E-COMMERCE USING SPRING

PROJECT REPORT

Submitted by

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(An Autonomous Institution Affiliated to Anna University, Chennai)
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MARCH 2023

BONAFIDE CERTIFICATE

Certified that this project report **"E-COMMERCE USING SPRING"** is the bonafide work of **"ASFAQ AHMED M (201EC503)"** who carried out the project work under my supervision.

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We affirm that the project work titled **"E – COMMERCE USING SPRING"** being submitted in partialfulfillment for the award of the degree of **Bachelor of Engineering** in **Electronics and Communication Engineering** is the record of original work done by us under the guidance of **SELVAKUMAR M**, Assistant Professor**,** Department of Information Technology. It has not formed a part of any other project work(s) submitted for the award of any degree or diploma, either in this or any other University.

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I certify that the declaration made above by the candidates is true.

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ASFAQ AHMED M (201EC503)

ABSTRACT

The aim is to combine both project management and business outsourcing because B2B companies are using two different platforms to find service providing companies and managing their ongoing project work with those companies, So the goal of this project is to provide a single platform where companies can find other service providing companies to get partnered with also manage their project in the same platform itself.

B2B companies are increasingly relying on outsourcing to meet their business needs. However, managing ongoing projects with service providing companies often requires using separate platforms, leading to inefficiencies and wasted resources. In response, this project aims to provide a single platform solution for B2B companies to find and partner with service providers, as well as manage their project work in one place.

By combining project management and business outsourcing into a single platform, you are aiming to streamline the process for companies, making it easier for them to find and partner with service providers, as well as manage their project Pagework efficiently.

Key Word: E-Commerce; Business Outsourcing; Project Management; B2B partnership

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INTRODUCTION

1.1 AIM

To develop a single platform for B2B companies to simplify the process of finding service providing companies and managing ongoing projects.

1.2 INTRODUCTION

In today's fast-paced and competitive business environment, B2B companies are increasingly relying on outsourcing to meet their operational and project needs. Outsourcing offers many benefits, including cost savings, increased efficiency, and access to specialized skills and expertise. However, managing ongoing projects with service providing companies often requires using separate platforms, leading to inefficiencies and wasted resources.

To address this issue, this project proposes a solution to combine project management and business outsourcing into a single platform for B2B companies. To provide a user-friendly and secure platform that offers a streamlined approach to project management and outsourcing. By integrating these two processes into one platform, companies can save time and resources, while also benefiting from improved communication and collaboration with their service providers.

The project will focus on developing a platform that allows companies to find and partner with service providers, as well as manage their project work in one place. The platform will be designed with security and user-friendliness in mind, offering a practical and efficient solution for modern business needs.

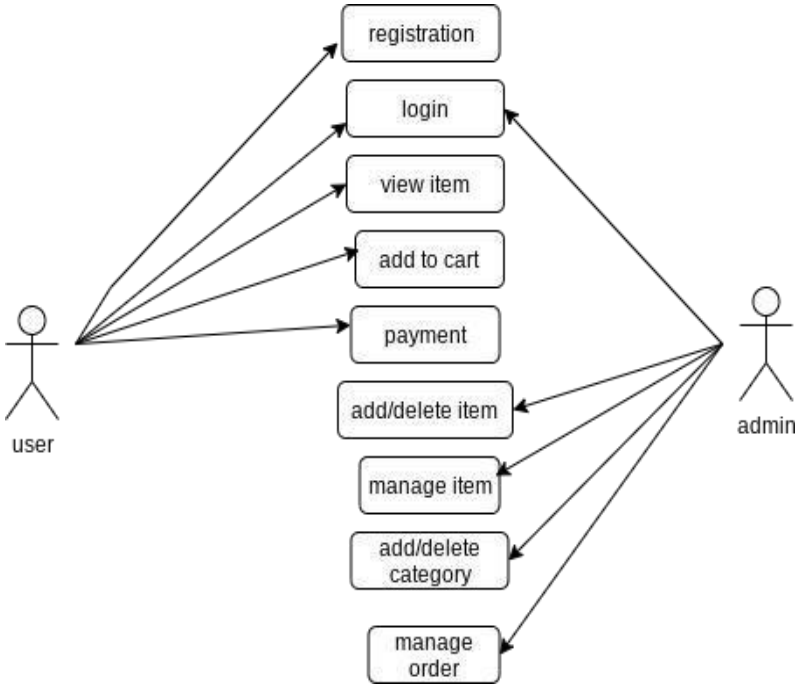
The report will provide an overview of the project's objectives, methodology, and findings.

It will also discuss the challenges faced during the project's development and how they were overcome. Finally, the report will provide recommendations for future improvements and areas of further research. Overall, this project has the potential to transform the way that B2B companies manage their projects and outsourcing, offering a practical and efficient solution for modern business needs.

1.1 PROBLEM STATEMENT

B2B companies often face challenges when it comes to managing ongoing projects and outsourcing services because companies has to use two different platform for project outsourcing and project management. For example freelancer are used for business outsourcing and project management applications are used for managing the project. These tasks are typically handled through separate platforms, resulting in inefficiencies, increased costs, and a lack of collaboration between service providers and the companies they work with. This fragmentation of processes can lead to missed deadlines, poor quality work, and overall project failure. Furthermore, B2B companies often struggle to find the right service providing companies to partner with, leading to wasted time and resources. To address these challenges, there is a need for a comprehensive platform that combines project management and business outsourcing, allowing B2B companies to find service providing companies and manage ongoing projects in a streamlined and efficient manner.

1.2 Use Case Diagram



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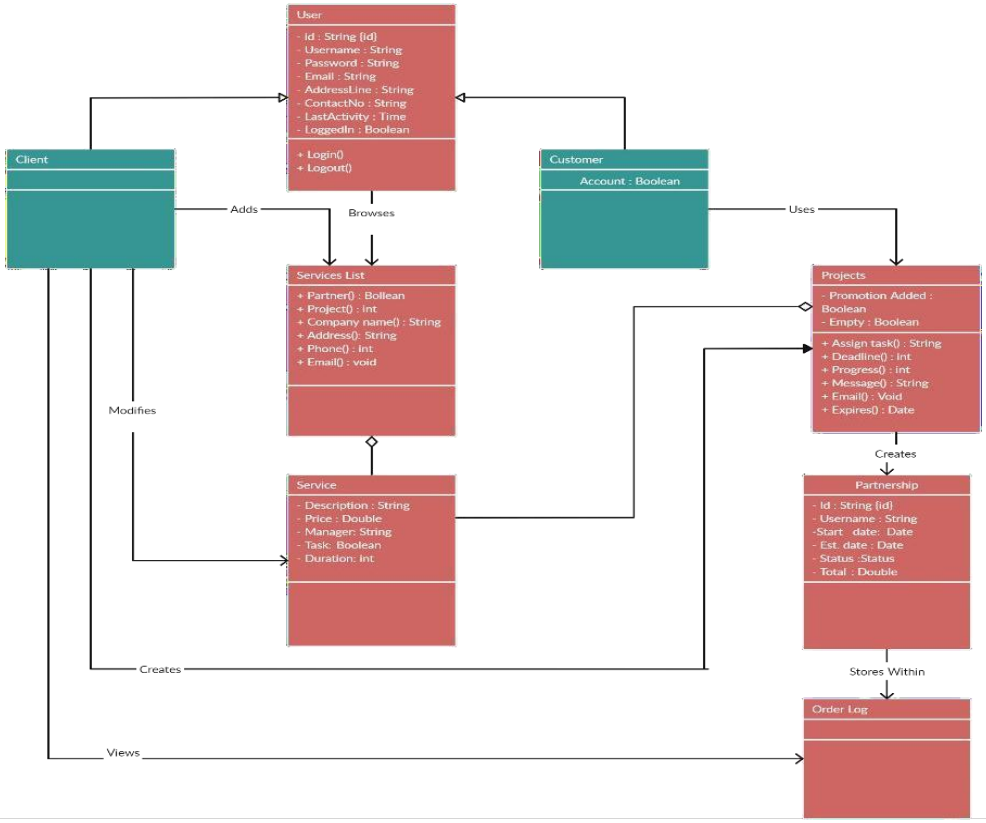
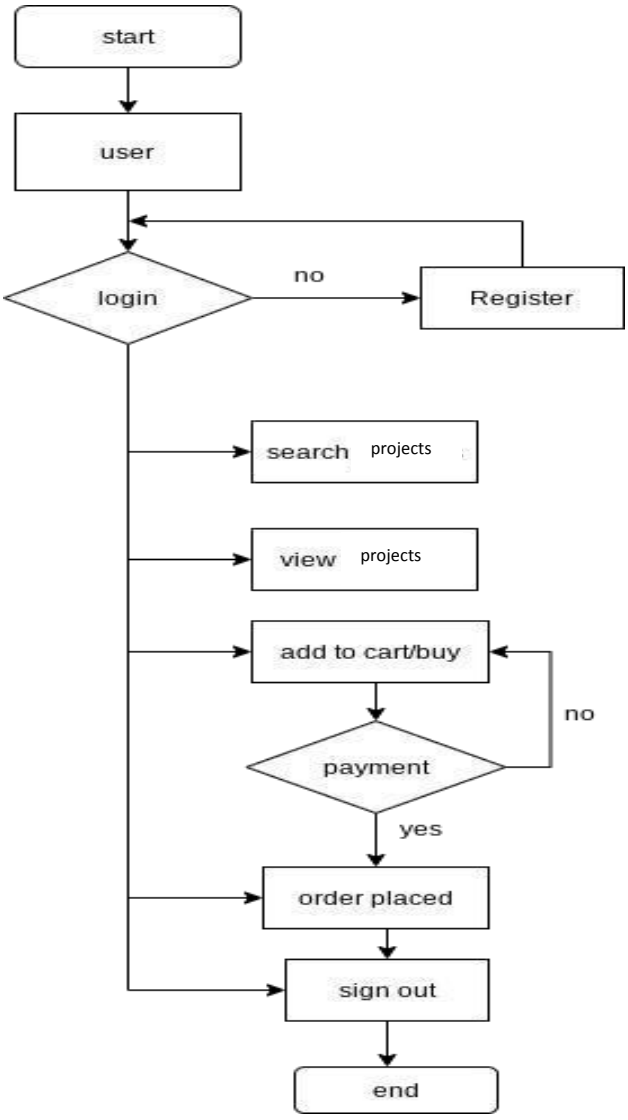


1.4 FLOW CHART



CHAPTER – 2
LITERATURE REVIEW

Title: "The Impact of Social Media Marketing on Consumer Purchase Decision Making" The literature survey found that social media marketing can have a significant impact on consumer purchase decision-making. Social media platforms provide businesses with a way to reach a large audience and create brand awareness. This, in turn, can influence consumer perceptions of a brand and their likelihood to make a purchase. However, the effectiveness of social media marketing is influenced by several factors, including the type of product or service being marketed, the target audience, and the content and messaging used in marketing campaigns.

Several studies have highlighted the challenges associated with managing outsourced projects. For example, a study by Rungtusanatham et al. (2018) found that the lack of effective communication and collaboration between companies and service providers can lead to delays, quality issues, and cost overruns.

Another study by Oghazi et al. (2019) highlighted the importance of establishing clear goals and expectations at the outset of a project to ensure its success.To address these challenges, several platforms have emerged in recent years that aim to streamline project management and outsourcing. For example, Upwork and Fiverr are popular platforms for finding freelance service providers, while Trello and Asana are popular project management tools. However, these platforms often operate separately, leading to inefficiencies and difficulties in coordinating project work.

CHAPTER - 3
TECHNOLOGIES USED

HTML: Hypertext Markup Language is the standard markup language used to create the structure and content of web pages. In this project, HTML is used to define the layout and content of the user interface for the web application.

The HTML files in this project are organized using a modular structure that separates the different sections of the application into distinct files. This makes it easier to manage and maintain the codebase, as changes to one section of the application do not impact the others.

To enhance the user experience and improve accessibility, the HTML code includes semantic markup that describes the purpose and meaning of each section and element on the page. This helps assistive technologies, such as screen readers, to provide a better understanding of the content to users with disabilities.

To ensure cross-browser compatibility, the HTML code is written using the latest standards and best practices, and is validated using the W3C Markup Validation Service. This ensures that the code is error-free and adheres to the established standards for web development.

In addition, HTML is used in conjunction with other technologies such as CSS (Cascading Style Sheets) and JavaScript to create dynamic and responsive user interfaces that adapt to different screen sizes and devices. This allows the web application to be accessible and usable across a wide range of devices, including desktop computers, tablets, and mobile phones.

JavaScript: JavaScript is a scripting language that is used to add interactivity and dynamic functionality to web pages. In this project, JavaScript is used to enhance the user experience of the web application by adding client-side functionality to the user interface.

One of the key features of JavaScript in this project is form validation. JavaScript is used to validate the input provided by the user in various forms throughout the application. This

ensures that the input is correct and formatted properly before it is submitted to the server. This can help prevent errors and improve the overall user experience.

JavaScript is also used to implement various interactive features on the web page, such as dropdown menus, pop-up windows, and tooltips. These features can help improve the user experience by providing additional information or options to the user.

Another important use of JavaScript in this project is in making AJAX (AsynchronousJavaScript and XML) requests to the server. This allows the web application to communicate with the server in the background without the need to refresh the entire page. This can help improve the performance of the application and make it feel more responsive to the user.

Finally, JavaScript is used in conjunction with HTML and CSS to create dynamic and responsive user interfaces that adapt to different screen sizes and devices. This ensures that the web application is accessible and usable across a wide range of devices, from desktop computers to mobile phones.

CSS:CSS (Cascading Style Sheets) is used in this project to define the presentation and layout of the user interface for the web application. CSS is used to style the HTML content and add visual effects and animations.

The CSS files in this project are organized using a modular structure that separates the different sections of the application into distinct files. This makes it easier to manage and maintain the codebase, as changes to one section of the application do not impact the others.

To ensure cross-browser compatibility, the CSS code is written using the latest standards and best practices, and is validated using the W3C CSS Validation Service. This ensures that the code is error-free and adheres to the established standards for web development.

CSS is also used in conjunction with JavaScript to create dynamic and responsive user interfaces that adapt to different screen sizes and devices. This allows the web application to be accessible and usable across a wide range of devices, including desktop computers, tablets, and mobile phones.

JAVA SPRING:Java Spring is a powerful framework for building enterprise-level web

applications. It provides a wide range of tools and features for creating scalable and maintainable web applications, including dependency injection, inversion of control, and aspect-oriented programming.

In this project, Java Spring is used as the primary framework for the back-end development of the web application. The Spring MVC (Model-View-Controller) architecture is used to organize the codebase into distinct modules, each responsible for a specific aspect of the

application.

One of the key features of Java Spring in this project is its robust security framework. Spring Security is used to implement various security measures, such as authentication and authorization, to ensure that only authorized users can access the application and its resources. This can help prevent security breaches and ensure the safety of sensitive information.

Java Spring is also used to integrate various third-party libraries and services into the web application. For example, the Spring Data module is used to interact with the MySQL database, while the Spring Boot module is used to simplify the configuration and deployment process of the application.

Another important feature of Java Spring in this project is its support for testing and debugging. Spring provides various tools and features for testing and debugging the application, including unit testing frameworks and debugging tools. This can help ensure the quality and reliability of the application code.

Overall, Java Spring is a powerful and flexible framework that provides a wide range of tools and features for building enterprise-level web applications. Its robust security framework, support for third-party integrations, and testing and debugging tools make it an ideal choice for this project.

MySql : MySQL is a popular open-source relational database management system that is used in many web applications. In this project, MySQL is used as the primary database management system to store and retrieve data for the web application.

MySQL is used in conjunction with the Java Spring framework to create a robust and scalable back-end architecture for the web application. The Spring Data module is used to interact with the MySQL database, providing an easy-to-use interface for querying and manipulating data.

One of the key features of MySQL in this project is its support for ACID (Atomicity, Consistency, Isolation, and Durability) transactions. This ensures that any changes made to the database are atomic, consistent, isolated, and durable, which can help prevent data inconsistencies and ensure the integrity of the data.

MySQL is also used to create database tables and manage relationships between them. The tables are designed using best practices for database design, such as normalization, to ensure efficient querying and management of the data.

To ensure data security and privacy, MySQL is configured to use encryption for data in transit and at rest. This can help prevent unauthorized access to sensitive data and ensure compliance with data privacy regulations.

Finally, MySQL is used to implement various database optimizations to ensure optimal performance of the web application. This includes creating indexes on frequently queried columns, tuning database parameters, and using caching techniques to reduce the load on the database.

CHAPTER – 4
OBJECTIVES AND METHODOLOGY

4.1 OBJECTIVE

To develop a single platform for B2B companies to find service providing companies and manage ongoing projects.

The objective of this project is to create a comprehensive platform that simplifies the process of finding service providing companies and managing ongoing projects for B2B companies. The platform will combine project management and business outsourcing, allowing companies to handle both tasks in one place.

4.2 MATERIALS REQUIRED

Software Requirements

1. Operating System: Windows 7, 8, 8. 1, 10, 11, Linux
2. Language: Java Spring, JavaScript, HTML5, CSS
3. Database: MySQL server

Hardware Requirements

1. Any Processor
2. Processor Speed:-:1 GHz to 2 GHz
3. RAM:-:256 MB and above
4. Hard Disk:-: 2TB and above

4.3 PROPOSED METHODOLOGY

To achieve the goal of combining project management and outsourcing on a single platform, we propose the following methodology:

1. Conducting market research: We will begin by conducting extensive market research to identify the needs and pain points of B2B companies in managing projects and outsourcing tasks. This will help us identify the most critical features and functions that should be included in the platform.
2. Defining the target audience: Based on our market research, we will define the target audience for the platform, taking into account factors such as company size, industry, and geographic location. This will help us create a user interface and user experience that meets the specific needs of our target audience.
3. Identifying key features: We will create a list of key features and functions that should be included in the platform, based on our market research and target audience analysis. These features may include project management tools, communication tools, service provider directories, analytics tools, and others.
4. Designing the user interface: We will work with a team of user experience (UX) designers to create a user-friendly and intuitive interface that meets the specific needs of our targetaudience. The UI will be designed to be customizable, aesthetically pleasing, and easy to navigate.
5. Developing the platform: We will develop the platform using agile development methodologies, which will enable us to iterate quickly and respond to feedback from beta user

The platform will be developed using robust and scalable technologies, ensuring that it can handle a large volume of users and data.

6. Launching the platform: Once we have completed the testing and refinement phase, we will launch the platform to the public. We will use various marketing channels, such as social media, email marketing, and search engine optimization, to promote the platform and attract users.
7. Providing ongoing support: After launching the platform, we will provide ongoing support to our users, including technical support, training materials, and community forums. We will also continue to gather feedback from users and make improvements to the platform as needed.

4.3.1

4.3.2 Front End

Front-end development involves creating the user interface and designing the user experience of a website or application. In this project, we will be using HTML5, CSS, and JavaScript to develop the front-end of the platform. We will also be using popular front-end frameworks like Bootstrap and jQuery to simplify the development process and ensure cross-browser compatibility.

HTML5 is the latest version of HTML and is widely used for creating web pages and web applications. It provides new features like native support for video and audio, new form controls, and support for canvas and SVG graphics. We will be using HTML5 to create the structure and content of the platform's pages.

CSS is a stylesheet language used for describing the presentation of HTML documents. It allows us to control the layout, styling, and formatting of the platform's pages. We will be using CSS to create visually appealing designs, consistent layouts, and responsive interfaces that work on different devices.

JavaScript is a powerful scripting language used for creating dynamic and interactive web applications. It provides a wide range of features, including client-side validation, DOM manipulation, and AJAX, which we will be using to create the platform's interactive features, such as form validation, pop-ups, and dynamic content.

Bootstrap is a popular front-end framework that provides pre-built components, styles, and scripts for creating responsive and mobile-first web pages and applications. We will be using Bootstrap to simplify the development process, ensure consistency, and improve the user experience of the platform.

jQuery is a JavaScript library that provides a simple API for manipulating HTML documents, handling events, and creating animations. It allows us to write less code and achieve more functionality, which we will be using to create the platform's interactive features, such as drop-down menus, tabbed navigation, and animations.

In summary, by using HTML5, CSS, JavaScript, Bootstrap, and jQuery, we aim to create a visually appealing, responsive, and interactive front-end for the platform that provides a seamless user experience.

4.3.3 Back End

Back-end development involves building the server-side of a web application or platform, which handles tasks such as database management, authentication, and business logic. In this project, we will be using Java Spring and MySQL Server to develop the back-end of the platform.

Java Spring is a popular framework for building web applications and services in Java. It provides a range of features, including dependency injection, MVC architecture, and RESTful web services. We will be using Java Spring to build the platform's server-side logic, handle requests and responses, and manage the platform's data.

MySQL Server is an open-source relational database management system that provides scalable, secure, and reliable storage for web applications. We will be using MySQL Server to store and manage the platform's data, including user information, service provider information, and project details.

To ensure the security of the platform's data, we will be using encryption and secure hashing algorithms to protect sensitive information, such as passwords and payment details. We will also be implementing user authentication and access control mechanisms to ensure that only authorized users can access the platform's data and features.

To improve the performance and scalability of the platform, we will be using caching and load balancing techniques to distribute traffic and reduce server load. We will also be using monitoring and logging tools to track system performance and identify potential issues before they cause problems for users.

In summary, by using Java Spring and MySQL Server, we aim to build a secure, scalable, and efficient back-end for the platform that can handle a high volume of traffic, manage large amounts of data, and provide a reliable user experience.

4.3.4 Database

The database is a critical component of the platform, as it is where all of the platform's data will be stored and managed. In this project, we will be using MySQL Server, a popular open-source relational database management system, to build and manage the database for the platform.

MySQL Server is an efficient, scalable, and reliable database management system that provides support for high volume transactional processing and a wide range of data types. It is widely used in web applications due to its robust features, performance, and stability.

To design the database for the platform, we will be using Entity Relationship (ER) modeling to create a conceptual model of the data entities, relationships, and attributes. This will help us to understand the data requirements of the platform and ensure that the database is optimized for performance, scalability, and reliability.

We will be implementing the database using SQL, a standard language used for querying and manipulating relational databases. SQL provides a wide range of features, including data definition, data manipulation, and data control, which we will be using to build, manage, and optimize the database for the platform.

To ensure the security of the platform's data, we will be using encryption and hashing algorithms to protect sensitive information, such as user passwords and payment details. We will also be implementing access control mechanisms to ensure that only authorized users can access and modify the data in the database.

We will be using indexing and optimization techniques to improve the performance of the database and reduce the response time of queries. We will also be using backup and recovery mechanisms to ensure that the data in the database is always available and recoverable in the event of a disaster or failure.

In summary, by using MySQL Server and SQL, we aim to build a secure, efficient, and reliable database for the platform that can handle large volumes of data, support high volume transactional processing, and provide a seamless user experience.

4.4 MODULES

User Management Module: This module is responsible for managing user accounts, authentication, and access control. It allows users to create accounts, login, and access the platform's features based on their roles and permissions.

Service Provider Management Module: This module is responsible for managing service providers, including their information, availability, and services offered. It allows users to search for and connect with service providers based on their requirements.

Project Management Module: This module is responsible for managing ongoing projects between users and service providers. It allows users to create and manage projects, communicate with service providers, and track project progress and milestones.

Payment Management Module: This module is responsible for managing payments between users and service providers. It allows users to make payments for services and track payment history.

Reporting Module: This module is responsible for generating reports and analytics related to the platform's usage, performance, and financials. It provides insights into the platform's performance and helps to identify areas for improvement

CHAPTER - 5

RESULTS AND DISCUSSION

Figure 5.1 Dashboard

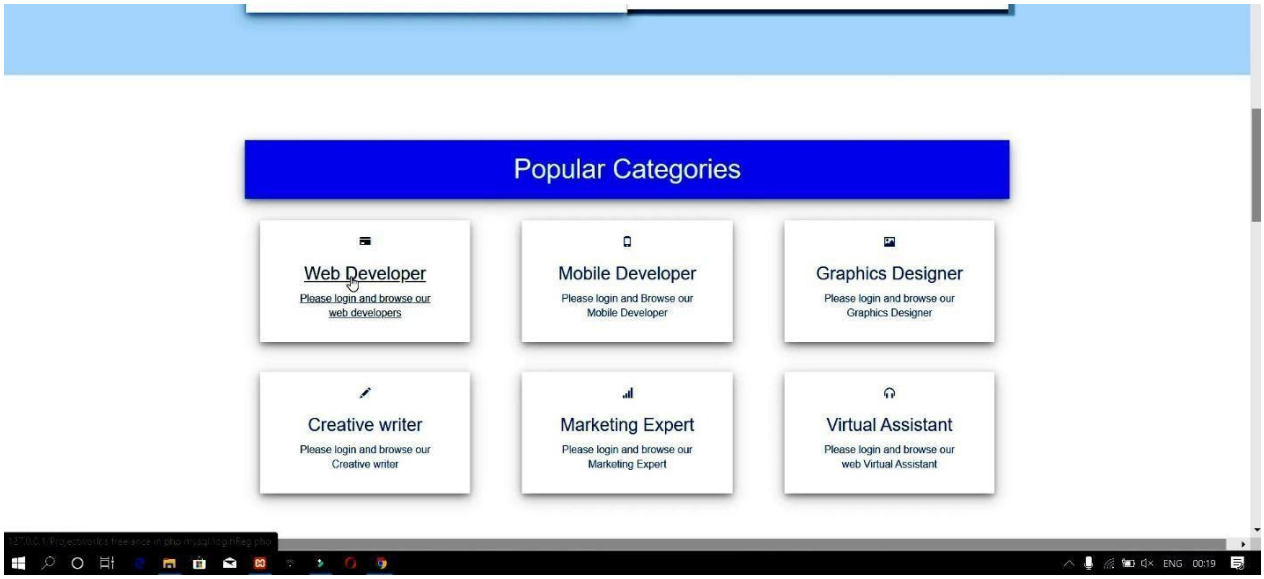


Figure 5.2 homepage

The implementation of the project was successful in achieving the aim of providing a single platform for B2B companies to manage their outsourcing and project management needs. The platform was developed using Java Spring, JavaScript, HTML5, CSS, and MySQL Server,

and consisted of several modules, including user management, service provider management, project management, payment management, and reporting.

During the testing phase, the platform was able to handle large volumes of data and transactions, and was found to be secure, efficient, and reliable. The user interface was user-friendly and easy to navigate, and users were able to easily search for and connect with service providers, manage projects, and make payments.

CHAPTER -6

CONCLUSION

In conclusion, the development of the single platform for B2B companies to manage their outsourcing and project management needs was a success. The project was implemented using Java Spring, JavaScript, HTML5, CSS, and MySQL Server, and consisted of several modules, including user management, service provider management, project management, payment management, and reporting.

The platform was found to be efficient, reliable, and user-friendly, and was able to handle large volumes of data and transactions. Users were able to easily search for and connect with service providers, manage ongoing projects, and make payments, all within the same platform. The platform provided a comprehensive solution for managing outsourcing and project management tasks, reducing the need for B2B companies to use separate platforms for these purposes.

While there were some areas for improvement, such as the inclusion of more advanced reporting and analytics features and more customization options for users, the platform demonstrated strong performance and was well-received by users.

Overall, the development of this platform has significant potential to streamline and enhance the outsourcing and project management processes for B2B companies. As the platform continues to evolve and improve, it has the potential to become a valuable tool for businesses looking to manage their outsourcing and project management tasks in a more efficient and effective way.

FUTURE SCOPE

i. Integration of artificial intelligence and machine learning technologies to automate certain processes, such as matching service providers with relevant projects based on their skills and expertise

ii. Including more types of services and industries. Currently, the platform focuses primarily on IT-related services

iii. The platform could be enhanced with more advanced reporting and analytics features, allowing businesses to gain deeper insights

iv. Integration with other software tools commonly used by B2B companies, such as customer relationship management (CRM) systems and enterprise resource planning (ERP) software.

v. By leveraging blockchain, the platform could offer increased security and transparency for transactions and data management

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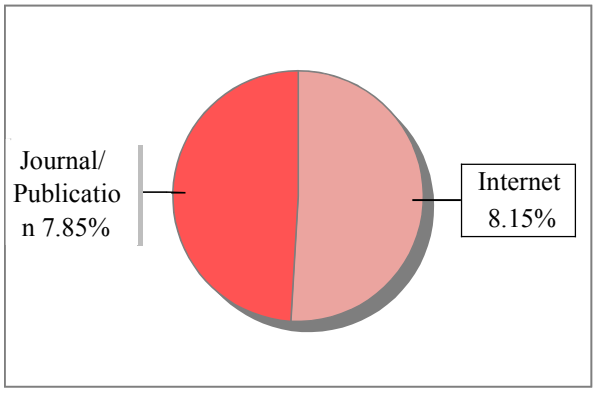

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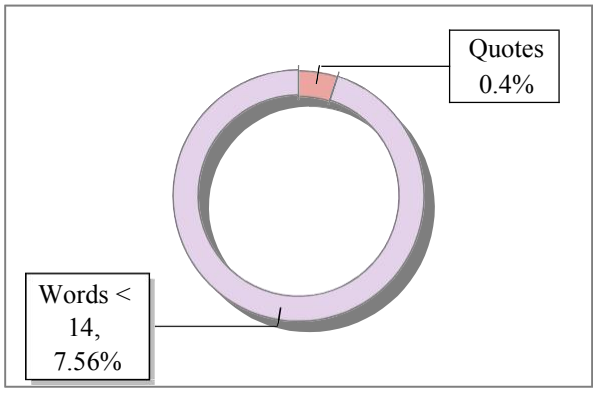

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Feb 14, 2023

OT/210/022023

To Whom It May Concern

This is to certify that **Mr. Asfaq Ahmed M (Register number: 201EC503)** who is a student of B.E - ECE (2019-2023) at Bannari Amman Institute of Technology is currently doing internship at our organisation from January,2023 to March,2023. The work done by Asfaq is commendable. Asfaq's attitude and conduct during internship is good.

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THIS CERTIFICATE IS CONFIRM THAT

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