

Resume Builder for skilled Fresher

A Major Project Report

submitted in partial fulfillment of requirement of the degree

of

Master of Computer Applications

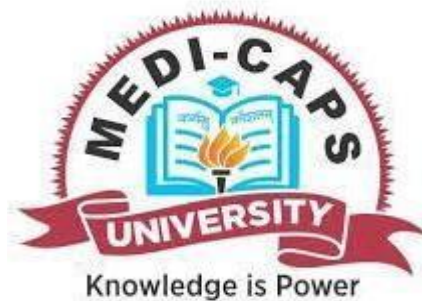
by

Akshat Dwivedi

EN21CA501013

under the guidance of

Prof. Ritu Sodhi



Department of Computer Applications

Faculty of Engineering

MEDI-CAPS UNIVERSITY, INDORE- 453331

Jan-June 2023

Report Approval

The project work “**Resume Builder for skilled Fresher**” is hereby approved as a creditable study of an engineering/computer application subject carried out and presented in a manner satisfactory to warrant its acceptance as prerequisite for the Degree for which it has been submitted.

It is to be understood that by this approval the undersigned do not endorse or approval any statement made, opinion expressed or conclusion drawn there in; but approve the “Project Report” only for the purpose for which it has been submitted.

Examiner(s)

Name(s)

Signature(s)

- | | |
|---------|-------|
| 1. | |
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| 4. | |
| 5. | |

Date:

Declaration

I hereby declare that the project entitled “**Resume Builder for skilled Fresher**” submitted in partial fulfillment for the award of the degree of Master of Computer Applications in “Department of Computer Applications” completed under the supervision of **Prof. Ritu Sodhi Major Project Guide, Department of Computer Applications**, Faculty of Engineering, Medi-Caps University Indore is an authentic work.

Further, I declare that the content of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for the award of any degree or diploma.

Signature

Akshat Dwivedi

04/05/2023

Certificate

I, **Prof. Ritu Sodhi** certify that the project entitled “**Resume Builder for skilled Fresher**” submitted in partial fulfillment for the award of the degree of Master of Computer Applications by **Akshat Dwivedi** is the record carried out by him under my guidance.

Prof. Ritu Sodhi

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Mr. Anil Patidar

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Company Certificate



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Dear **Akshat Dwivedi**, M.C.A 4th Semester Medicaps University, Indore

On behalf of **Annova Solutions**, I am pleased to inform your acceptance of an internship position as **Intern NodeJS Backend Developer**. Your first day of joining is **25-Jan-2023**. In addition to your duties outlined in the interview, you will report to your internship manager **Mr. Hemant Vijayvargiya (Contact 9669562594)**

As an intern, you are not the company's employee; and therefore, will not receive any regular employee benefits. This is an unpaid internship program. You understand that participating in the internship program is not an offer of employment. This internship will end on **25-May-2023**.

During your internship, you will have an access to company's clients and confidential information. You agree that you will keep all this information and client information strictly confidential and will not share it with anyone outside the company. You will not use it for your own benefits and on completion of the internship; you will return documents, equipment, and all property of the company.

Congratulations on the Internship.

Best Regards,

Nandini
HR Manager,
Annova Solutions, Indore
<https://annovasolutions.com/>



Completion Certificate



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Date :10-May-2023

TO WHOM IT MAY CONCERN

This is to certify that **Akshat Dwivedi**, Student of **Medi-caps University, Indore**, **MCA 4th Semester** has successfully completed internship program from 25-Jan-23 to 10-May-23 at Annova Solutions, Indore. He has worked as a full time **Intern Node Backend Developer** and designed various creatives also, He dedicated her full efforts in growing online presence of Annova Solutions.

During the Internship he demonstrated good design skills with a self- motivated attitude to learn new things.

We wish him all the best for his future endeavour.

Warm Regards



Nandini
HR Manager,
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Acknowledgement

I would like to express my deepest gratitude to our Honorable Chancellor, **Shri R. C. Mittal**, who has provided me with every facility to successfully carry out this project, and my profound indebtedness to **Prof. (Dr.) D. K. Patnaik**, Vice-Chancellor, Medi-Caps University, whose unfailing support and enthusiasm has always boosted up my morale. I also thank **Prof. (Dr.) Pramod S Nair**, Dean, Faculty of Engineering, Medi-Caps University, for giving me a chance to work on this project. I would also like to thank my Head of the Department **Prof. Anil Patidar** for his continuous encouragement for betterment of the project.

I express my heartfelt gratitude to my **External Guide, Mr. Hemant Vijayvargiya, Annova Solutions Private Limited** as well as to my Internal Guide, **Prof. Ritu Sodhi, Major Project Guide, Department of Computer Applications**, for continuous help and support which helped me to complete this project.

I would also like to thank to my team at Tata Consultancy Services Limited who extended their kind support and help towards the completion of this project. It is their help and support, due to which I/we am/are able to complete the design and technical report. Without their support this report would not have been possible.

Akshat Dwivedi

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MCA IV Semester

Department of Computer Applications

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Abstract

The "Resume Builder for skilled Fresher" project is aimed at providing a user-friendly application that enables job seekers to quickly and easily create professional resumes. The application allows users to input their personal information, work experience, education, and other relevant details, and offers a range of templates to choose from.

The project is designed to provide a high-quality resume generator that can be used by fresher job seekers who are looking to make a strong impression in the job market. The resume generator will be built using a programming language such as Python, Java, or JavaScript, and will be user-friendly with an intuitive interface.

The generated resumes will be in a professional format that is suitable for job applications. The project also focuses on ensuring the privacy and security of user data.

The "Resume Builder for skilled Fresher" project aims to provide an effective and efficient tool for job seekers to create resumes that stand out in the competitive job market. By leveraging technology, the project aims to simplify and streamline the resume creation process, helping job seekers to better showcase their skills and qualifications.

1. Simplify the resume creation process: The project aims to provide a user-friendly interface that simplifies the process of creating a resume, making it easy for even inexperienced job seekers to create a professional-looking resume.
2. Save time: By providing customizable templates and pre-populated fields, the project aims to save job seekers time in creating a resume, allowing them to focus on other aspects of their job search.
3. Increase visibility: The project aims to create resumes that are visually appealing and stand out from the competition, increasing the visibility of job seekers in a crowded job market.

4. Showcase skills and qualifications: The project aims to provide a platform for job seekers to showcase their skills and qualifications in a clear and concise manner, making it easier for potential employers to identify suitable candidates.

5. Improve job search success: By providing job seekers with a professional-looking resume that effectively showcases their skills and qualifications, the project aims to improve their chances of success in their job search.

Overall, the objective of the "Resume Builder for skilled Fresher" project is to provide a user-friendly and efficient tool that helps fresher job seekers create professional-looking resumes that effectively showcase their skills and qualifications, improving their chances of success in their job search.

The Resume Builder Project is a web-based tool designed to help job seekers create professional resumes quickly and easily. The project aims to simplify the process of resume creation by providing users with a user-friendly interface and customizable templates to suit different job roles and industries. The tool allows users to input their personal information, work experience, education, and skills, and then generates a visually appealing and professional resume. The project also includes features such as real-time feedback and suggestions, resume sharing, and a preview feature to help users see how their resumes will look before downloading. Overall, the Resume Builder Project provides a simple and effective solution to the challenge of creating a resume that stands out to potential employers.

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Abbreviations

- IT- Information technology
- RAM- Random Access Memory
- MHz-Mega Hertz
- IFR-Information Flow Representation
- ERD- Entity Relationship Diagram

Notations and Symbols/Nomenclatures

Process 

External Entity 

Data Flow 

Multiplicity *

Association 

Chapter 1:

Introduction

1.1 Annova Solutions

At Annova Solutions, we believe in solving problems and overcoming challenges for our clients. Our leaders have extensive knowledge across various verticals across the globe. Our teams are powered with innovation, new-techniques, and adaptability which makes working with us flexible yet efficient. Annova sets up Knowledge Service Units (KSUs) which are nothing but an extension of your team – except that Annova does most of the heavy lifting, ideation, execution, so that you can sit back, relax and focus on most strategic areas of your business. We are the pioneers and masters of AI & Machine Learning Services, Computer Vision Services, Healthcare Operations, and shared service partners in India. We work for clients from across the globe, 90% of them being from the USA.

Annova Solutions specializes in building custom software applications, data analytics solutions, and providing technology consulting services to help businesses optimize their operations and achieve their goals. The company has a team of experienced developers, data scientists, and technology experts who work closely with clients to understand their unique needs and develop tailored solutions that deliver measurable results.

Some of the key services offered by Annova Solutions include custom software development, data analytics and business intelligence, cloud computing solutions, mobile application development, and IT consulting. The company has worked with a range of clients, from small startups to large enterprises, and has delivered solutions across various industries, including finance, healthcare, retail, and logistics.

Annova Solutions is known for its expertise in emerging technologies such as artificial intelligence, machine learning, blockchain, and the Internet of Things (IoT), and has been recognized for its innovative solutions and exceptional client service.

Headquarters of The Company

Indore, Madhya Pradesh, India

Products & Services Provided

Annova Solutions provides a wide range of information technology-related products and services including application development, business process outsourcing, capacity planning, consulting, enterprise software, hardware sizing, payment processing, software management, and technology education services

1.2 Description of Project

The "Resume Builder for skilled Fresher" project is aimed at providing a web-based application that allows fresher job seekers to create professional resumes easily and quickly. The application will have an intuitive user interface that will guide the user through the process of creating a resume by providing step-by-step instructions.

The application will offer a range of resume templates that users can choose from, with different sections and formatting options. The templates will be designed to showcase the user's skills and qualifications effectively, helping them stand out in the competitive job market.

The application will allow users to input their personal information, work experience, education, and other relevant details. The user can then preview and customize the templates according to their preferences. Once the user is satisfied with the resume, they can download or print it in a professional format suitable for job applications.

The project will focus on providing a user-friendly and seamless experience for the users while ensuring the security and privacy of their data.

The application will be tested extensively to ensure that it meets all the requirements and functions correctly. The "Resume Builder for skilled Fresher" project aims to provide a valuable tool for fresher job seekers to create high-quality resumes that will help them stand out in the job market and increase their chances of getting hired.

1.3 Significance of Resume Builder for skilled Fresher

The "Resume Builder for skilled Fresher" project is significant because it addresses a common challenge faced by many fresher job seekers – creating a professional resume that effectively showcases their skills and qualifications. A well-crafted resume can make all the difference in securing a job interview, and this project aims to provide a tool that simplifies the process of creating a high-quality resume.

By providing a range of customizable templates and an easy-to-use interface, the "Resume Builder for skilled Fresher" project aims to help users create resumes that stand out in the competitive job market. The project's significance lies in its ability to provide an efficient and effective tool for fresher job seekers to create professional resumes that are tailored to their specific needs and qualifications.

Additionally, the project leverages technology to streamline the resume creation process, saving users time and effort in creating a resume from scratch. The project's web-based application allows users to access the resume builder from anywhere, making it a convenient solution for those on the go.

1.4 Importance of Resume Builder for skilled Fresher

The "Resume Builder for skilled Fresher" project is important for several reasons. Firstly, it addresses the need for a tool that helps fresher job seekers create professional resumes that effectively showcase their skills and qualifications. This is important because a well-crafted resume can make all the difference in securing a job interview, especially in a competitive job market.

Secondly, the project is important because it leverages technology to streamline the resume creation process. By providing a web-based application that offers customizable templates and an easy-to-use interface, the project saves users time and effort in creating a resume from scratch. This is particularly important for fresher job seekers who may not have the experience or knowledge to create a professional-looking resume on their own.

Thirdly, the project's emphasis on privacy and security is important. Job seekers often have to provide personal information when creating a resume, and the project's focus on ensuring the privacy and security of user data is crucial in building trust with users.

Finally, the "Resume Builder for skilled Fresher" project is important because it provides a valuable tool for fresher job seekers to achieve their career goals. By simplifying the process of creating a high-quality resume, the project helps job seekers to stand out in the job market and increases their chances of success in securing a job interview and ultimately landing their desired job.

Overall, the "Resume Builder for skilled Fresher" project is important because it provides a user-friendly, efficient, and effective tool that addresses a common challenge faced by fresher job seekers and helps them achieve their career goals.

Chapter 2: Background

2.1 Description of the existing system

The traditional way of making a resume involved using a word processor such as Microsoft Word or Google Docs to create a document from scratch. The user would start with a blank page and manually input their personal information, work experience, education, skills, and other relevant details.

The user would then format the document by selecting fonts, font sizes, and styles, and adjusting the margins and spacing to create a professional-looking layout. The user would often have to refer to various resources such as online guides or templates to ensure that their resume was structured and presented correctly.

Creating a resume in the traditional way was often a time-consuming and daunting task, especially for fresher job seekers who may not have a lot of work experience or knowledge of resume formatting. Additionally, the traditional approach often resulted in resumes that were less visually appealing and less likely to stand out in a competitive job market.

Overall, while the traditional approach to creating a resume may have worked in the past, it is becoming increasingly outdated in today's digital age, where technology can streamline and simplify the resume creation process. Tools such as the "Resume Builder for skilled Fresher" project can provide a more efficient and effective way for job seekers to create professional-looking resumes that effectively showcase their skills and qualifications.

2.2 Circumstances leading to the current new system

The current system of making resumes in the traditional form has its roots in the pre-digital era when job seekers would submit printed copies of their resumes to potential employers. This system relied on the use of typewriters and printers, with job seekers manually typing their resumes and then printing them out on paper.

As technology evolved, word processing software such as Microsoft Word and Google Docs became widely available, making it easier for job seekers to create and format their resumes. However, the process of creating a resume in the traditional form remained largely unchanged, with users manually inputting their personal information and formatting the document themselves.

The traditional approach to creating a resume was also influenced by the prevailing job market conditions. In the past, many jobs were advertised in newspapers or through word of mouth, and job seekers had to submit their resumes in person or by mail. This made it necessary for resumes to be presented in a printed format, and for job seekers to have a physical copy of their resume to hand out to potential employers.

Today, however, the job market has shifted towards digital channels, with many job postings and applications taking place online. This has led to the development of new tools and technologies for creating resumes, such as the "Resume Builder for skilled Fresher" project, which leverages web-based technologies to provide a more efficient and effective way of creating resumes.

Overall, the circumstances leading to the current system of resume making in the traditional form were influenced by the technology and prevailing job market conditions of the time. However, as technology continues to evolve and the job market shifts towards digital channels, there is a need for more streamlined and efficient approaches to resume creation, such as the use of web-based resume builders.

2.3 Work already carried out in the project domain

There has been significant work carried out in the domain of resume builders for job seekers. Some of the notable examples include:

1. Canva: Canva is a graphic design platform that offers a range of templates for creating resumes, including ones designed specifically for fresher job seekers. The platform provides an easy-to-use interface and customization options, making it popular among job seekers.
2. Zety: Zety is a web-based resume builder that offers a range of templates and customization options for creating professional-looking resumes. The platform also provides resume writing tips and a resume-checking service to help users optimize their resumes for job applications.
3. Novoresume: Novoresume is another web-based resume builder that offers customizable templates and an easy-to-use interface for creating resumes. The platform also provides a range of features, including a cover letter builder and a resume tracking system.
4. LinkedIn: LinkedIn is a social networking platform that also offers a range of tools for job seekers, including a resume builder. The platform allows users to import their existing resumes and offers customization options for formatting and design.
5. Google Docs: Google Docs is a popular word processing software that offers a range of templates for creating resumes. The platform also allows for collaboration and sharing, making it easy for job seekers to work on their resumes with others.

2.4 Objective of the project

As placement season of most of the colleges is going to start, making Resume is a very hectic work for all the students. Also, many companies judge the candidature of a student just by his/her Resume. So it is necessary for the student to think beyond the third dimension while making the Resume.

- "Resume Builder for skilled Fresher" is the Web Application which helps students to get their resume in hand just by filling up a simple form where important credentials need to be filled.
- The resume is downloadable in PDF format. Also, the user can log in again to access the previous resume that he had made.
- The resume is of Standard Format as stated by most of the Engineering Colleges of India.

Overall, the objective of the "Resume Builder for skilled Fresher" project is to provide a user-friendly and efficient tool that helps fresher job seekers create professional-looking resumes that effectively showcase their skills and qualifications, improving their chances of success in their job search.

2.5 What is to be achieved and method of measuring the extent of that achievement

To measure the achievement of the "Resume Builder for skilled Fresher" project is to provide a user-friendly and efficient tool that helps fresher job seekers create professional-looking resumes that effectively showcase their skills and qualifications, improving their chances of success in their job search.

The achievement of this goal can be measured in several ways, including:

1. User feedback: User feedback is one of the most important measures of the success of the project. Feedback can be gathered through surveys, focus groups, and user testing sessions. This feedback will help the development team identify any areas that need improvement and make adjustments accordingly.
2. Adoption rate: The adoption rate of the tool is another measure of success. This can be measured by tracking the number of users who sign up for the tool and use it to create their resumes.
3. User satisfaction: User satisfaction is another important measure of success. This can be measured by tracking user engagement with the tool and analyzing user feedback to determine how satisfied they are with the tool's features and functionality.
4. Job placement rate: The ultimate measure of success is the job placement rate of the job seekers who use the tool. This can be tracked by analyzing data on the number of job applications submitted by users and the number of job offers received.

By measuring these metrics, the project team can determine the extent of the achievement of the project goals and make any necessary adjustments to improve the tool's effectiveness in helping fresher job seekers create professional-looking resumes and improve their chances of success in their job search.

Chapter 3: Analysis

3.1 System Requirement Analysis

System Requirement Analysis is a critical step in the software development lifecycle, which involves identifying, analyzing, and documenting the functional and non-functional requirements of a software system. Here are some of the system requirements for the "Resume Builder for skilled Fresher" project:

1. Functional Requirements:

- The system should allow users to create a new account or log in to an existing account.
- The system should provide users with a user-friendly interface to create a resume.
-
- The system should allow users to input their personal information, education, work experience, skills, and qualifications.
- The system should allow users to preview their resume and make changes before finalizing it.
- The system should allow users to save their resume in various formats such as PDF, Word, or HTML.
- The system should provide users with the option to share their resume on social media platforms or with potential employers.

2. Non-functional Requirements:

- The system should be responsive and load quickly on all devices.
- The system should be secure and protect users' personal information.
- The system should be scalable and able to handle a large number of users.

By identifying and documenting these requirements, the development team can ensure that the "Resume Builder for skilled Fresher" project meets the needs of the users and is successful in achieving its objectives.

Hardware Requirements:

233 MHz Pentium processor or another compatible ~~It~~ Chipset Motherboard

512 MB SD-RAM

4 GB hard disk

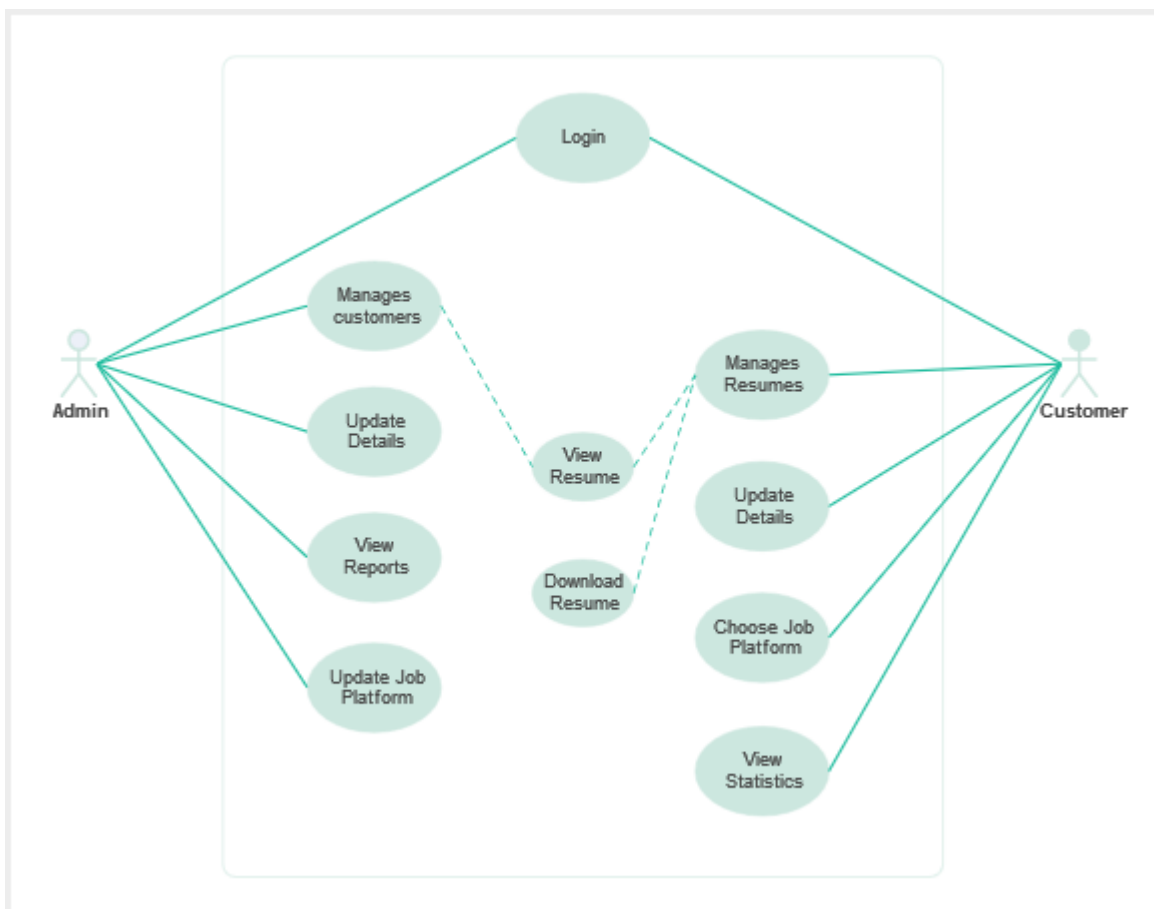
Software Requirements:

Operating System -Windows 98 onwardsApplication Software –Spring Tool SuiteDatabase Tool – PostgreSQL

3.2 System Analysis

System analysis is the process of understanding and defining the requirements of a software system, and designing a solution that meets those requirements. Here is a brief overview of the system analysis process for the "Resume Builder for skilled Fresher" project:

1. **Requirements Gathering:** In this phase, the development team will gather information about the requirements of the system by interviewing stakeholders, reviewing existing documentation, and researching industry best practices. The team will identify the functional and non-functional requirements of the system.
2. **System Design:** Based on the requirements gathered in the previous phase, the development team will design the system architecture, including the user interface, data model, and software components. The team will also create wireframes and prototypes to demonstrate the functionality of the system.
3. **System Development:** In this phase, the development team will write the code for the system components, including the front-end user interface, back-end database, and application programming interfaces (APIs) that allow different components to communicate with each other.
4. **Testing:** Once the system components are developed, the development team will conduct a variety of tests to ensure that the system meets the requirements and functions as intended. These tests may include functional testing, performance testing, security testing, and user acceptance testing.



5. Deployment: Once the system passes all tests, the development team will deploy the system to a production environment and make it available to users.

6. Maintenance: After deployment, the development team will monitor the system and provide ongoing maintenance and support to ensure that it continues to function properly and meet the needs of users.

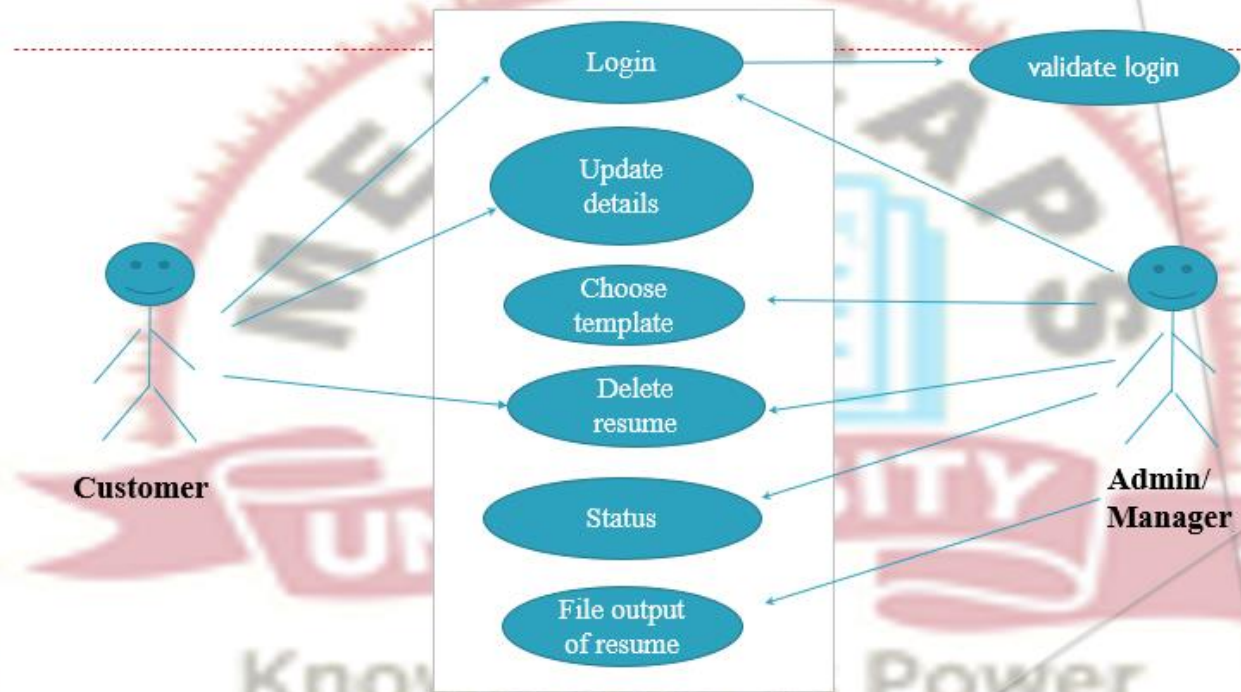
By following this system analysis process, the development team can ensure that the "Resume Builder for skilled Fresher" project meets the requirements of users and achieves its objectives.



Use Case Diagram

Use-case diagrams describe the high-level functions and scope of a system. These diagrams also identify the interactions between the system and its actors. The use cases and actors in use-case diagrams describe what the system does and how the user use it, but not how the system operates internally.

Use Case Diagram

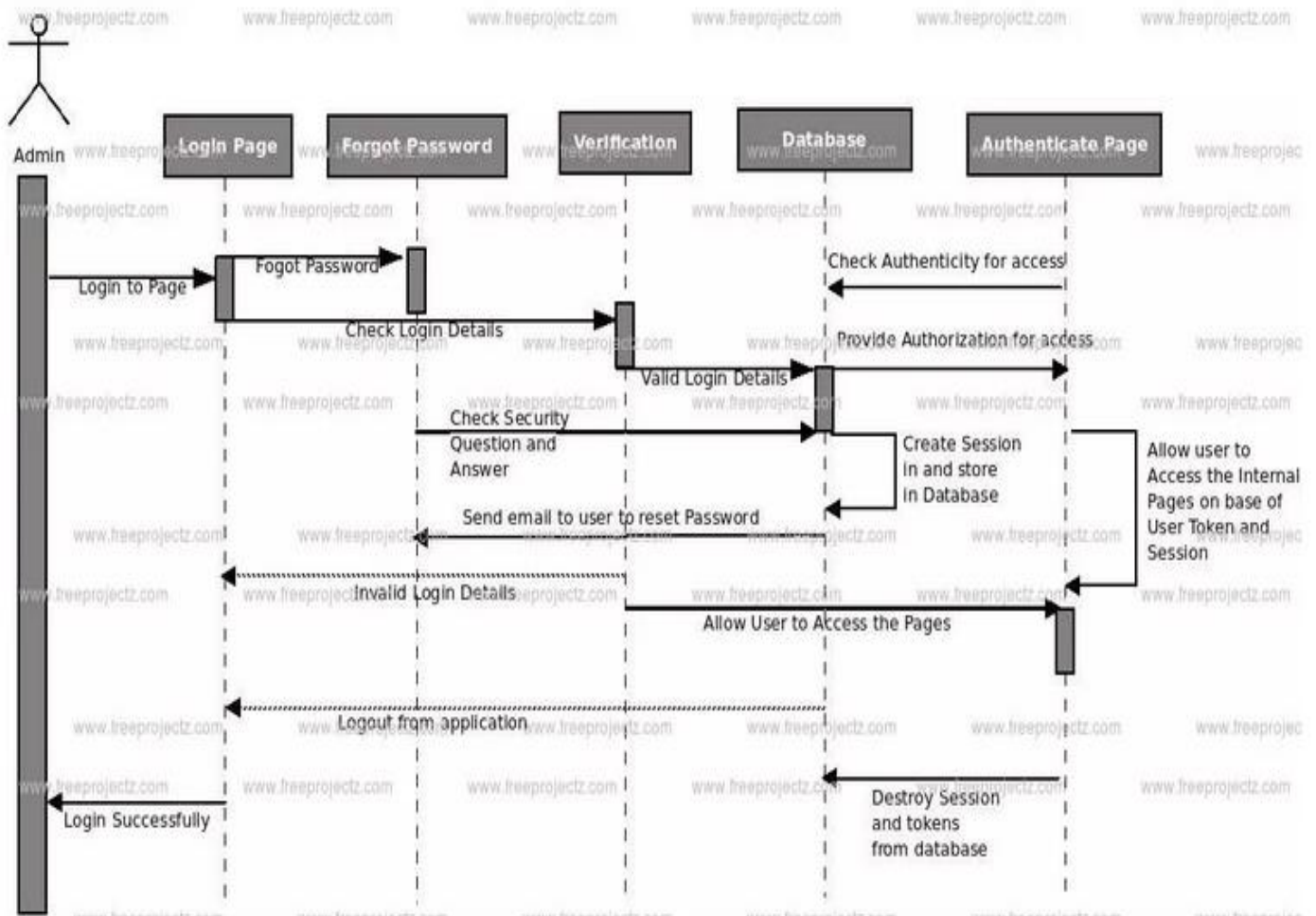




Sequence Diagram

A sequence diagram or system sequence diagram (SSD) shows object interactions arranged in time sequence in the field of software engineering. It depicts the objects involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of scenario. Sequence diagrams are typically associated with use case realizations in the logical view of the system under development. Sequencediagrams are sometimes called event diagrams or event scenarios.

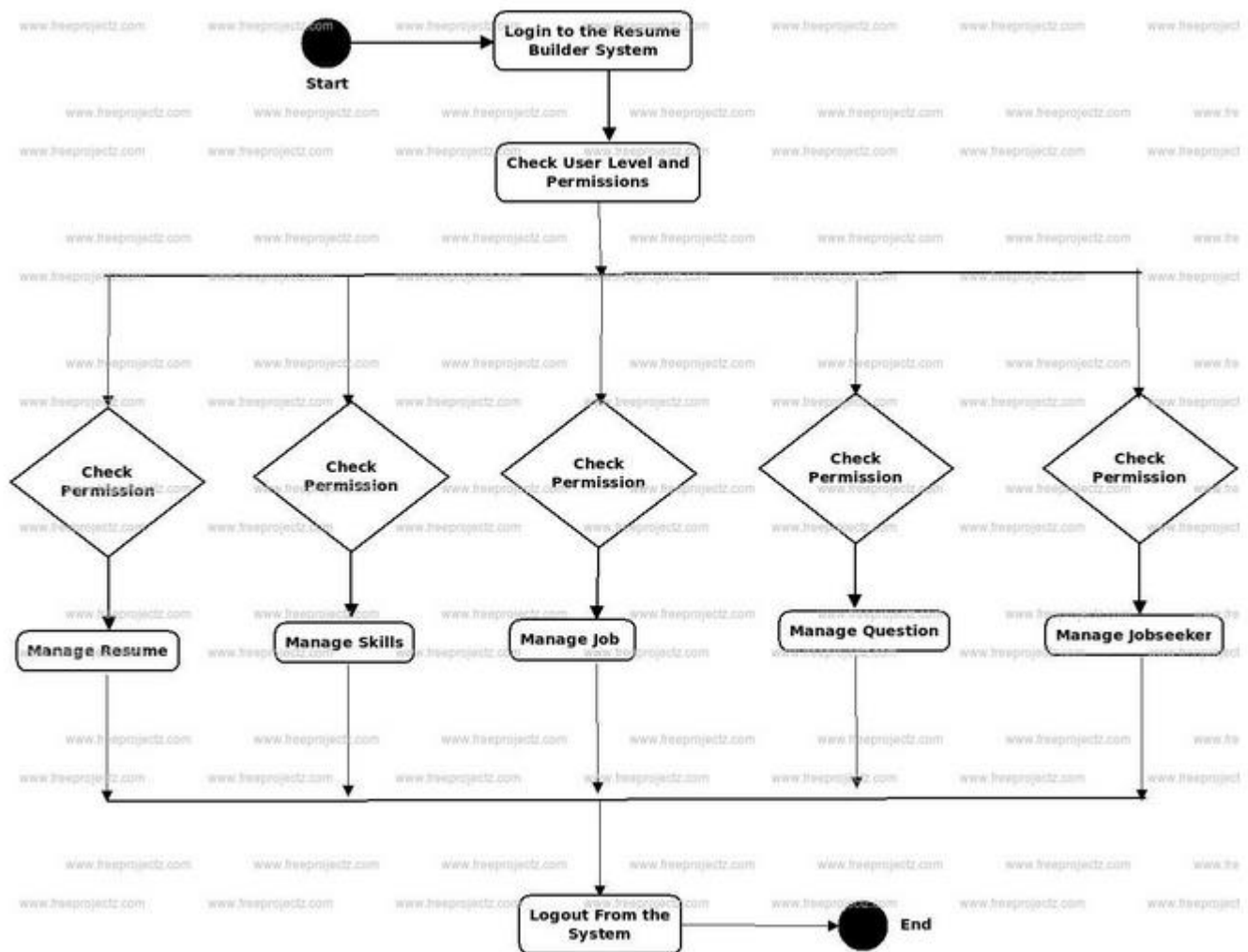
Sequence Diagram





Activity Diagram

An activity diagram is a behavioral diagram i.e. it depicts the behavior of a system. An activity diagram portrays the control flow from a start point to a finish point showing the various decision paths that exist while the activity is being executed.

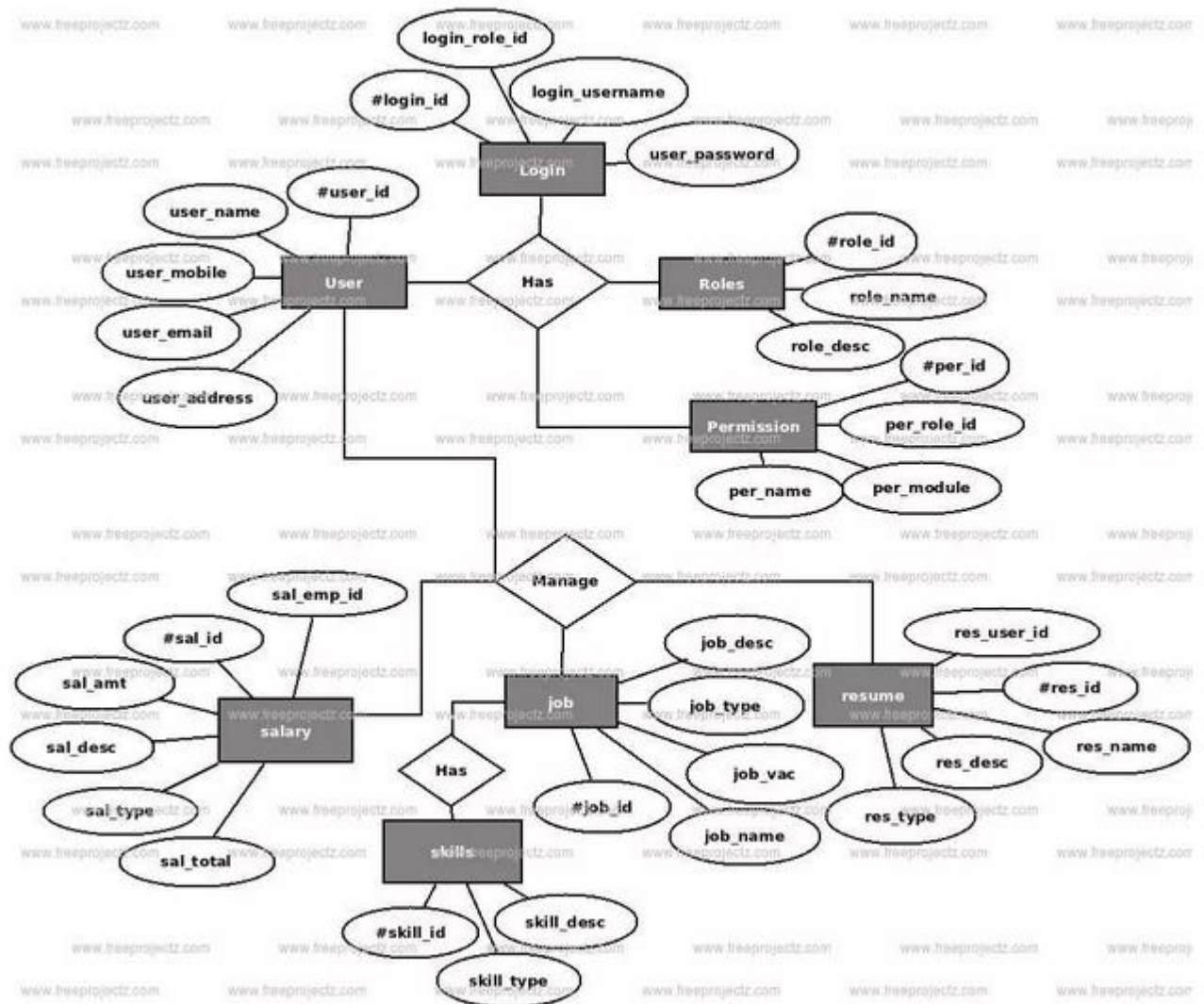




ER Diagram

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

ER Diagram



We have analyzed the feasibility of the system in terms of following spans:

- Technical Feasibility
- Operational Feasibility
- Economical Feasibility

3.3 Technical Feasibility

Technical feasibility is an assessment of whether the proposed project can be developed with the existing technology and resources. In the case of the "Resume Builder for skilled Fresher" project, the following technical feasibility factors need to be considered:

1. Platform and tools: The project needs to be developed using programming languages, frameworks, and libraries that are compatible with the intended platform. The project may require tools such as text editors, integrated development environments (IDEs), databases, and hosting services. It is important to ensure that these tools are available and compatible with each other.
2. Data storage: The project will require a database to store user information, resumes, and other data. The type of database, such as relational or non-relational, and the storage capacity required must be determined.
3. Security: The project will store sensitive information, such as user login credentials and personal information. It is essential to implement security measures to protect this information from unauthorized access or data breaches.
4. User interface design: The project must have an intuitive user interface that is easy to navigate and use. The user interface should be designed to work across different devices and platforms.
5. Performance and scalability: The project should be designed to perform well under varying user loads and be scalable to accommodate increasing numbers of users.

Based on the above factors, it is technically feasible to develop the "Resume Builder for skilled Fresher" project using existing technologies and resources. However, it will require careful planning, design, and implementation to ensure that the project is successful and meets the requirements of users.

3.4 Operational Feasibility

Operational feasibility refers to whether the proposed project can be integrated into the existing operations of an organization or business. In the case of the "Resume Builder for skilled Fresher" project, the following operational feasibility factors need to be considered:

1. User acceptance: The project should meet the needs of the intended users, i.e., skilled freshers looking to create a professional resume. The user interface and features must be easy to understand and use. User feedback should be gathered during the development process to ensure that the project meets their needs.
2. Cost: The cost of developing and implementing the project should be reasonable and within the budget of the organization or business. The project should also generate revenue or add value to the organization or business to justify its costs.
3. Integration with existing systems: The project should be compatible with existing systems and processes. For example, the project should integrate with job portals, social media platforms, or applicant tracking systems (ATS).
4. Training and support: The project should be accompanied by training and support resources to help users understand how to use the system. Technical support should also be available to address any issues or bugs that may arise.

5. Legal and regulatory compliance: The project must comply with relevant laws and regulations, such as data protection laws, intellectual property laws, and anti-discrimination laws.

Based on the above factors, it is operationally feasible to develop and implement the "Resume Builder for skilled Fresher" project. However, it will require careful planning, user testing, and ongoing support to ensure that the project is successfully integrated into the operations of organizations and businesses.

3.5 Economic Feasibility

The economic feasibility of a resume builder for skilled freshers depends on several factors such as the target market, pricing strategy, marketing efforts, and operational costs.

Target Market:

The success of a resume builder for skilled freshers largely depends on the size and demand of the target market. A resume builder aimed at a small niche market may not be economically viable, while one targeted at a large market may generate significant revenue.

Pricing Strategy:

The pricing strategy plays a critical role in determining the economic feasibility of a resume builder. The pricing should be competitive enough to attract customers while also generating sufficient revenue to cover operational costs and generate profits. The pricing model could be subscription-based, pay-per-use, or a combination of both.

Marketing Efforts:

The marketing efforts can greatly impact the economic feasibility of a resume builder. A well-planned marketing strategy can help reach a wider audience and attract potential customers. Social media, SEO, content marketing, and paid advertising are some of the marketing channels that can be used to promote a resume builder.

Operational Costs:

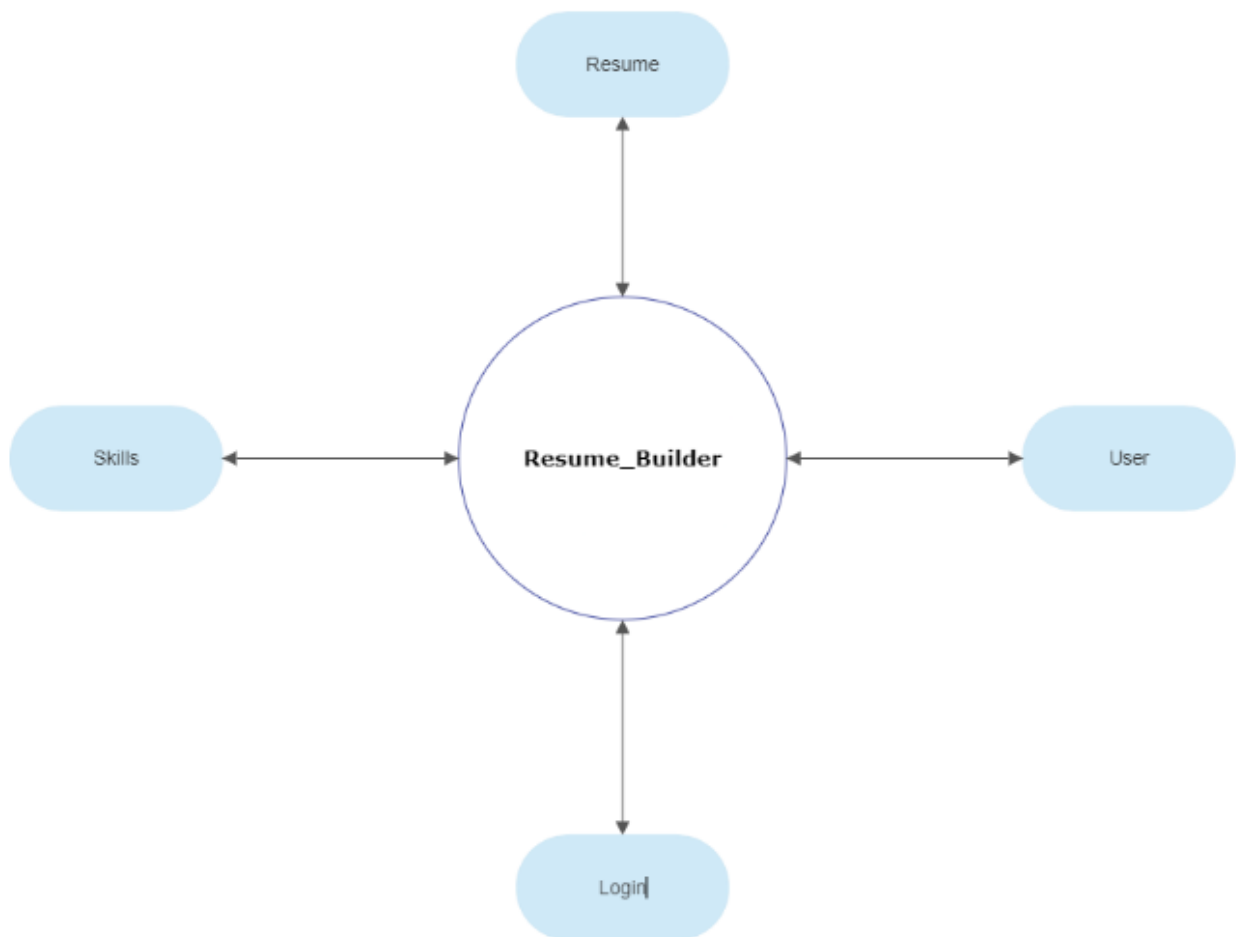
The operational costs of a resume builder include expenses such as website hosting, software development, customer support, and salaries of employees. Keeping operational costs low is important to ensure that the revenue generated from the product can cover all expenses and leave room for profits.

In conclusion, the economic feasibility of a resume builder for skilled freshers depends on several factors, including the target market, pricing strategy, marketing efforts, and operational costs. If the product is targeted at a large market, with a competitive pricing strategy and effective marketing efforts, it has the potential to be economically feasible.

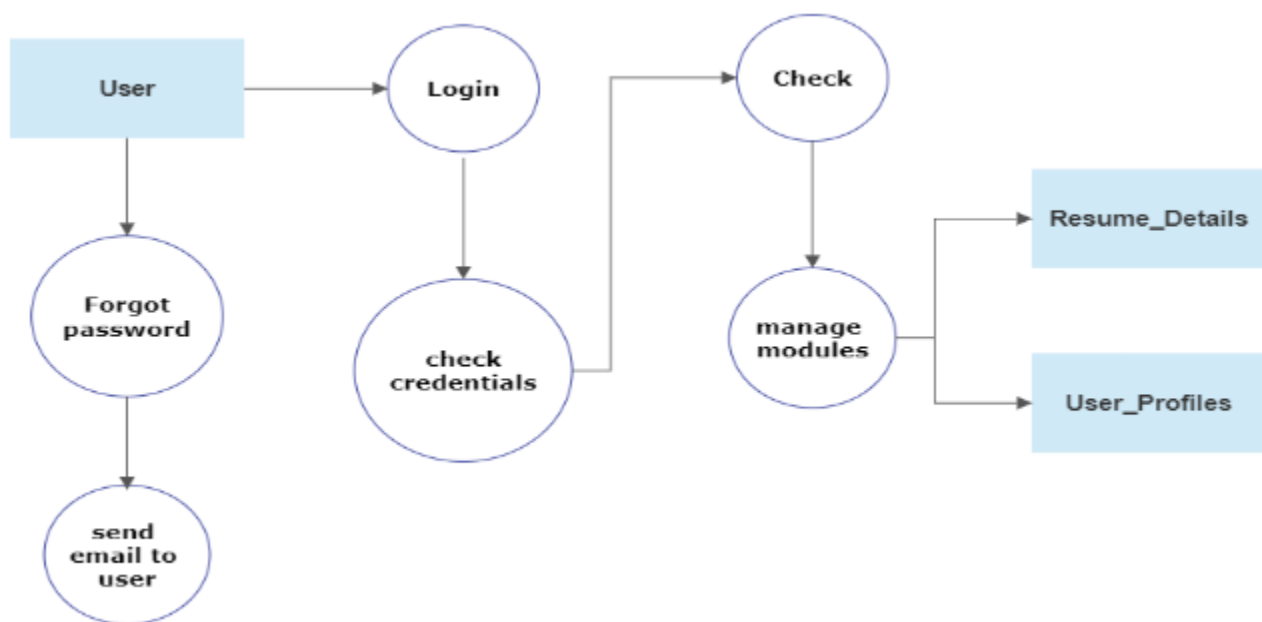
3.6 Data Flow Diagram

An information flow diagram (IFD) is a diagram that shows how information is communicated (or "flows") from a source to a receiver or target (e.g. $A \rightarrow C$), through some medium. The medium acts as a bridge, a means of transmitting the information.

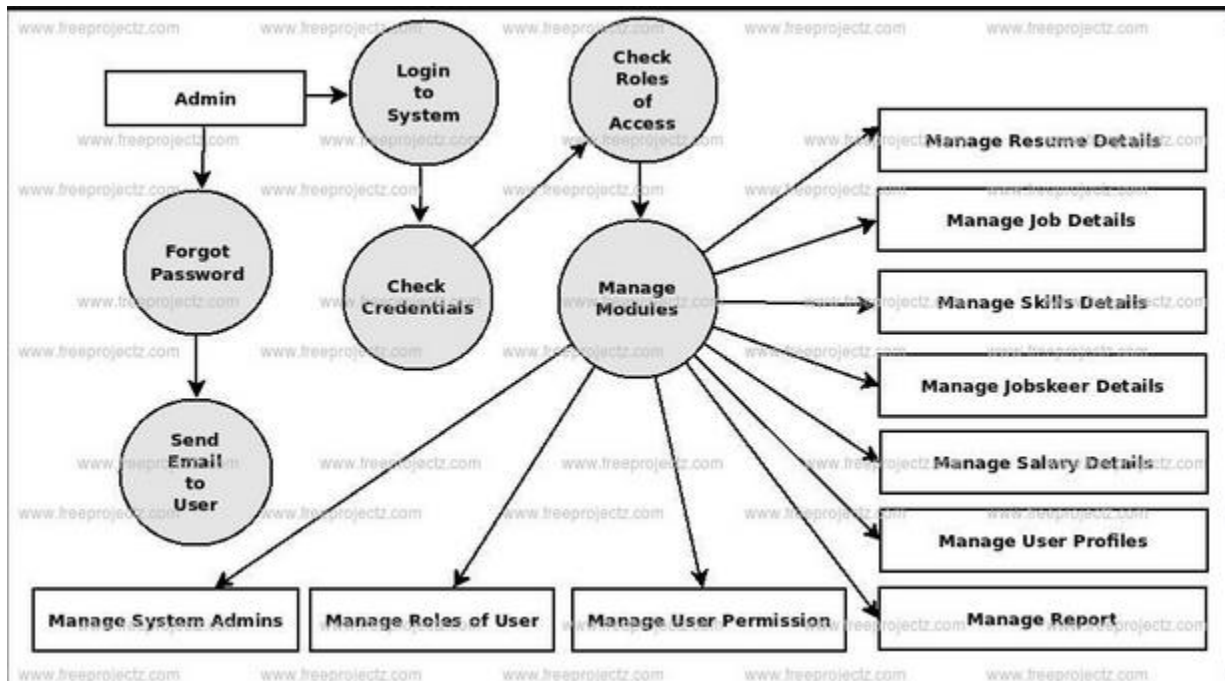
Level 0-



Level 1



Level 2



3.7 Method/Technology to be used

Programming Language

JavaScript is a programming language that is widely used for creating dynamic and interactive websites. It was first introduced in 1995 by Netscape Communications, and has since become one of the most popular programming languages in the world.

JavaScript allows developers to add interactive elements to their websites, such as pop-up windows, animations, and drop-down menus. It can also be used to create more complex applications, such as web-based games and mobile apps.

One of the key features of JavaScript is its ability to manipulate the Document Object Model (DOM) of a webpage. The DOM is a hierarchical structure that represents the elements of a webpage, such as images, text, and links. By using JavaScript to manipulate the DOM, developers can dynamically update the content of a webpage without having to reload the entire page.

JavaScript is a client-side language, which means that it is executed by the user's web browser, rather than on the server. This makes it a powerful tool for creating interactive web applications that respond to user input in real time.

In recent years, JavaScript has also become increasingly popular for server-side programming, with the introduction of frameworks such as Node.js. These frameworks allow developers to use JavaScript to create back-end web applications, as well as front-end applications.

Framework

React.js, commonly known as React, is a popular open-source JavaScript library for building user interfaces. It was developed by Facebook and released in 2013.

React allows developers to build reusable UI components and efficiently manage the state of those components, making it easier to create complex user interfaces with minimal code. React uses a declarative programming style, meaning that developers can describe what they want their UI to look like and React will take care of rendering it in the browser.

One of the key features of React is its virtual DOM (Document Object Model), which allows React to update only the parts of the UI that have changed rather than updating the entire page. This makes React highly efficient and fast, even when dealing with large and complex applications.

React is often used in conjunction with other libraries and frameworks such as Redux, React Router, and Next.js. It can be used to build a wide range of applications, including single-page applications (SPAs), mobile applications, and even desktop applications using technologies such as Electron.

Overall, React has become a popular choice for building modern, dynamic user interfaces due to its performance, flexibility, and ease of use.

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that enables developers to run JavaScript code outside of a web browser. It was developed by Ryan Dahl in 2009 and has since become a popular platform for building server-side applications.

One of the key advantages of Node.js is that it uses an event-driven, non-blocking I/O model, which makes it particularly well-suited for building real-time applications that require a lot of data to be processed quickly. It is also built on top of the Google V8 JavaScript engine, which provides fast performance and scalability.

Node.js is often used in conjunction with popular web frameworks such as Express.js, Hapi, and Koa, and it can be used to build a wide range of applications, from simple command-line tools to complex web applications and APIs.

HTML stands for HyperText Markup Language. It is the standard markup language used to create web pages and other web-based documents. HTML provides a way to structure content on the web using a series of tags and attributes, which define how different elements of a web page should be displayed.

HTML is a declarative language, meaning that it describes the structure and content of a web page, rather than specifying how it should be displayed. Web browsers then use this information to render the web page and display it to users.

HTML documents are made up of a series of tags, which are enclosed in angle brackets (< >). Tags are used to define the structure and content of different elements on a web page, such as headings, paragraphs, links, images, and forms.

HTML also supports the use of attributes, which provide additional information about an element. For example, the "href" attribute is used to specify the destination of a link, and the "src" attribute is used to specify the source of an image.

Overall, HTML is a fundamental technology for building websites and other web-based applications. By learning HTML, developers can create rich, dynamic, and interactive web pages that can be accessed by users all around the world.

Visual Studio Code (often referred to as VS Code) is a free and open-source code editor developed by Microsoft. It was first released in 2015 and has since become one of the most popular code editors in the developer community.

VS Code, short for Visual Studio Code, is a free and open-source source code editor developed by Microsoft. It is available for Windows, macOS, and Linux, and is one of the most popular code editors used by developers today.

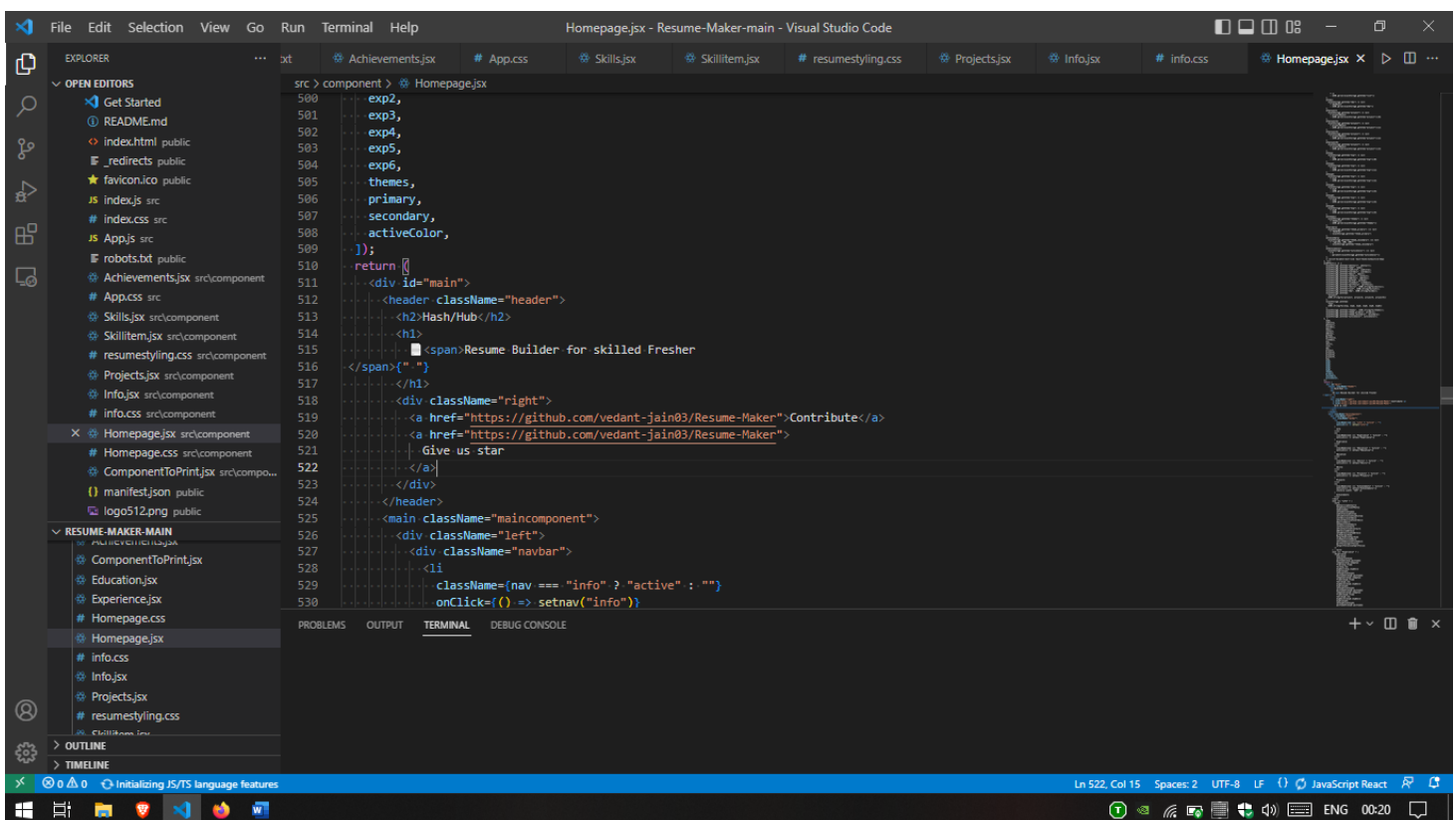
VS Code is designed to be highly customizable and flexible, with a wide range of features and extensions that allow developers to work with a variety of programming languages and frameworks. Some of the key features of VS Code include:

- Intelligent code completion and error highlighting
- Integrated debugging and testing tools
- Git integration and support for version control
- Built-in terminal and command line interface
- Support for multiple programming languages and file types
- Wide range of extensions and plugins for additional functionality

One of the main advantages of VS Code is its performance and responsiveness, even when working with large and complex codebases. It also has a large and active community of developers, who have contributed to the development of many useful extensions and plugins.

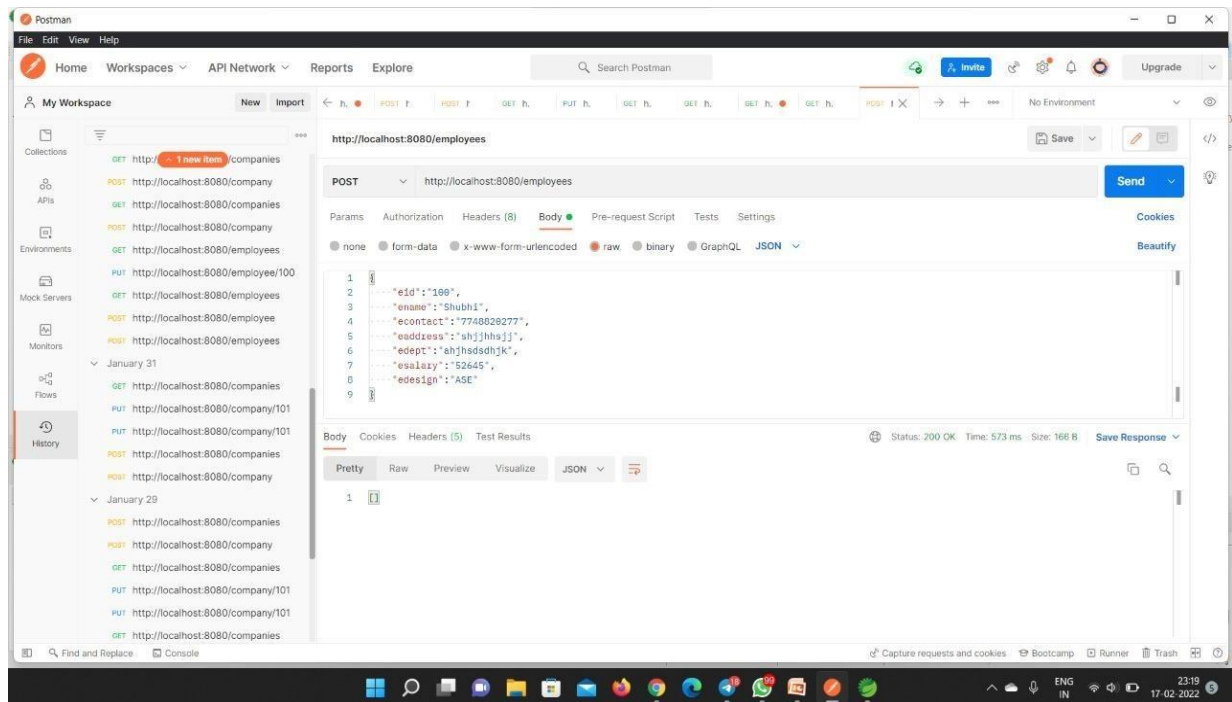
Overall, VS Code is a powerful and versatile code editor that has become a popular choice for developers due to its flexibility, performance, and ease of use.

Vs code Snapshot



- ## Testing Tools

Postman: Postman is an application used for API testing. It is an HTTP client that tests HTTP requests, utilizing a graphical user interface, through which we obtain different types of responses that need to be subsequently validated.

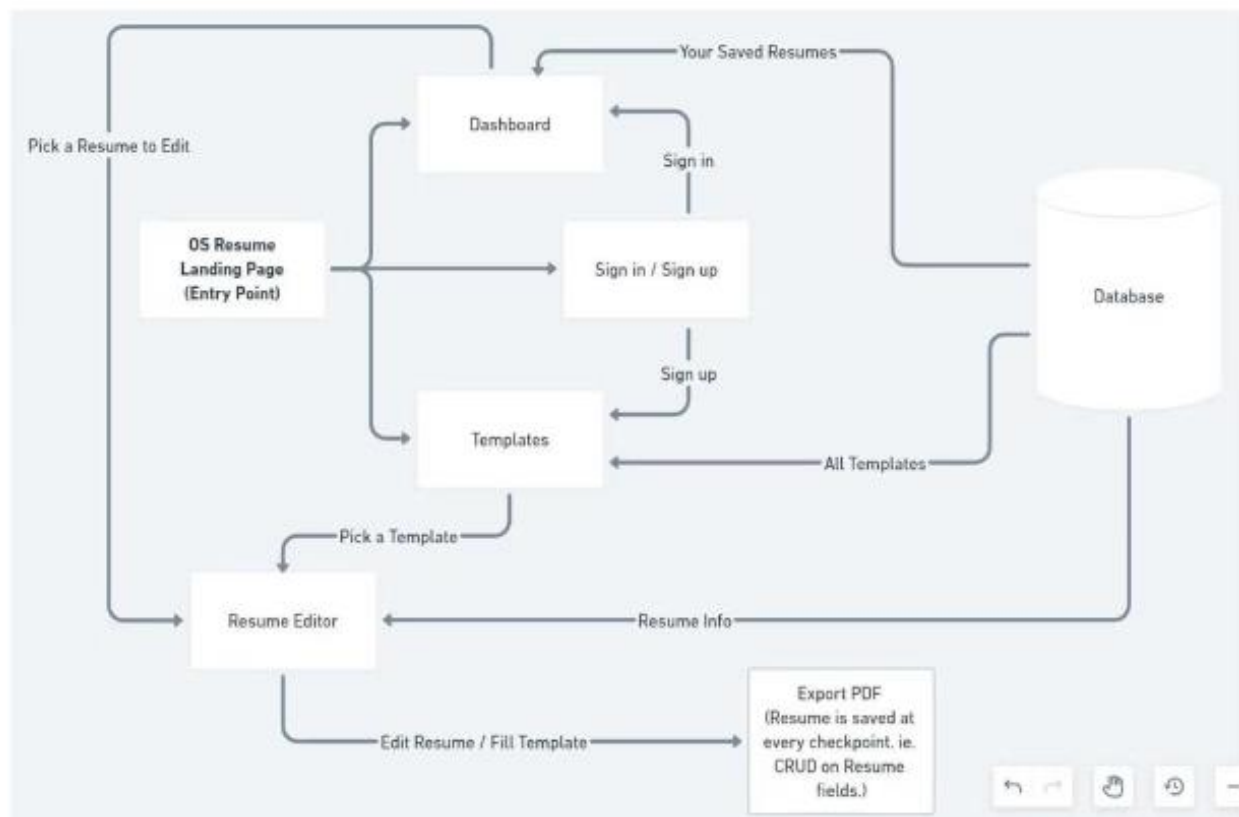


Postman Snapshot

Chapter 4: Design

4.1 System Architecture

A system architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system.



4.2 Data Design

Database design is the organization of data according to a database model. The designer determines what data must be stored and how the data elements interrelate. With this information, they can begin to fit the data to the database model. Database management system manages the data accordingly.

We created four entities, Company, Department, Employee and Salary slip. In each of these we created variables as information of respective entities.

4.3 Interface Design

The screenshot displays a web browser window with the URL `localhost:3000/Resume-Maker`. The browser's tab bar shows three open tabs: "Google", "Request for Assistance.", and "Resume Maker". The application interface has a dark theme. At the top, the header includes the "Hash/Hub" logo, the title "RESUME BUILDER FOR SKILLED FRESHER", and two buttons: "Contribute" and "Give us star". Below the header is a navigation menu with tabs for "Info", "Experience", "Education", "Skills", "Projects", and "Achievements". The "Info" tab is currently selected. On the left side of the "Info" tab, there are two sections: "Information" and "Extra Information". The "Information" section contains fields for "Photo" (with a "Browse..." button), "Name" (with the placeholder "Your Name"), "Subtitle" (with the placeholder "Your Subtitle"), and "Description" (a text area with the placeholder "Description"). The "Extra Information" section contains fields for "Email" (with the placeholder "Email Address"), "Contact" (with the placeholder "Number"), and "Address" (with the placeholder "Address"). On the right side of the "Info" tab, there are two buttons: "Print this out!" and "Clear All". Below these buttons is a "Theme" section with a color picker and a "Pick Theme" button. At the bottom of the browser window, the Windows taskbar is visible, showing various system icons and the time "00:29".

Hash/Hub RESUME BUILDER FOR SKILLED FRESHER

Contribute Give us star

Info Experience Education Skills Projects Achievements

Print this out! Clear All

Theme Pick Theme

Information

Photo Browse...

Name Your Name

Subtitle Your Subtitle

Description Description

Extra Information

Email Email Address

Contact Number

Address Address

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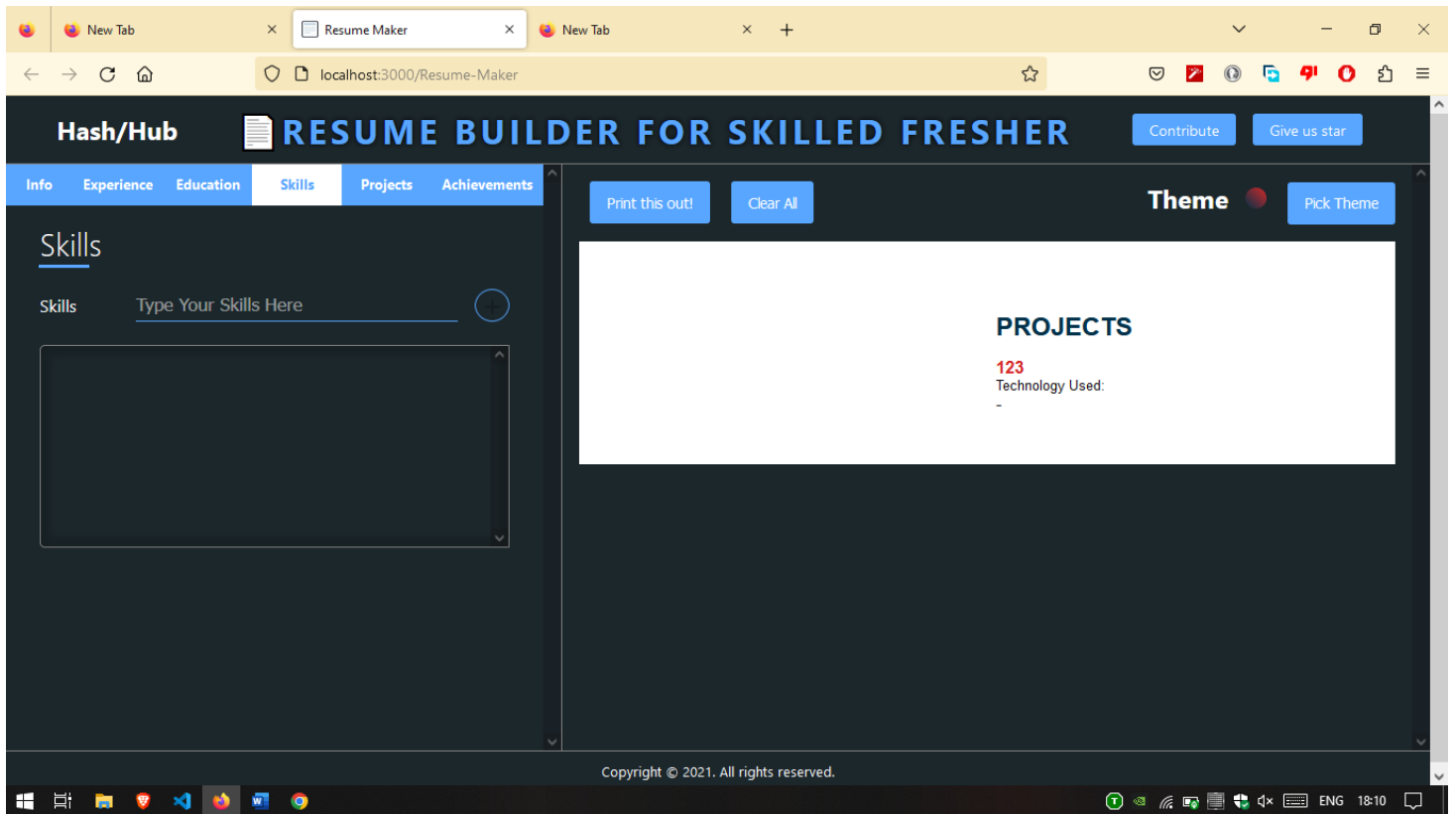
#While adding Information like experience

The screenshot shows a web browser window with the URL `localhost:3000/Resume-Maker`. The application is titled "Hash/Hub RESUME BUILDER FOR SKILLED FRESHER". The navigation bar includes tabs for "Info", "Experience", "Education", "Skills", "Projects", and "Achievements". The "Experience" tab is active, displaying a form for adding work experience. The form has two sections: "Experience #1" and "Experience #2". Each section contains input fields for "Post Title", "Post Name", "Company", "Company Name", "From", "Your Subtitle", "To", "Your Subtitle", and a large text area for "Experience" with the placeholder "Write your Experience Here". On the right side of the interface, there are buttons for "Print this out!", "Clear All", "Theme", and "Pick Theme". The footer of the application states "Copyright © 2021. All rights reserved."

#While adding Information like education

The screenshot shows the same web browser window with the URL `localhost:3000/Resume-Maker`. The application is titled "Hash/Hub RESUME BUILDER FOR SKILLED FRESHER". The navigation bar includes tabs for "Info", "Experience", "Education", "Skills", "Projects", and "Achievements". The "Education" tab is active, displaying a form for adding education information. The form has two sections: "Experience #1" and "Experience #2". Each section contains input fields for "Post Title", "Post Name", "Company", "Company Name", "From", "Your Subtitle", "To", "Your Subtitle", and a large text area for "Experience" with the placeholder "Write your Experience Here". On the right side of the interface, there are buttons for "Print this out!", "Clear All", "Theme", and "Pick Theme". The footer of the application states "Copyright © 2021. All rights reserved."

#While adding Information like skills



#Database Screenshot

mongoDB Atlas GROUP **ig-MongoDB-Atlas-2** 0 Eastern Time (US & Canada) Usage This Month: \$9.90 details Jay

Alerts + ADD

Open Alerts Closed Alerts **All Activity** Alert Settings

TYPES x Host has been upgraded FROM TO 2017-04-07 FILTER DOWNLOAD ACTIVITY FEED

Type	Description	Created On
i	Host has been upgraded from 3.4.2 to 3.4.3 cluster0-shard-00-01-x8fks.mongodb.net:27017 in Cluster0-shard-0	04/07/17 - 12:23:03 PM
i	Host has been upgraded from 3.4.2 to 3.4.3 cluster0-shard-00-02-x8fks.mongodb.net:27017 in Cluster0-shard-0	04/07/17 - 12:23:03 PM
i	Host has been upgraded from 3.4.2 to 3.4.3 cluster0-shard-00-00-x8fks.mongodb.net:27017 in Cluster0-shard-0	04/07/17 - 12:23:03 PM
i	Host has been upgraded from 3.4.2 to 3.4.3 mongodbdemo-shard-00-01-x8fks.mongodb.net:27017 in MongoDBDemo-shard-0	04/07/17 - 11:50:04 AM
i	Host has been upgraded from 3.4.2 to 3.4.3 mongodbdemo-shard-00-00-x8fks.mongodb.net:27017 in MongoDBDemo-shard-0	04/07/17 - 11:49:23 AM
i	Host has been upgraded from 3.4.2 to 3.4.3 mongodbdemo-shard-00-02-x8fks.mongodb.net:27017 in MongoDBDemo-shard-0	04/07/17 - 11:48:44 AM

Hash/Hub RESUME BUILDER FOR SKILLED FRESHER Contribute Give us star

Info Experience Education Skills Projects **Achievements**

Achievements Type Your Achievements Here

PROJECTS
123
Technology Used:
-

Print this out! Clear All Theme Pick Theme

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#While adding Information like Achievements

Chapter 5: Testing

5.1 Scope of testing

Software testing is a process of checking software applications and products for bugs and errors to ensure their performance is efficient. Testing in software engineering is a fundamental process of creating reliable – and usable – software products.

That's what makes it necessary in guiding effective software development. Understanding the different types of software testing is what the need for Quality Assurance in software development stems from.

Usually, companies that attempt to create software have dedicated software testers – an in-house means of software testing help. By detecting errors and mistakes that affect the quality of software, these testers can ensure that software products are worthy of being sold in the market. Thus, they guarantee a software's usefulness, and help turning software applications into end-products that perform the way their designers intended them to.

5.2 Test plan

A Test Plan refers to a detailed document that catalogs the test strategy, objectives, schedule, estimations, deadlines, and the resources required for completing that particular project. Think of it as a blueprint for running the tests needed to ensure the software is working properly – controlled by test managers.

A well-crafted test plan is a dynamic document that changes according to progressions in the project and stays current at all times. It is the point of reference, based on which testing activities are executed and coordinated among a QA team.

5.3 Test case design

A good test case design technique is crucial to improving the quality of the software testing process. This helps to improve the overall quality and effectiveness of the released software.

The test case design techniques are broadly classified into three major categories.

5.4 Specification-Based techniques

5.5 Structure-Based techniques

5.6 Experience-Based techniques

➤ Specification-Based or Black-Box techniques

This technique leverages the external description of the software such as technical specifications, design, and client's requirements to design test cases. The technique enables testers to develop test cases that provide full test coverage. The Specification-based or black box test case design techniques are divided further into 5 categories. These categories are as follows:

Boundary Value Analysis (BVA)

This technique is applied to explore errors at the boundary of the input domain. BVA catches any input errors that might interrupt with the proper functioning of the program.

Equivalence Partitioning (EP)

In Equivalence Partitioning, the test input data is partitioned into a number of classes having an equivalent number of data. The test cases are then designed for each class or partition. This helps to reduce the number of test cases.

Decision Table Testing

In this technique, test cases are designed on the basis of the decision tables that are formulated using different combinations of inputs and their corresponding outputs based on various conditions and scenarios adhering to different business rules.

State Transition Diagrams

In this technique, the software under test is perceived as a system having a finite number of states of different types. The transition from one state to another is guided by a set of rules. The rules define the response to different inputs. This technique can be implemented on the systems which have certain workflows within them.

Use Case Testing

A use case is a description of a particular use of the software by a user. In this technique, the test cases are designed to execute different business scenarios and end-user functionalities. Use case testing helps to identify test cases that cover the entire system.

➤ Structure-Based or White-Box techniques

The structure-based or white-box technique design test cases based on the internal structure of the software. This technique exhaustively tests the developed code. Developers who have complete information of the software code, its internal structure, and design help to design the test cases. This technique is further divided into five categories.

Statement Testing & Coverage

This technique involves execution of all the executable statements in the source code at least once. The percentage of the executable statements is calculated as per the given requirement. This is the least preferred metric for checking test coverage.

Decision Testing Coverage

This technique is also known as branch coverage is a testing method in which each one of the possible branches from each decision point is executed at least once to ensure all reachable code is executed. This helps to validate all the branches in the code. This helps to ensure that no branch leads to unexpected behavior of the application.

Condition Testing

Condition testing also is known as Predicate coverage testing, each Boolean expression is predicted as TRUE or FALSE. All the testing outcomes are at least tested once. This type of testing involves 100% coverage of the code. The test cases are designed as such that the condition outcomes are easily executed.

Multiple Condition Testing

The purpose of Multiple condition testing is to test the different combination of conditions to get 100% coverage. To ensure complete coverage, two or more test scripts are required which requires more efforts.

All Path Testing

In this technique, the source code of a program is leveraged to find every executable path. This helps to determine all the faults within a particular code.

➤ Experience-Based techniques

These techniques are highly dependent on tester's experience to understand the most important areas of the software. The outcomes of these techniques are based on the skills, knowledge, and expertise of the people involved. The types of experience-based techniques are as follows:

Error Guessing

In this technique, the testers anticipate errors based on their experience, availability of data and their knowledge of product failure. Error guessing is dependent on the skills, intuition, and experience of the testers.

Exploratory Testing

This technique is used to test the application without any formal documentation. There is minimum time available for testing and maximum for test execution. In exploratory testing, the test design and test execution are performed concurrently.

5.4 Sample test data and results

Following test cases were carried out:

Cases	Action To be Performed	Expected Results	Actual Result
Case 1 :	Admin login	If Admin details are correct, Login done	If Admin details are correct, Login done
Case 2 :	Update Details	If company with respective id exists, update details	Updated Successfully.
Case 3 :	Update resume Details	If an update id exists, details update.	Updated Successfully.
Case 4 :	User Login	If user id provided exist, update successfully.	User Updated Successfully.
Case 4 :	Update User Details	If a valid company id is provided , add Employee.	Employee Added Successfully. Employee Id

			generate d
C a s e 5 :	Update resume Details	If an update id exists, details update	Updated Success fully.
C a s e 6 :	Add file format	If the valid format is provided , add pay slip.	File format added successf ully
C a s e 7 :	Delete resume	If the resume y id provided exists, delete the compan y details.	resume details deleted successf ully.

Chapter 6: Limitations

6.1 Limitation

Like any other project, the "Resume Builder for skilled Fresher" project may have some limitations. Some potential limitations include:

1. User adoption: It is possible that users may not adopt the project if they prefer to use traditional methods of creating resumes, or if they do not have access to the internet or computer systems required to use the project.
2. Technical limitations: The project may have technical limitations that could affect its performance or usability. For example, the project may not be able to handle large amounts of data or may not be compatible with all browsers or operating systems.
3. Limited features: The project may have limited features compared to other existing resume builders. Some users may prefer more advanced features, such as integration with applicant tracking systems or more customization options.
4. Data security: As the project involves storing personal and confidential information, it is essential to ensure data security measures are in place to protect user data.
5. Language limitations: The project may not be able to support all languages, which could limit its accessibility for users in different regions or countries.
6. Dependence on internet connectivity: The project requires a stable internet connection to function correctly, which could be a limitation for users in areas with poor connectivity.

It is important to identify and address these limitations to ensure that the project is successful and meets the needs of its intended users.

Chapter 7: Summary and Conclusions

The "Resume Builder for skilled Fresher" project has a lot of potential for future development and expansion. Some possible areas of future scope include:

1. Integration with job portals: The project could be integrated with popular job portals such as Indeed, LinkedIn, or Glassdoor to make it easier for users to apply for jobs.
2. Customization options: The project could include more customization options to allow users to create resumes that are tailored to their specific needs and preferences.
3. Multi-language support: The project could be expanded to support multiple languages, making it more accessible to users around the world.
4. Artificial intelligence (AI) and machine learning (ML) integration: The project could be integrated with AI and ML algorithms to provide users with personalized recommendations and suggestions for improving their resumes.
5. Collaboration features: The project could include collaboration features that allow users to work together on a single resume, making it easier for teams or groups to create and edit resumes together.
6. Mobile application: The project could be developed as a mobile application to allow users to create and edit their resumes on-the-go.
7. Analytics and reporting: The project could include analytics and reporting features to help users track their resume views, application success rates, and other relevant metrics.

Overall, there are many potential areas of future development and expansion for the "Resume Builder for skilled Fresher" project. These developments could help to make the project even more useful and valuable for users, while also expanding its reach and impact.

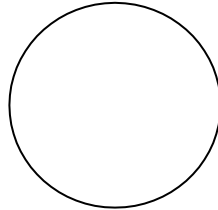
Chapter 9: Future Scope

9.1 Resume Builder for skilled Fresher

1. Integration with job search platforms: You could integrate your resume builder with popular job search platforms such as LinkedIn or Indeed. This would allow users to easily apply to jobs directly from their resume and track their job application status.
2. Personalized resume suggestions: Using machine learning algorithms, you could suggest improvements to the user's resume based on their industry and job title. This would make the resume building process more efficient and effective for the user.
3. Cover letter builder: In addition to the resume builder, you could also develop a cover letter builder. This would allow users to easily create a customized cover letter for each job they apply to, and could include suggestions for formatting and content.
4. Collaboration and feedback features: You could enable users to share their resumes with friends, mentors or career counselors, and receive feedback and suggestions for improvement. This would make the resume building process more collaborative and increase the chances of creating a high-quality resume.
5. Analytics and insights: You could provide users with analytics and insights about their resume, such as how many times it has been viewed or downloaded by potential employers. This would help users to track the effectiveness of their resume and make data-driven decisions about their job search strategy.

Appendix

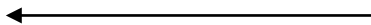
- ✓ Process: A process done in the system is denoted by this symbol. For example, prepare attendance report, pay slip, etc.



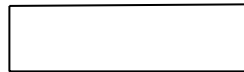
- ✓ External entity: A source or destination of data which is external to the system.



- ✓ A data flow: it is packet or data. It may be in the form of document or letter.



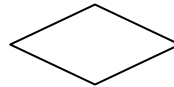
- ✓ Data store: Any store data but with no reference to the physical method of storing.



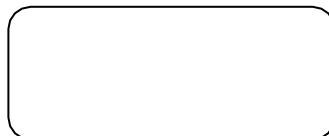
- ✓ Multiplicity: Use to represent one to many relationships between the entities

*

- ✓ Association: It represents the relationship between the entities



- ✓ State: It represents current state of system that is being designed.



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