

# **MINI PROJECT-I**

**(2020-2021)**

## **Labour Management System**

**(Final Report)**

**Department of Computer Engineering  
& Applications**

**Institute of Engineering & Technology**



### **SUBMITTED TO:**

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# **ACKNOWLEDGEMENT**

It gives us a great sense of pleasure to present the final report of the B.Tech Mini Project-I (**Labour Management System**) undertaken during B.Tech III<sup>rd</sup> Year.

We, would like to express our special thanks to our mentor “**Mr. Vaibhav Diwan**”, Assistant Professor Department of CEA, for their invaluable guidance and support during the course of this project work, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies

We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

Harshit Tivari

(171500128)

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Rupesh Kumar Mishra

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Pranjal Trivedi

(171500226)

# *Certificate of Completion*

*This is to certify that **Rupesh Kumar Mishra** successfully completed 20 total hours of **Complete back end development with NodeJS with projects** online course on Aug. 15, 2020*

*Igneus Technologies*  
Igneus Technologies, Instructor

&



Certificate no: UC-2971bf3f-b8cc-4645-a08e-76b16c862809  
Certificate url: ude.my/UC-2971bf3f-b8cc-4645-a08e-76b16c862809

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*Colt Steele*  
Colt Steele, Instructor

&



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Certificate url: ude.my/UC-29f13948-1209-4449-b5b8-2ebff4a4d89

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# **Labour Management System**

(WEB DEVELOPMENT)

## **1 Introduction**

### **1.1 Project Overview**

Warehouse managers constantly try to optimize the amount of staff they employ and ensure that employees are productive. If warehouse managers have too many employees, and not enough work, then they have to pay employees to wait for work. If too much work exists and not enough employees are available, customer orders are not shipped on time, or warehouse accuracy suffers. Labor Management enables warehouse managers to track the amount of time each user takes to complete a set of tasks, their work hours, their non-work hours, etc. It records this information at both specific and generic levels. It records the task type, material transacted, and source and destination locations.

The system has a recruitment model where each new labourer can register themselves to apply for a job and they are selected based on their capabilities and a series of procedures. After Labor Management records the information, it analyzes it for two primary purposes, employee management and employee evaluation. Because the system knows the amount of time and expected work required to complete each task, it can predict how much time or staff is necessary to complete the work in the warehouse. Employee evaluation compares the time performance of employees against their colleagues or engineered standards for labor productivity, and rates employees on their performance level. It helps the warehouse manager to make decisions about staffing, compensation, training, and work assignment.

## **1.2 Design Overview**

This website is basically a recruitment portal where we connect the candidates to their respective companies depending upon the interview and experience. So in our website there are 2 logins :-

**1. Company login:** By using the Company login the company has access to view all the candidates resume and select them depending upon the work experience and resume. they can even post the no of candidates required for a particular job with its details.

**2. Candidate Login:** In candidate login the person can Upload its resume but if the person has not created the resume then we have added an extra feature where u can create the Resume on our website .We also have shown a feature where the candidate can view all the jobs that are available and at what post.

**Essential Features:** Candidate can choose its job by filtering the location, packages, type of job. Even the company can choose the candidate by filtering location, type of job.



# **Domain and Requirement Analysis**

## **System Analysis**

System analysis is a process of collecting and interpreting facts, identifying the problems, and decomposition of the system into its components.

It is a process of studying a system in order to define its goals or purposes and to discover operations and procedures for accomplishing them most efficiently.

## **Role of System Analyst**

The system analyst is a person who is thoroughly aware of the system and guides the system development project by giving proper directions. He is an expert having technical and interpersonal skills to carry out development tasks required at each phase.

## **Main Roles of System Analyst**

- Defining and understanding the requirements of user through various fact finding techniques.
- Prioritizing the requirements by obtaining user consensus.
- Maintains analysis and evaluation to arrive at an appropriate system which is more user friendly.
- Draw certain specifications which are easily understood by users and programmers in precise and detailed form.
- Implement the logical design of system which must be modular

## **Methodology**

Our methodology is designed to help you take maximum advantage of the internet technologies. It incorporates all aspects related to our website and allows us to ensure that the final product is of the highest standards. Below are the steps we will take to ensure that all your deliverables are completed in time, within budget also we will try to solve each and every problem efficiently.

## **Requirements analysis**

The first step for us is to analyze you and your target market's requirements. Who will be visiting your website, what will be the purpose of their visit, what is the primary goal of your website, how can your organization best cater to their needs etc. Many such questions are analyzed for the Needs Analysis stage.

If we are given access to the current website statistics, we would also like to analyze your current page views, average user time spent on the site, top landing pages, existing search engine rankings, existing bounce rates and many such factors. We analyze your online target audience and assess your differentiation strategy to best attract and retain your online visitors.

Your website will also undergo comprehensive search engine analysis twice during the course of the project; once during this stage and once again after the deployment (Go Live phase) of your website.

## **Formulate digital strategy**

Based on the needs analysis, we determine the factors that will best serve your website. We look at the trends in the market to ensure that you have the latest technology, components and elements. We take time to think outside the box and give consideration to more than your present-day business needs so that your website can sustain any upcoming future needs

## **Web-page conceptualization**

We consider this stage to be one of the most crucial factors in any project. We justify every single aspect of the design to ensure that each element is serving a specific need and the website is truly designed to attract, retain and enhance the end user- experience.

Once all developments are done, we proceed to the Testing phase, where features of your website and the Content Management System are tested rigorously.

Once the preliminary testing is done, we then proceed to the multi-browser test, where your website is tested over major browsers such as IE, Firefox & Safari as a standard practice. If you require your website to be tested on more browsers, simply ask us to have them included in the testing phase for your project.

For your information, the latest worldwide browser statistics are as follows. As discussed previously, we would also like to analyse browser and platform statistics of your website at the planning phase to ensure that your new website is built accordingly.

## **Evaluation and fine-tuning**

Once the website is passed through the preliminary testing phase, we can handover the site for User Acceptance Testing to you if UAT is required. Upon receiving a User Acceptance Testing signoff from you and based on your feedback, we will do the necessary changes to the website.

Once all cleared from your end, we will proceed to the Data Migration phase.

## **Data Migration phase**

Once we have received the UAT signoff, we will proceed to migrate all data

from your current website to your new website. You can alternatively provide new content in a word document (one document per page). Depending upon your project, migration is done manually, one page at a time. The content is also organised based on the new navigation panel and site structure. We also keep your primary and secondary keywords in mind while migrating the content over, so that you can take maximum advantage of the search engine indexes.

### **Pre-deployment phase**

Once the data has been ready, we submit the site for your review for final feedback. Once cleared, we will set up the site on the server where it is going to be deployed. Once setup on your server, website undergoes testing again to ensure that data- integrity and quality of deliverables are maintained. The site will be ready for the final deployment once the pre-deployment phase is done.

### **Website handover**

Once the site is set up on your destination server, upon your approval we make the website live. One final set of testing is done on the live website for the quality assurance purposes. We then hand over the control of the site to you.



## 2 System Architecture

From the project we can identify following modules

### **Employee management:**

The Employee Management module deals with the punctuality and working of the employees. The module records the time at which the workers start and end their work. It records their working hours during the 3 phases of the day i.e morning, afternoon and evening. It also keeps track of the overtime work done by each employee thereby removing the need of assigning a separate personal to keep track of the records. The module also handles the increment to be given to each employee based on the amount of overtime work he/she has done. The Employee Evaluation module analyzes the information from the Employee.

### **Employee Evaluation Module:**

The Employee Evaluation module analyzes the information from the Employee Management module. Based on the data the productivity of each worker is analyzed every month and their ranks are calculated. Based on the ranks employee of the month and respective perks are awarded for each team of employee. Whenever the request for any new work comes to the company it is assigned to the teams based on their rankings. Each and every employee can keep track of how he /she is evaluated for their work assigned on a daily or monthly basis. The employee can check their salary breakdown based on different schemes given by the company.

### **Recruitment Portal:**

It is responsible for finding freelance workers/teams of workers based on the criteria sent to us by the respective companies. Interviews are conducted based on the resume offered to us by the employee and the compatible.

## **2.1 Chosen System Architecture**

The system architectural design used is Data Flow architecture. In data flow architecture, the whole software system is seen as a series of transformations on consecutive pieces or sets of input data, where data and operations are independent of each other. In this approach, the data enters into the system and then flows through the modules one at a time until they are assigned to some final destination (output or a data store). Initially the user will upload the resume. If the resume satisfies any of the recruitment criteria the user will be considered for the job. The resumes will be filtered on the basis of whether the application is of corporate type and non-corporate type. The candidates belonging to the corporate category give an online test. Based on the results of the test decision is taken whether the candidate should be selected for the interview round. The interview round is common for both corporates and non-corporates. After further processing the candidates are selected and the information is stored in the database.

## **2.2 Discussions of Alternate Designs**

### **a. Data Centered Architecture**

In this architecture there is a single centralized data store. Store data is accessed continuously by the other components like an update, delete, add, modify from the data store. Such architecture is more suitable when there is a need for communication between different clients accessing the storage. But in our case only our company will be accessing the data store(i.e only 1 client) and thus there is no need for this architecture.

## **b. Call and Return**

The main substyles that exist in this category are-

### **(i) Main Program or Subprogram Architecture**

The program is divided into smaller pieces hierarchically. The main program invokes many of program components in the hierarchy that program components are divided into subprograms.

### **(j) Remote procedure call architecture**

The main program or subprogram components are distributed in a network of multiple computers. The main aim is to increase the performance. Our project does not consist of hierarchical components or divided into subprograms. Also the software is not distributed over multiple devices but is situated on a single

## **2.3 System Interface Design**

The system interface is as follows:

- a. **OS:** The web app can be run on Windows(32/64 Bit), Mac Os.
- b. **Networking:** Apache Tomcat Server is used for hosting the app on localhost.
- c. **Libraries:**
  - **MySQL:** Used for database connectivity.
  - **Php:** Multiple php libraries used for developing busi

### **3 Detailed Description of Components**

#### **3.1 Employee page:-**

In these after the employee creating the account and after entering the correct email and password the Employee will be taken to the Employee page.

#### **3.2 Recruiter page:-**

In these after the recruiter creating the account and entering correct email and password the Recruiter will be taken to the Recruiter page.

#### **3.3 Application form:-**

In these components for applying the Job the employee must fill the application form by filling it with complete details.

#### **3.4 Submission of Resume:-**

After filling of the complete form the Employee has to Submit his resume for applying for the Job.

#### **3.5 Online Test:-**

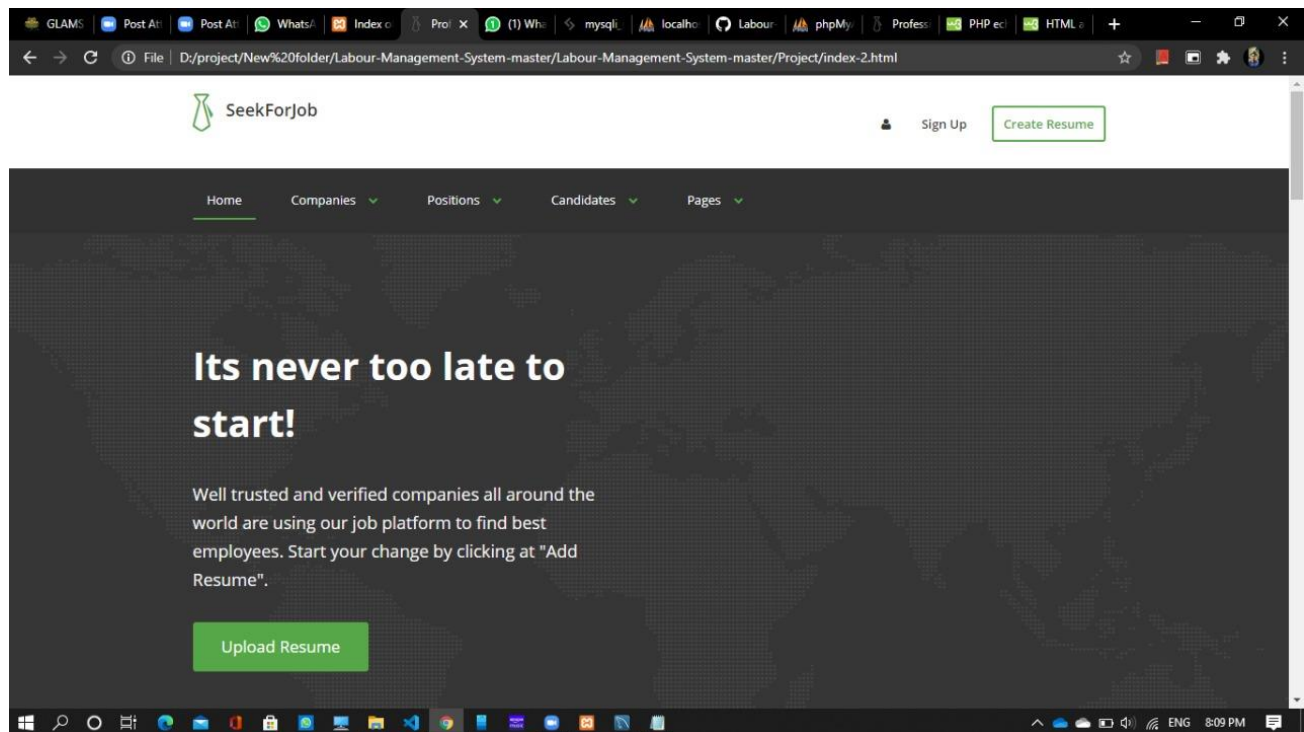
After submitting the resume if an employee is selected for further round and If an employee is an corporate employee then for qualifying for further Round he has to pass through the online test round.

#### **3.6 Interview:-**

After passing through all the rounds there is a final round in which an interview is taken by the recruiter.


## **Screenshots**





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File | D:/project/New%20folder/Labour-Management-System-master/Labour-Management-System-master/Project/position-detail.html

 .SeekForJob

Sign Up

Create Resume

Logout"; } ?>

Home

Companies

Positions

Candidates


Pages

Position Detail

Home / Pages / Custom page


Senior Java Developer

URGENT

 Dropbox

Location	San Fracisco, California
Start Date	28/11/2015
Contract	Full time

Top Employeer




Website

www.example.com

E-mail

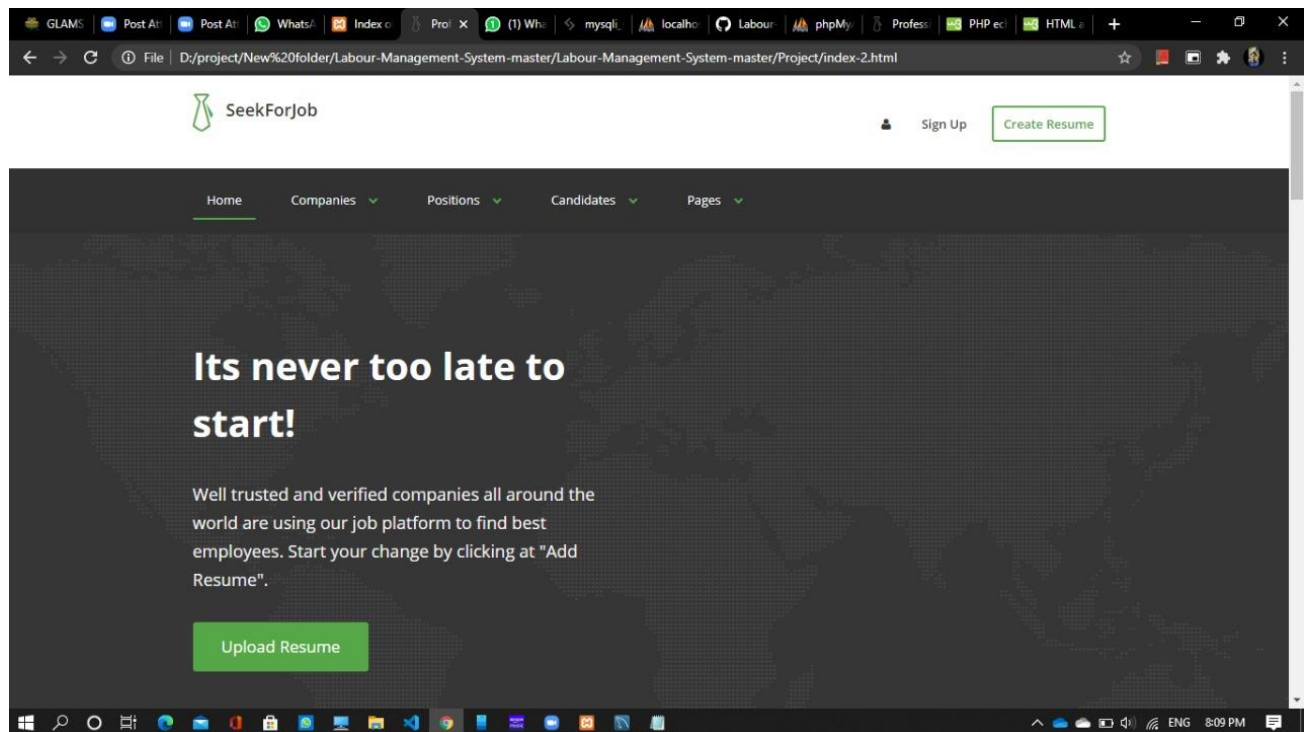
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Call

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01:20

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HomeCompaniesPositionsCandidatesPages

Companies

Home / Pages / Custom page

Displaying 21 companies matching your query

Open Positions




Dropbox

San Francisco, California

4 open positions

★★★★★ / 53




Airbnb

New York City, New York

3 open positions


★★★★★ / 24

UX/UI Senior Designer

 Dropbox Inc.

San Francisco, California

Junior Java Tester

 Google Inc.

San Francisco, California

Windows taskbar with icons for various applications and system tray showing time as 8:45 PM.

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Home Companies Positions Candidates Pages

Company Detail

Home / Pages / Custom page

Top Employer



Websitewww.example.com

E-mailinfo@example.com

Dropbox

File Hosting Service

Favorite

Receive updates

Follow

Positions

Employees

Followers

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Windows taskbar with icons for various applications and system status (8:46 PM, ENG).



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Home

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Candidates


Pages

Position Detail

Home / Pages / Custom page


Senior Java Developer

URGENT

 Dropbox

Location	San Francisco, California
Start Date	28/11/2015
Contract	Full time

Top Employeer



Website

www.example.com

E-mail

info@example.com

Windows taskbar with icons for Start, Search, Task View, and various applications. System tray shows network, volume, and time (8:46 PM).

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File | D:/project/New%20folder/Labour-Management-System-master/Labour-Management-System-master/Project/resume.html


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Home Companies Positions Candidates Pages

Resume

Home / Pages / Custom page



Elliot Sarah Scott

Senior Data Analystist

Timothy Blvd, Silicon Valley, California

Email: hello@example.com - Website: www.example.com

Download

Contact


Save

Windows taskbar with icons for File Explorer, Edge, and other applications.

System tray showing network, volume, and time (8:47 PM).

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Home Companies Positions Candidates Pages

Search ...

Create Re

Login

Registration

Photo

Upload Photo

Browse

First Name

Middle Name

Surname

Sign In

LinkedIn Import

Quick Preview

Navigation


1. Basic Information

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Star | | | | | | | | | |

 SeekForJob

Sign Up

Create Resume

Logout"; } ?>

Home

Companies

Positions


Candidates

Pages

# Login

Company Login

Employee Login

 SeekForJob

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Windows taskbar icons

ENG 8:47 PM



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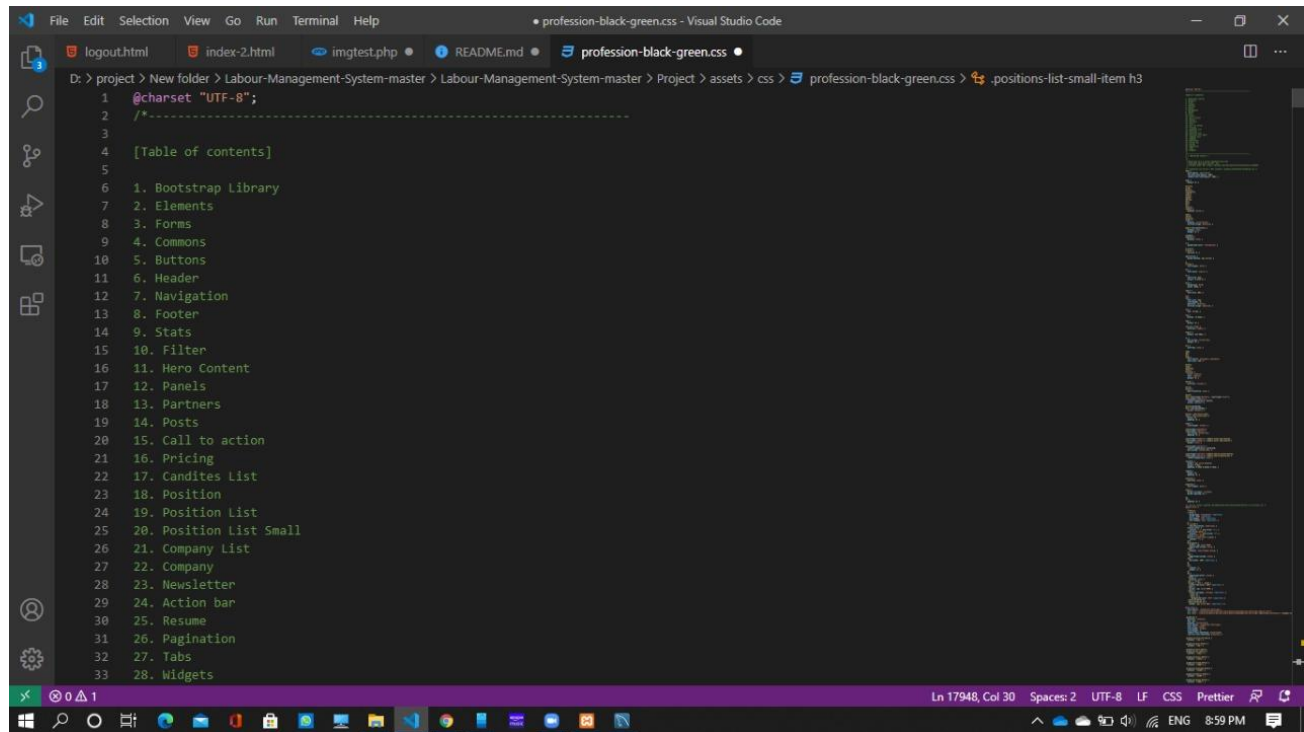
info@example.com

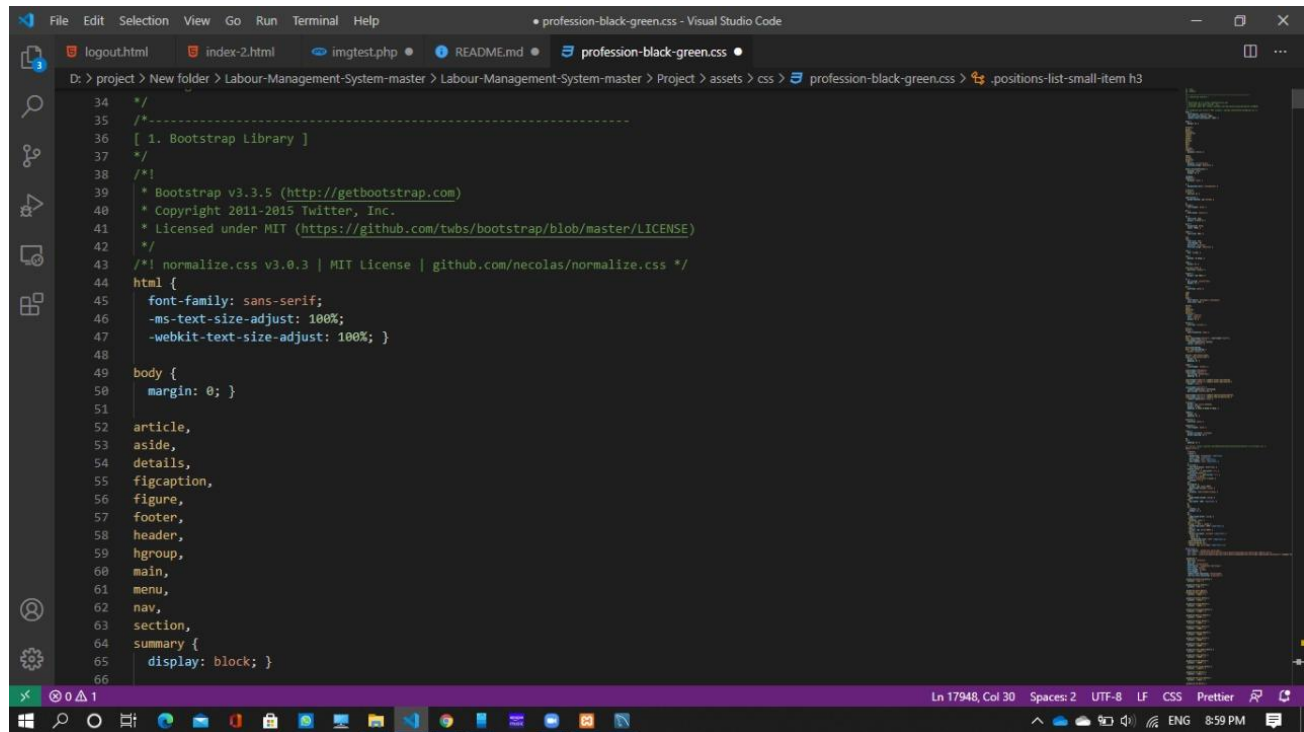
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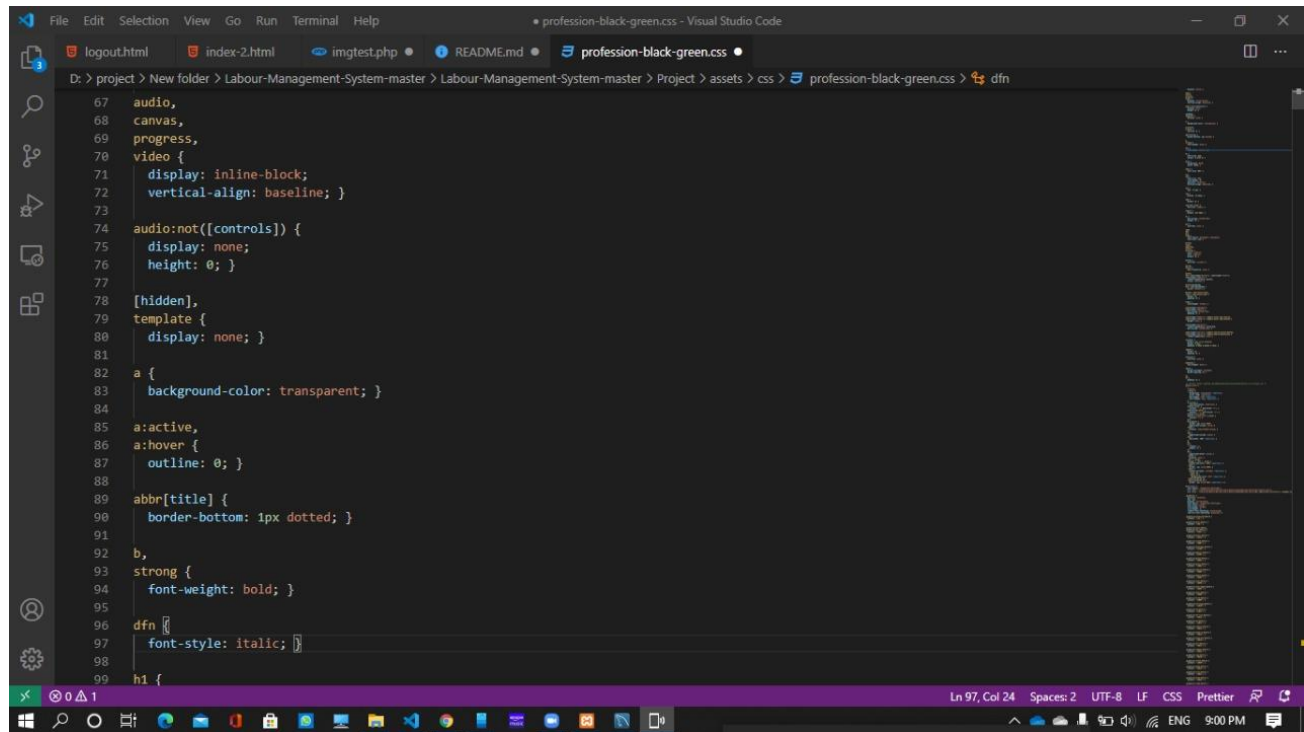
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Windows taskbar with icons for Start, Search, Task View, File Explorer, Edge, and various applications. System tray shows network, volume, and time (8:53 PM).








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HomeCompanies ▾Positions ▾Candidates ▾Pages ▾

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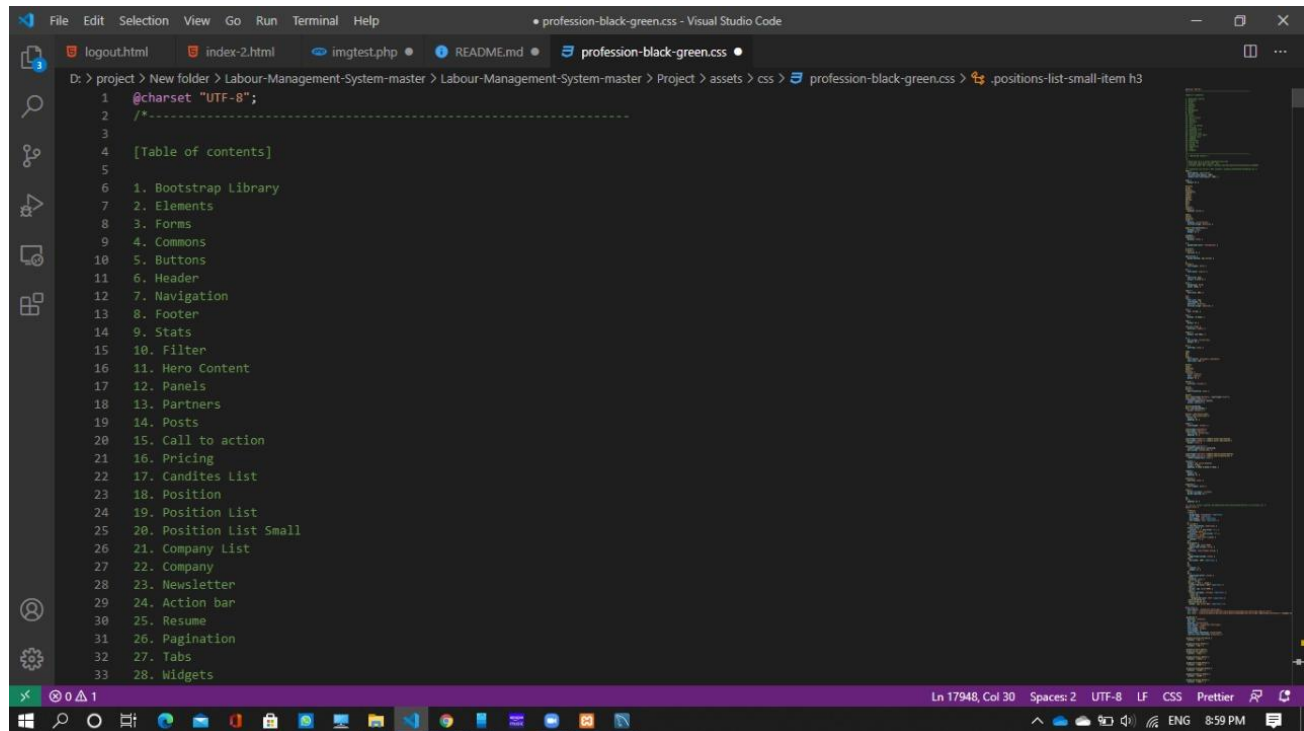
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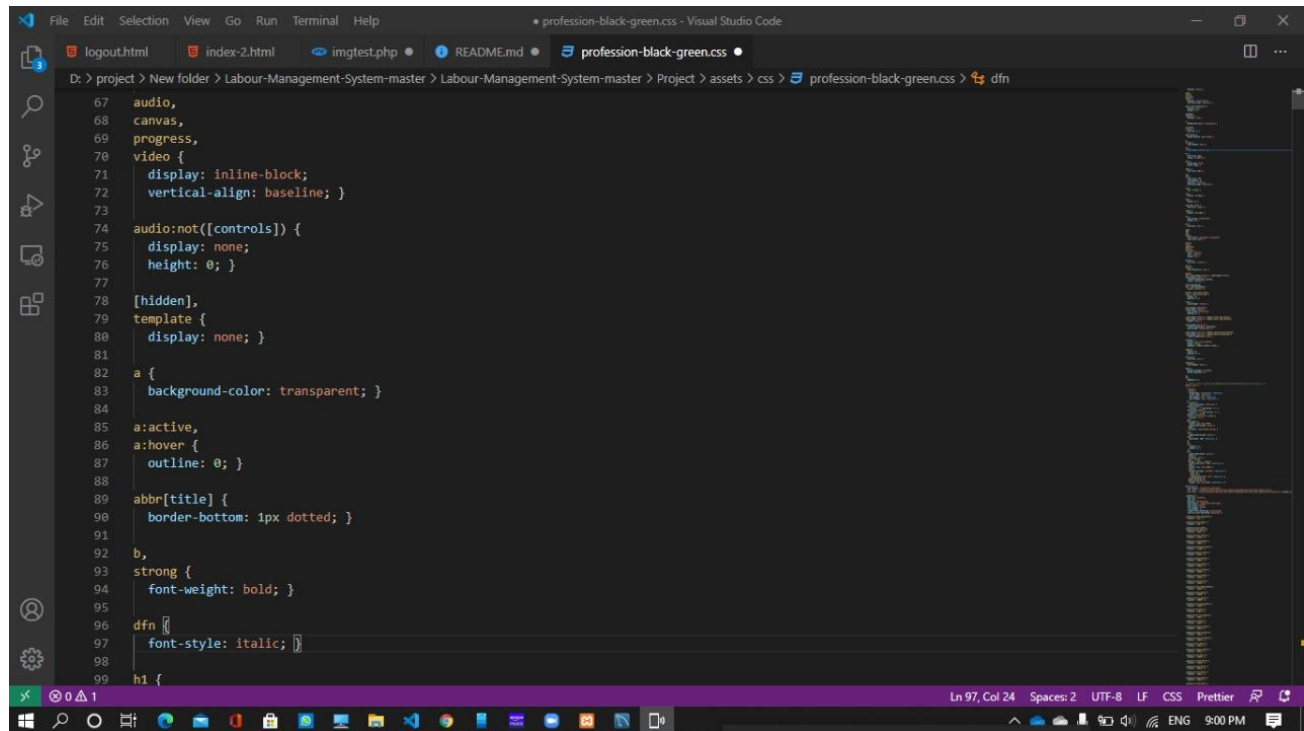
Call

 **Rupesh**  
01:20



ENG8:53 PM





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profession-black-green.css - Visual Studio Code

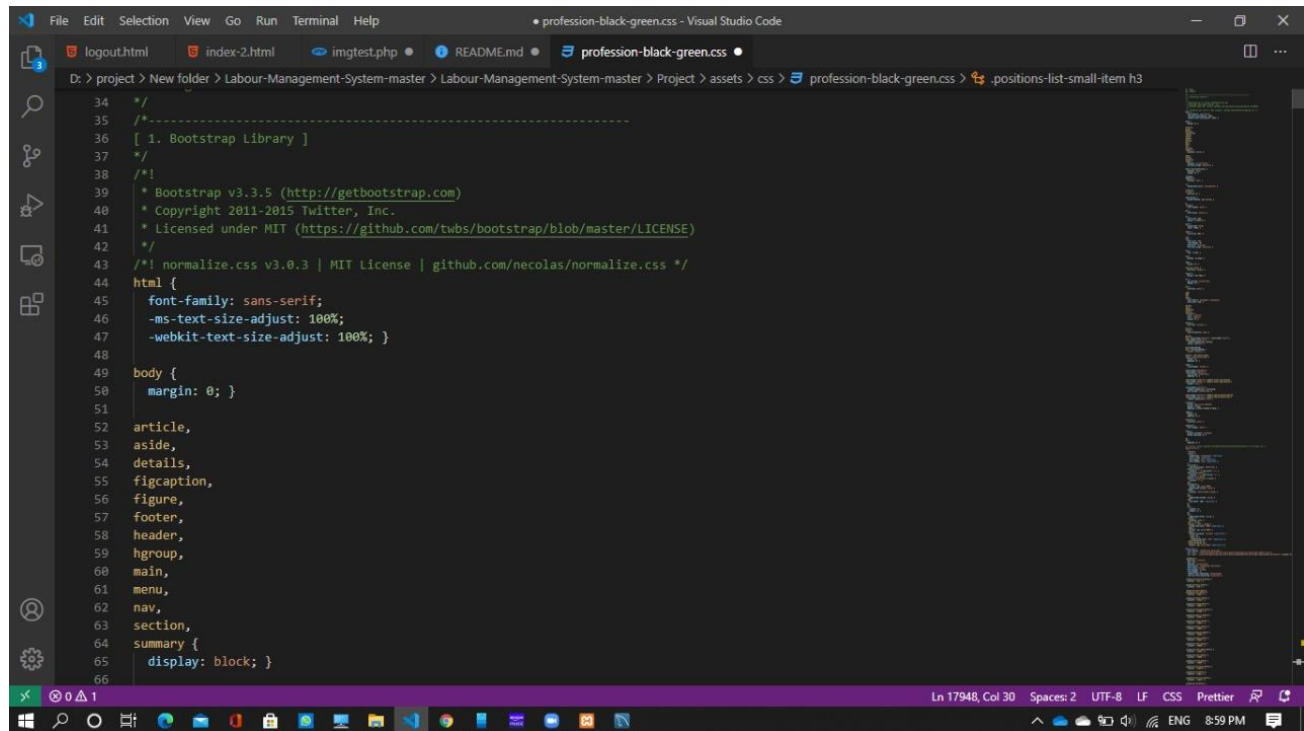
logout.html index-2.html imgtest.php README.md profession-black-green.css

D:\> project > New folder > Labour-Management-System-master > Labour-Management-System-master > Project > assets > css > profession-black-green.css > dfn

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67 audio,
68 canvas,
69 progress,
70 video {
71   display: inline-block;
72   vertical-align: baseline; }
73
74 audio:not([controls]) {
75   display: none;
76   height: 0; }
77
78 [hidden],
79 template {
80   display: none; }
81
82 a {
83   background-color: transparent; }
84
85 a:active,
86 a:hover {
87   outline: 0; }
88
89 abbr[title] {
90   border-bottom: 1px dotted; }
91
92 b,
93 strong {
94   font-weight: bold; }
95
96 dfn {
97   font-style: italic; }
98
99 h1 {
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## **4. Objects and Actions**

### **4.1 Homepage:**

This is the main page of our system which shows everything about our website. The user can either login into his account or signup to create an account. Also he/she can visit several other pages from this page. The user can get information about the positions available, companies who created a vacancy, candidates who have applied and much more. The user can also navigate to create a resume from this page.

### **4.2 Login Page:**

This page helps the user to choose between either logging in as an employee or logging in as a company representative. The user can navigate to other pages as above from this page also.

### **4.3 Employee Login Page:**

The user can enter his/her credentials to login as an employee. Once Logged in as an employee he/she can apply to various vacancies available.

### **4.4 Company Login Page:**

The user can enter his/her credentials to login as company representative. Once Logged in as a company the user can see all the applications for their posts.

### **4.5 Personal Signup Page:**

On this page the user can enter the required data and credentials to create his/her new account as an employee. Once created an account as an employee, the user can avail all the facilities.

#### **4.6 Company Signup Page:**

On this page the user can enter the required data and credentials to create his/her new account as company representative. Once created an account as company representative, the user can avail all the facilities.

#### **4.7 Candidates List Page:**

On this page a user with logged in as a company representative can see all the list of employees who have applied for the post.

#### **4.8 Company Listing Page:**

On this page a user with logged in as an employee can see all the vacancies by all the companies and can apply for the same.

#### **4.9 Create Resume Page:**

On this page an employee can create his/her resume for using it to apply for the vacancies.

## 5. Tools and Techniques

For the preparation of SRS Document we require the ShareLatex or OverLeaf websites.

For developing all the UML Diagrams we have to use the LucidChart website or StarUML software.

For the Frontend of the system, programming languages such as HTML, CSS, Javascript, Bootstrap will be used. There are no special softwares or tools required to run these files, just a browser and a working internet connection are enough to test these files.

For the Backend of the system, we are going to use PHP programming language for the database as well as for all the mapping with the front end. To test and run this php code we require a software XAMPP which serves the purpose of setting up a server for our database and all the interaction with the database.

After the complete system is built and is tested for the errors any of the online platforms can be used for deploying and hosting of the website so that it can be used by everyone.

## **HARDWARE REQUIREMENT** (MINIMUM)

- 2 GB RAM
- 20 GB OF HARD DISK
- Processor i3 (7<sup>th</sup> Gen)
- 1024 x 768 Display
- Internet

## **SOFTWARE REQUIREMENT-**

### **1. • SYSTEM SOFTWARE**

- a. - Operating System (Windows, Linux)
- b. - Web Browser

### **2. • APPLICATION SOFTWARE**

#### **a. - Front-End:**

- i. ➤ HTML
- ii. ➤ CSS
- iii. ➤ JavaScript
- iv. ➤ Bootstrap

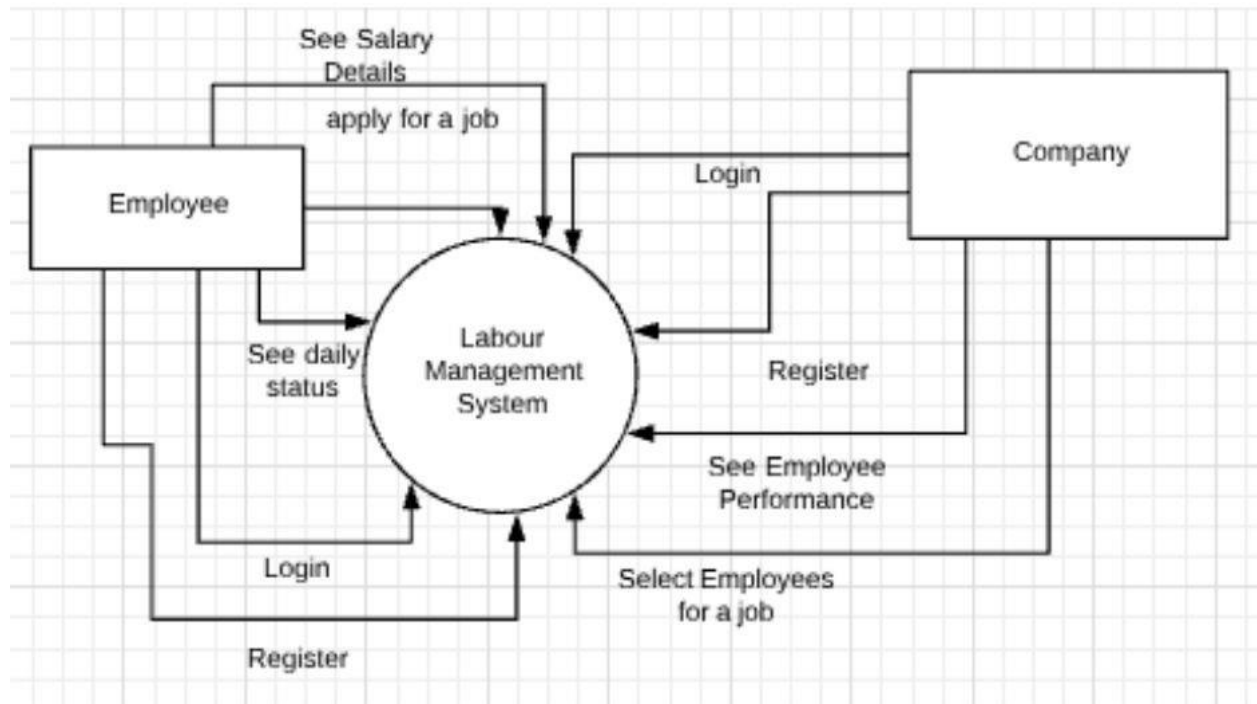
#### **b. - Back-End:**

- i. ➤ DBMS
- ii. ➤ Php

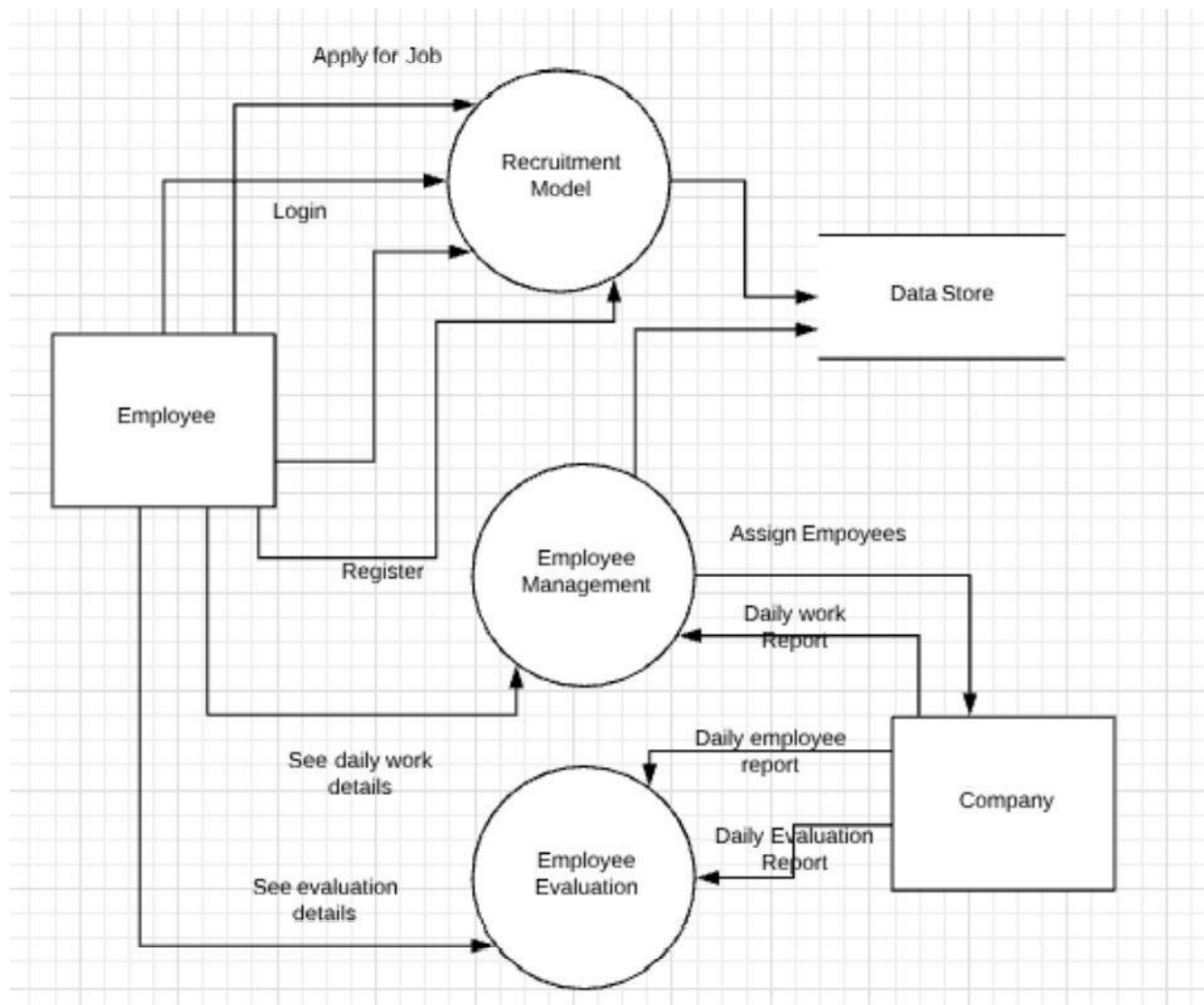
### **3. Server:**

- a. XAMPP 5.6.33 Server

## 6. Data Flow Diagram

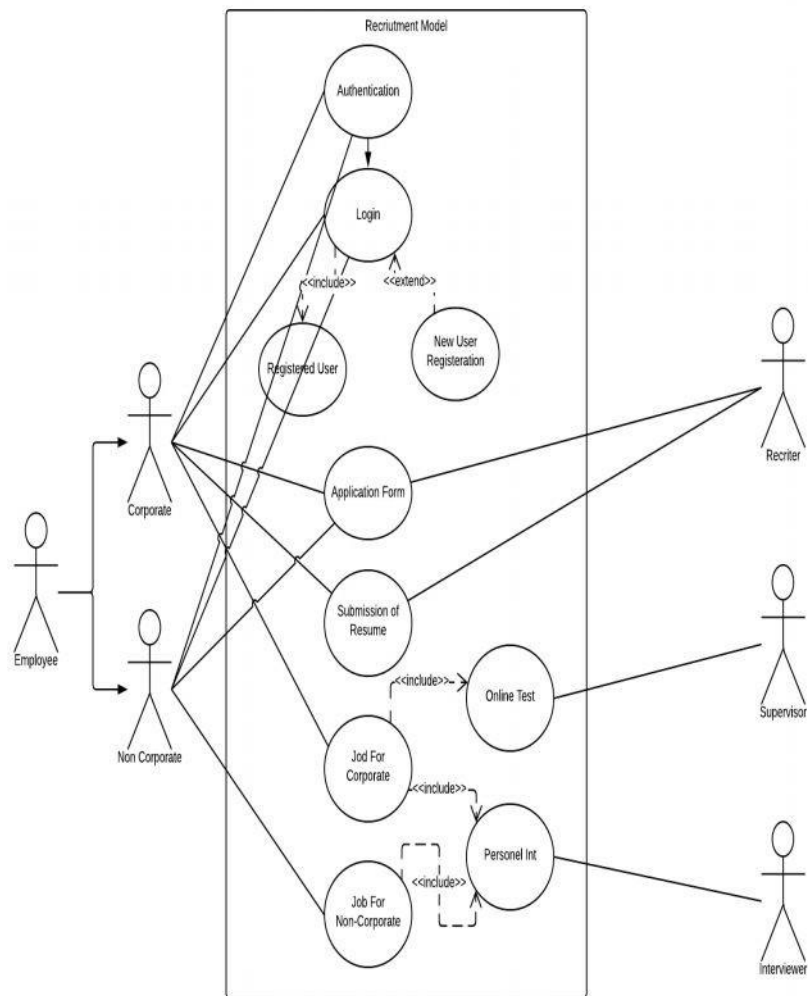


DFD LEVEL 1



DFD LEVEL 2

## 7. Use-case Diagram





## 8. Contribution Summary

**Name:** Ashish Kumar

**Roll no.:** 171500063

**Role:** Front-end, Database and Documentation

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## 9. References:

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**GitHub ID:** <https://github.com/htiwari15/LaborSystem>

THANKYOU