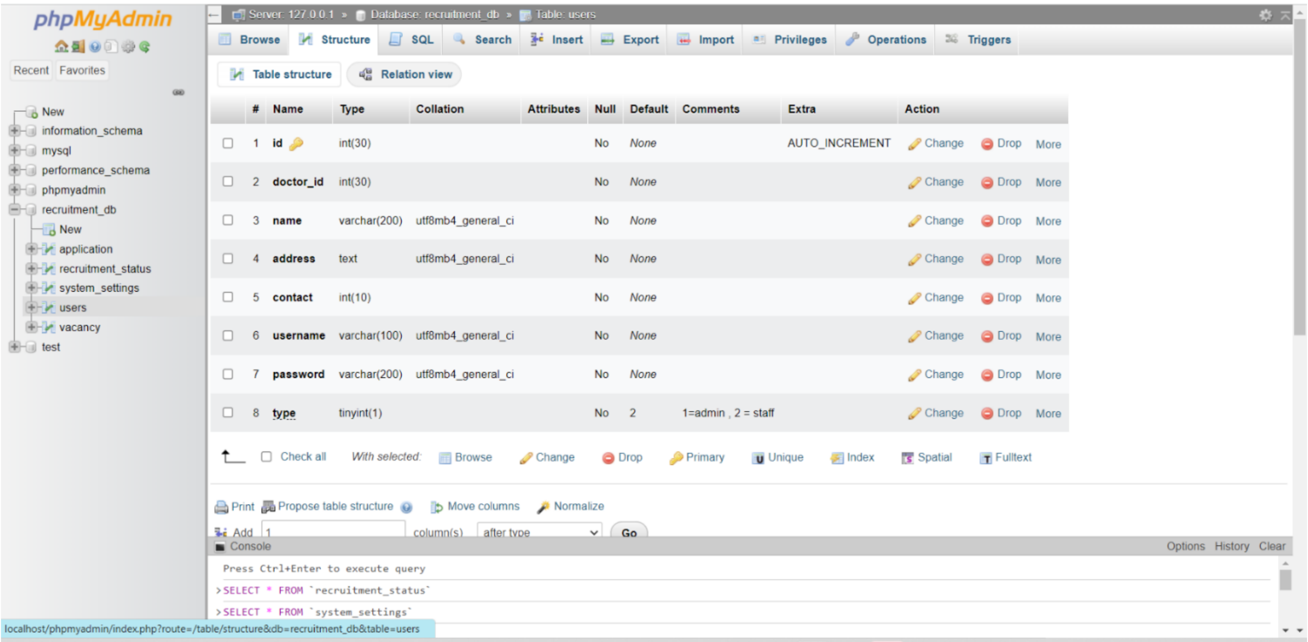
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(30)			No	None		AUTO_INCREMENT	Change Drop More
2	name	text	utf8mb4_general_ci		No	None			Change Drop More
3	email	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
4	contact	int(10)			No	None			Change Drop More
5	cover_img	text	utf8mb4_general_ci		No	None			Change Drop More
6	about_content	text	utf8mb4_general_ci		No	None			Change Drop More

```
Press Ctrl+Enter to execute query
>SELECT * FROM `recruitment_status`
>SELECT * FROM `system_settings`
```

localhost/phpmyadmin/index.php?route=/table/structure&db=recruitment_db&table=syste...

A.13: Settings

A.13 shows the attributes of the settings table along with its datatype.


phpMyAdmin
Recent Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
recruitment_db
New
application
recruitment_status
system_settings
users
vacancy
test
Server: 127.0.0.1 » Database: recruitment_db » Table: users
Browse Structure SQL Search Insert Export Import Privileges Operations Triggers
Table structure Relation view
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext
Print Propose table structure Move columns Normalize
Add 1 column(s) after type Go
Console
Options History Clear

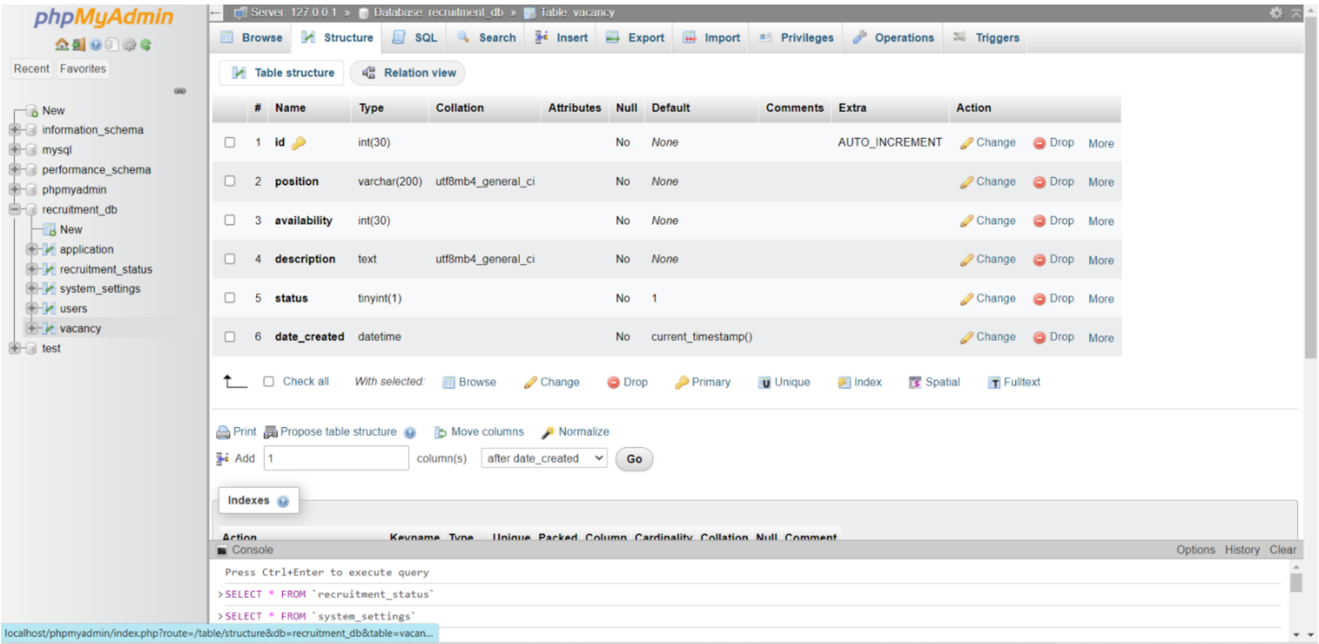
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(30)			No	None		AUTO_INCREMENT	Change Drop More
2	doctor_id	int(30)			No	None			Change Drop More
3	name	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
4	address	text	utf8mb4_general_ci		No	None			Change Drop More
5	contact	int(10)			No	None			Change Drop More
6	username	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
7	password	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
8	type	tinyint(1)			No	2	1=admin , 2 = staff		Change Drop More

```
Press Ctrl+Enter to execute query
>SELECT * FROM `recruitment_status`
>SELECT * FROM `system_settings`
```

localhost/phpmyadmin/index.php?route=/table/structure&db=recruitment_db&table=users

A.14: User

A.14 shows the attributes of the user table along with its datatype.


phpMyAdmin
Recent Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
recruitment_db
New
application
recruitment_status
system_settings
users
vacancy
test
Server: 127.0.0.1 » Database: recruitment_db » Table: vacancy
Browse Structure SQL Search Insert Export Import Privileges Operations Triggers
Table structure Relation view
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext
Print Propose table structure Move columns Normalize
Add 1 column(s) after date_created Go
Indexes
Action Keyname Type Unique Packed Column Cardinality Collation Null Comment
Console Options History Clear

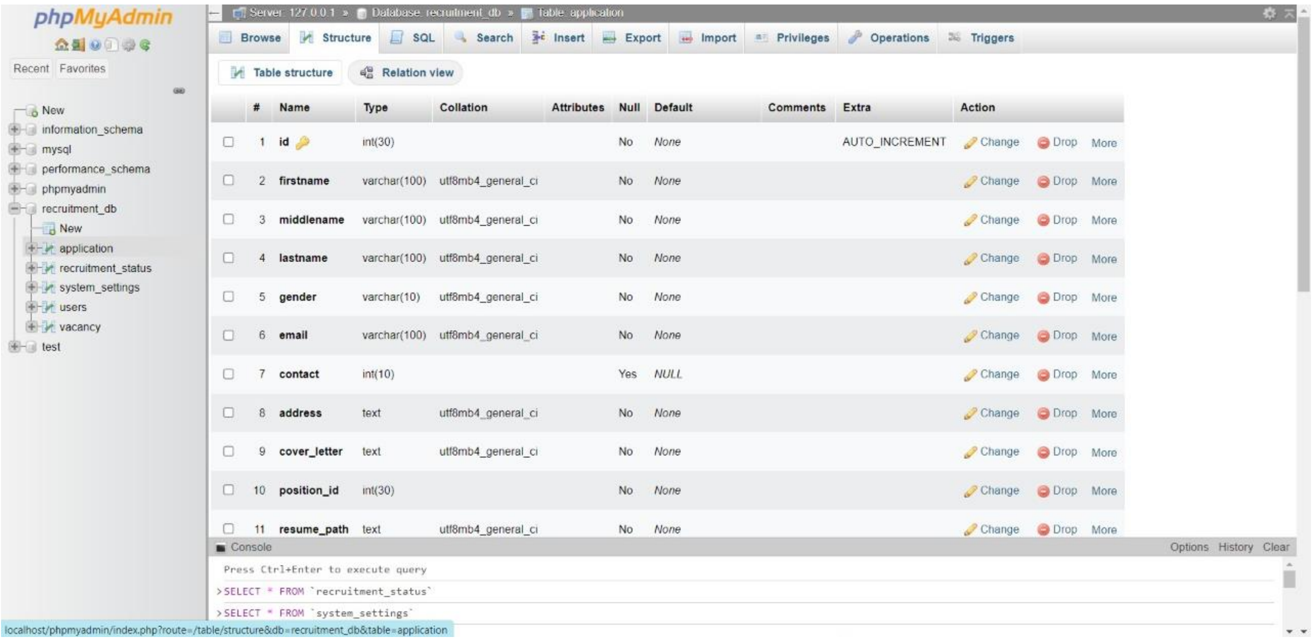
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(30)			No	None		AUTO_INCREMENT	Change Drop More
2	position	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
3	availability	int(30)			No	None			Change Drop More
4	description	text	utf8mb4_general_ci		No	None			Change Drop More
5	status	tinyint(1)			No	1			Change Drop More
6	date_created	datetime			No	current_timestamp()			Change Drop More

```
Press Ctrl+Enter to execute query
>SELECT * FROM `recruitment_status`
>SELECT * FROM `system_settings`
```

localhost/phpmyadmin/index.php?route=/table/structure&db=recruitment_db&table=vacan...

A.15: Vacancy

A.15 shows the attributes of the vacancy table along with its datatype.


phpMyAdmin
Recent Favorites
New
information_schema
mysql
performance_schema
phpmyadmin
recruitment_db
New
application
recruitment_status
system_settings
users
vacancy
test
Server: 127.0.0.1 » Database: recruitment_db » Table: application
Browse Structure SQL Search Insert Export Import Privileges Operations Triggers
Table structure Relation view
Console Options History Clear

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(30)			No	None		AUTO_INCREMENT	Change Drop More
2	firstname	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
3	middlename	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
4	lastname	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
5	gender	varchar(10)	utf8mb4_general_ci		No	None			Change Drop More
6	email	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
7	contact	int(10)			Yes	NULL			Change Drop More
8	address	text	utf8mb4_general_ci		No	None			Change Drop More
9	cover_letter	text	utf8mb4_general_ci		No	None			Change Drop More
10	position_id	int(30)			No	None			Change Drop More
11	resume_path	text	utf8mb4_general_ci		No	None			Change Drop More

```
Press Ctrl+Enter to execute query
>SELECT * FROM `recruitment_status`
>SELECT * FROM `system_settings`
```

localhost/phpmyadmin/index.php?route=/table/structure&db=recruitment_db&table=application

A.16: Application

A.16 shows the attributes of the table along with its datatype.