VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI, Karnataka -590018

INTERNSHIP REPORT

ON

"Words-per-minute Calculator"

Submitted in partial fulfilment for the award of degree(18CSI85)

BACHELOR OF ENGINEERING IN
INFORMATION SCIENCE

Submitted by:

Vinay H N

1BY19IS182

Conducted at
VARCONS TECHNOLOGIES

BMS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

YELAHANKA, BENGALURU - 560023

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

YELAHANKA, BENGALURU-560064

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the Internship titled **"Words-per-minute Calculator"** carried out by **Mr. Vinay H N,** a bona-fide student of BMS Institute of Technology, in partial fulfillment for the award of **Bachelor of Engineering**, in **Information Science and Engineering** under Visvesvaraya Technological University, Belagavi, during the year 2022-2023. It is certified that all corrections/suggestions indicated have been incorporated in the report.

The project report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the course Internship / Professional Practice (18CSI85)

Signature of Guide **Signature of HOD** **Signature of Principal**

External Viva:

Name of the Examiner Signature with Date

1) _____

_____

2) _____

_____

DECLARATION

I, **VINAY H N**, final year student of Information Science and Engineering, BMS Institute of technology, declare that the Internship has been successfully completed, in **Varcons Technologies**. This report is submitted in partial fulfillment of the requirements for award of Bachelor Degree in Information Science and Engineering, during the academic year 2022-2023.

Date: 23/03/2023

Place: Bengaluru

NAME: VINAY H N

USN: 1BY19IS182

OFFER LETTER PROVIDED BY THE COMPANY

INTERNSHIP ,OFFER LETTER

Date: 20th February, 2023

Name: **Vinay H N**
USN: **1BY19IS182**

Dear Student,

We would like to congratulate you on being selected for the **Full Stack Web Devlopment** Internship position with **Varcons Technologies**, effective Start Date **20th February, 2023**, All of us are excited about this opportunity provided to you!

This internship is viewed as being an educational opportunity for you, rather than a part-time job. As such, your internship will include training/orientation and focus primarily on learning and developing new skills and gaining a deeper understanding of concepts of **Full Stack Web Devlopment** through hands-on application of the knowledge you learn while you train with the senior developers. You will be bound to follow the rules and regulations of the company during your internship duration.

Again, congratulations and we look forward to working with you!.

Sincerely,

Spoorthi H C
Director
VARCONS TECHNOLOGIES
213, 2st Floor, 18 M G Road, Ulsoor,
Bangalore-560001

ACKNOWLEDGEMENT

This Internship is a result of accumulated guidance, direction and support of several important persons. We take this opportunity to express our gratitude to all who have helped us to complete the Internship.

We express our sincere thanks to **Dr. Mohan Babu G. N, Principal, BMS Institute of Technology & Management**, for providing used equate facilities to undertake this Internship.

We would like to thank **Head of the Department, Information Science and Engineering, BMS Institute of Technology & Management**, for providing us an opportunity to carry out Internship and for his valuable guidance and support.

We would like to thank our Raju Sir, Software Services for guiding us during the period of internship.

We express our deep and profound gratitude to our guide, **Prof. Ambika Subhash, Dept of ISE, BMS Institute of Technology & Management,** for her keen interest and encouragement at every step in completing the Internship.

We would like to thank all the faculty members of our department for the support extended during the course of Internship.

We would like to thank the non-teaching members of our dept, for helping us during the Internship.

Last but not the least, we would like to thank our parents and friends without whose constant help, the completion of Internship would have not been possible.

NAME: VINAY H N
USN: 1BY19IS182

ABSTRACT

A words per minute (WPM) website project can be an excellent way to help people improve their typing skills and measure their progress over time. The project could involve creating a website that offers typing tests, tutorials, and resources to help users increase their typing speed and accuracy.

The website could include a typing test that measures the user's WPM, as well as to help users practice and improve their typing skills. The website could also feature tutorials on proper typing technique and posture, which can help users avoid common typing-related injuries and improve their overall efficiency.

This website is user-friendly and easy to navigate, with clear instructions and feedback on users' progress. This is also essential to make the website engaging and fun, with interactive activities that encourage users to practice and improve their typing skills.

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CHAPTER 1

COMPANY PROFILE

1. COMPANY PROFILE

A Brief History of Varcons Technologies

Varcons Technologies, was incorporated with a goal" To provide high quality and optimal Technological Solutions to business requirements of our clients". Every business is a different and has a unique business model and so are the technological requirements. They understand this and hence the solutions provided to these requirements are different as well. They focus on client's requirements and provide them with tailor made technological solutions. They also understand that Reach of their Product to its targeted market or the automation of the existing process into e-client and simple process are the key features that our clients desire from Technological Solution they are looking for and these are the features that we focus on while designing the solutions for their clients.

Varcons is a Technology Organization providing solutions for all web design and development, MYSQL, PYTHON Programming, HTML, CSS, ASP.NET and LINQ. Meeting the ever-increasing automation requirements, specialize in ERP, Connectivity, SEO Services, Conference Management, effective web promotion and tailor-made software products, designing solutions best suiting client's requirements.

Varcons Technologies, strive to be the front runner in creativity and innovation in software development through their well-researched expertise and establish it as an out of the box software development company in Bangalore, India. As a software development company, they translate this software development expertise into value for their customers through their professional solutions.

They understand that the best desired output can be achieved only by understanding the clients demand better. Varcons Technologies work with their clients and help them to define their exact solution requirement. Sometimes even they wonder that they have completely redefined their solution or new application requirement during the brainstorming session, and here they position themselves as an IT solutions consulting group comprising of high caliber consultants.

They believe that Technology when used properly can help any business to scale and achieve new heights of success. It helps Improve its efficiency, profitability, reliability; to put it in one sentence "Technology helps you to Delight your customers" and that is what we want to achieve.

CHAPTER 2

ABOUT THE COMPANY

2. ABOUT THE COMPANY

Varcons Technologies is a Technology Organization providing solutions for all web design and development, MYSQL, PYTHON Programming, HTML, CSS, ASP.NET and LINQ. Meeting the ever-increasing automation requirements, Varcons Technologies specialize in ERP, Connectivity, SEO Services, Conference Management, effective web promotion and tailor-made software products, designing solutions best suiting client's requirements. The organization where they have a right mix of professionals as a stakeholder to help us serve our clients with best of our capability and with at par industry standards. They have young, enthusiastic, passionate, and creative Professionals to develop technological innovations in the field of Mobile technologies, Web applications as well as Business and Enterprise solution. Motto of our organization is to "Collaborate with our clients to provide them with best Technological solution hence creating Good Present and Better Future for our client which will bring a cascading a positive effect in their business shape as well". Providing a Complete suite of technical solutions is not just our tag line, it is Our Vision for Our Clients and for Us, we strive hard to achieve it.

Products Of Varcons Technologies

Android Apps

It is the process by which new applications are created for devices running the Android operating system. Applications are usually developed in Java (and/or Kotlin; or other such option) programming language using the Android software development kit (SDK), but other development environments are also available, some such as Kotlin support the exact same Android APIs (and byte code), while others such as Go have restricted API access.

The Android software development kit includes a comprehensive set of development tools. These include a debugger, libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials. Currently supported development platforms include computers running Linux (any modern desktop Linux distribution), Mac OS X 10.5.8 or later, and Windows 7 or later. As of March 2015, the SDK is not available on Android itself, but software development is possible by using specialized Android applications.

Web Application

It is a client–server computer program in which the client (including the user interface and client- side logic) runs in a web browser. Common web applications include web mail, online

retail sales, online auctions, wikis, instant messaging services and many other functions. web applications use web documents written in a standard format such as HTML and JavaScript, which are supported by a variety of web browsers. Web applications can beconsidered as a specific variant of client–server software where the client software isdownloaded to the client machine when visiting the relevant web page, using standardprocedures such as HTTP. The Client web software updates may happen each time the web page is visited. During the session, the web browser interprets and displays the pages, and acts as the universal client for any web application. The use of web application frameworks can often reduce the number of errors in a program, both by making the code simpler, and by allowing one team to concentrate on the framework while another focuses on a specified usecase. In applications which are exposed to constant hacking attempts on the Internet, security-related problems can be caused by errors in the program.

Frameworks can also promote the use of best practices such as GET after POST. There are some who view a web application as a two-tier architecture. This can be a "smart" client that performs all the work and queries a "dumb" server, or a "dumb" client that relies on a "smart" server. The client would handle the presentation tier, the server would have the database (storage tier), and the business logic (application tier) would be on one of them or on both. While this increases the scalability of the applications and separates the display and the database, it still doesn't allow for true specialization of layers, so most applications will outgrow this model. An emerging strategy for application software companies is to provide web access to software previously distributed as local applications. Depending on the type of application, it may require the development of an entirely different browser-based interface, or merely adapting an existing application to use different presentation technology. These programs allow the user to pay a monthly or yearly fee for use of a software application without having to install it on a local hard drive. A company which follows this strategy is known as an application service provider (ASP), and ASPs are currently receiving much attention in the software industry.

Security breaches on these kinds of applications are a major concern because it can involve both enterprise information and private customer data. Protecting these assets is an important part of any web application and there are some key operational areas that must be included in the development process. This includes processes for authentication, authorization, asset handling, input, and logging and auditing. Building security into the applications from the beginning can be more effective and less disruptive in the long run.

Web design

It is encompassing many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design; interface design; authoring, including standardized code and proprietary software; user experience design; and

search engine optimization. The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and if their role involves creating markup then they are also expected to be up to date with web accessibility guidelines. Web design partially overlaps web engineering in the broader scope of web development.

Departments and services offered

Varcons Technologies plays an essential role as an institute, the level of education, development of student's skills is based on their trainers. If you do not have a good mentor then you may lag in many things from others and that is why we at Varcons Technologies gives you the facility of skilled employees so that you do not feel unsecured about the academics. Personality development and academic status are some of those things which lie on mentor's hands. If you are trained well then you can do well in your future and knowing its importance of Varcons Technologies always tries to give you the best.

They have a great team of skilled mentors who are always ready to direct their trainees in the best possible way they can and to ensure the skills of mentors we held many skill development programs as well so that each mentor can develop their own skills with the demands of the companies so that they can prepare a complete packaged trainee.

Services provided by Varcons Technologies.

• Core Java and Advanced Java

• Web services and development

• Dot Net Framework

• Python

• Selenium Testing

• Conference / Event Management Service

• Academic Project Guidance

• On The Job Training

• Software Training

CHAPTER 3

INTRODUCTION

3. INTRODUCTION

Introduction to Web Apps

Web applications are similar to the traditional applications you'd install on your Information, such as Microsoft Office. They are able to perform the same kinds of tasks, they look the same and they feel the same but there is one key difference - the application itself is not installed on your phone or Information, but lives in the cloud. Web apps are not new, but it used to be that they were often unable to compete with more traditional applications for business-critical functions or where rich user interaction was required. This is no longer the case. With the power of modern web technologies, we are able to design and build performing, secure, and feature rich applications that live in the cloud and bring with them a huge number of benefits.

1. They can be accessed from anywhere.

- Because web applications are built with web technologies and they run in a web browser Internet Explorer, Google Chrome, Mozilla Firefox – this allows them to be accessed from every web enabled tool. If you have an internet connection you can use them.
- It allows for remote working, it allows for rapid publishing of content, it allows for real time collaboration between teams. If you have web access, you can access your business tools.

2. They are cost effective.

- Web applications are cheaper to produce and maintain than traditional applications. No matter how many platforms your business uses (Mac, Linux, Windows) web application build can be used across them all.

3. They benefit from more rapid update cycles.

- A huge benefit of web applications is that when an update is released, all of your users are immediately using that version. This doesn't happen with installed applications, especially in large organizations with IT policies that restrict administrator access.

4. They are secure.

- Web developers have had to become experts in security – the web is a platform designed to share everything with everyone! As such, the types and levels of security included in web applications are often far greater than those seen in traditional applications.

- They also benefit from the ability to launch updates in real-time – the application on the servers is the application people are using. The applications on people's laptops however are the version last installed. And when those laptops get left on a train it's not a concern, as nothing is stored locally.

5. They enable more computing with fewer Information.

- Web applications push all of the hard work to the servers, and act as intermediaries between the user interface and the calculations happening behind the scenes. This means you can accomplish terrifyingly complex work on a tablet, or your phone.
- We've built web applications that allow people to understand the complex relationships between 250,000 pieces of art on their phones, and applications that run the business systems of one of the largest solar energy providers in the world. Often these products are not financially viable to build using traditional application processes.

Problem Statement

The problem that a words per minute (WPM) website aims to solve is the need for individuals to improve their typing speed and accuracy, which is a critical skill in today's digital world. Many people struggle with slow typing speed, which can be a significant obstacle in work, school, and personal communication. Poor typing skills can lead to frustration, decreased productivity, and missed opportunities.

However, many individuals may not have access to resources that can help them improve their typing skills, such as professional training or tutoring. Additionally, there may be a lack of effective and engaging online resources available for individuals to practice and improve their typing skills.

A WPM website aims to address these issues by providing users with an easily accessible platform to practice and improve their typing skills. The website offers typing tests, tutorials, and resources that are specifically designed to help users increase their typing speed and accuracy. The website can also track users' progress over time, which can be a valuable tool for self-assessment and improvement.

Introduction to Words-per-minute Calculator Website

A words per minute (WPM) website project can be an excellent way to help people improve their typing skills and measure their progress over time. The project could involve creating a website that offers typing tests, tutorials, and resources to help users increase their typing speed and accuracy.

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CHAPTER 4

SYSTEM ANALYSIS

4. SYSTEM ANALYSIS

Existing System

The existing system of a words per minute (WPM) website typically consists of a platform that offers typing tests, tutorials, and progress tracking to help users improve their typing speed and accuracy. But this website provides users with a series of timed typing tests, where users are given a specific amount of time to type a given set of words or sentences. And this website calculates the user's typing speed and accuracy based on the number of words typed and the number of errors made.

Some existing WPM websites may also offer tutorials and practice exercises to help users improve their typing technique and speed. These exercises may include specific drills designed to improve typing accuracy or speed, such as typing exercises that focus on certain letter combinations or typing tests that use increasingly complex sentences.

Additionally, many WPM websites offer progress tracking and analytics tools that allow users to monitor their improvement over time. But this tools typically provide users with detailed reports that show their average typing speed, accuracy, and overall progress over time. Users may also receive feedback and suggestions for improvement based on their performance.

Proposed System

This is a functional website used to calculate the typing speed of an individual. By using the functionalities of MERN full stack which includes HTML, CSS. The WPM website is developed which tracks the speed and accuracy of the user and even stores the user’s details using MongoDB.

Starting with the login and registration page we come to the WPM Calculator Page where a user is provided with multiple options such as the user can change the test time, reload and undo the test and even toggle the keyboard sound. A user will be provided with paragraph that will be generated by the server. By analyzing the performance of the user, a small report will be generated which includes WPM accuracy, raw keys per min (KPM), correct and incorrect characters typed, missing and extra characters typed. A small tip will be provided for the improvement of speed and accuracy.

Objective of the System

- Evaluating a person's proficiency in touch typing: Touch typing is a typing method that involves using all ten fingers without looking at the keyboard. WPM typing tests can help assess how well a person can touch type.
- Measuring a person's typing speed: WPM typing tests can provide a numerical measurement of how many words a person can type per minute. This can be used to compare the typing speed of different individuals or to track a person's progress over time.

- Identifying areas for improvement: WPM typing tests can highlight areas where a person may need to improve their typing skills. For example, if a person consistently makes errors when typing certain letters or words, they can focus on practicing those specific areas to improve their accuracy.
- Providing a benchmark for proficiency: WPM typing tests can provide a standard benchmark for what is considered a proficient typing speed. This can be helpful for employers or educators to determine whether a person has the necessary typing skills for a particular job or course.

CHAPTER 5

REQUIREMENT ANALYSIS

5. REQUIREMENT ANALYSIS

Hardware Requirement Specification

- NODE JS
- VS Code Editor
- Processor: Intel core i5 processer
- Memory: 15.6 GB
- Hard Disk: 40 GB

Software Requirement Specification

A] Functional Requirements

- Every user should be comfortable with basic working of the system
- The time limit function for typing should be implemented
- Effective navigation techniques should be encouraged

B] Non-Functional Requirements

- **Availability**

Availability is the percentage of time in a given period that a system is available to perform its task and function under normal conditions.

- **Accessibility**

The system shall be accessible by people with specific vision needs to the extent that a user shall be able to display whole user interface in a larger font without truncating displayed text or other values.

- **Security**

The access permissions for system data may only be change by the systems data administrator passwords shall never be viewable at the point of entry or any other time.

CHAPTER 6

DESIGN AND ANALYSIS

6. DESIGN & ANALYSIS

The Word Per Minute (WPM) website is designed to provide users with a platform to test and improve their typing speed. The target audience includes students, professionals, and individuals looking to enhance their typing skills for personal or work-related purposes.

The website features a simple and user-friendly interface that allows users to start typing immediately. It includes a timer that starts automatically when the user begins typing and a word count tracker that displays the number of words typed and the corresponding WPM score. Users can select different typing exercises with varying levels of difficulty, and a leader board displays the top scores for each exercise.

To ensure that the website is user-friendly, it has a clean and intuitive design with a responsive layout that adapts to different screen sizes and devices. The website is built using various technologies, including HTML, CSS, JavaScript, and a server-side programming language like PHP or Python. It also uses a database to store user data and track progress over time.

The website was tested extensively to ensure that it performs as intended and meets the design specifications. Usability testing, functionality testing, and performance testing were conducted, and user feedback was gathered to identify areas for improvement.

CHAPTER 7

IMPLEMENTATION

7. IMPLEMENTATION

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification. It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the changeover and an evaluation of change over methods a part from planning.

Two major tasks of preparing the implementation are education and training of the users and testing of the system. The more complex the system being implemented, the more involved will be the system analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

TESTING

The testing phase is an important part of software development. It is the Information zed system will help in automate process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied. Software testing is carried out in three steps:

1. The first includes unit testing, where in each module is tested to provide its correctness, validity and also determine any missing operations and to verify whether the objectives have been met. Errors are noted down and corrected immediately.
2. Unit testing is the important and major part of the project. So, errors are rectified easily inparticular module and program clarity is increased. In this project entire system is divided into several modules and is developed individually. So, unit testing is conducted to individual modules.
3. The second step includes Integration testing. It need not be the case, the software whose modules when run individually and showing perfect results, will also show perfect results when run as a whole.

CHAPTER 8

SNAPSHOTS

8. SNAPSHOTS

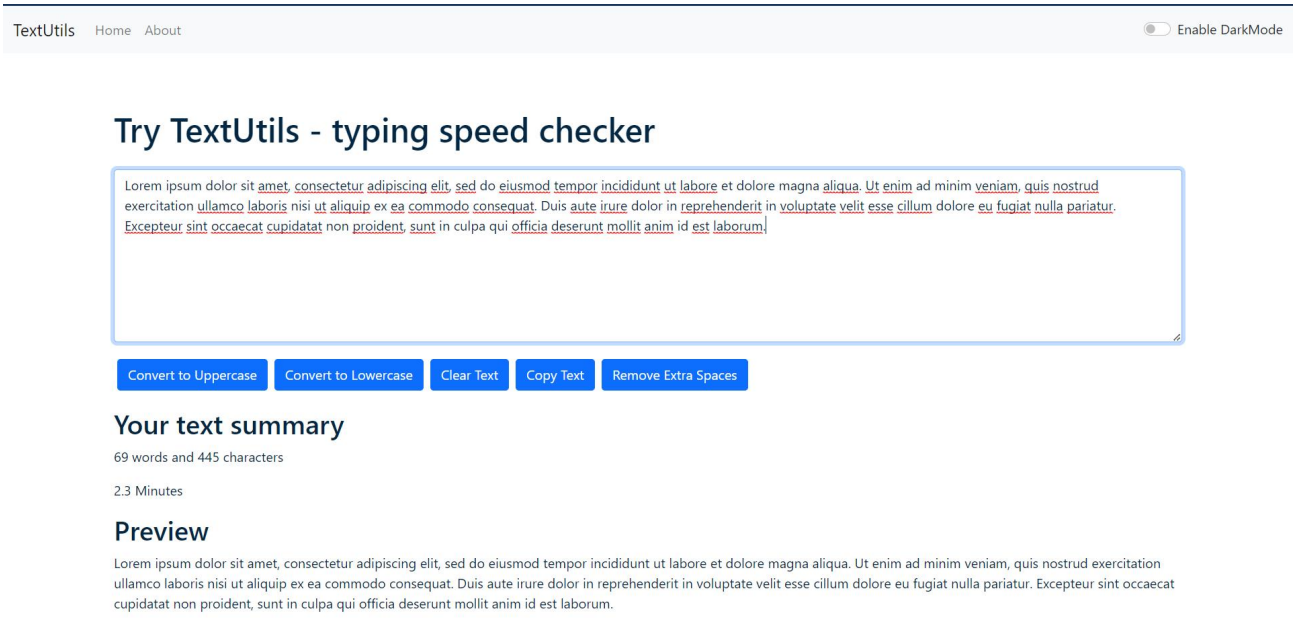

Fig 1: Landing / Home page

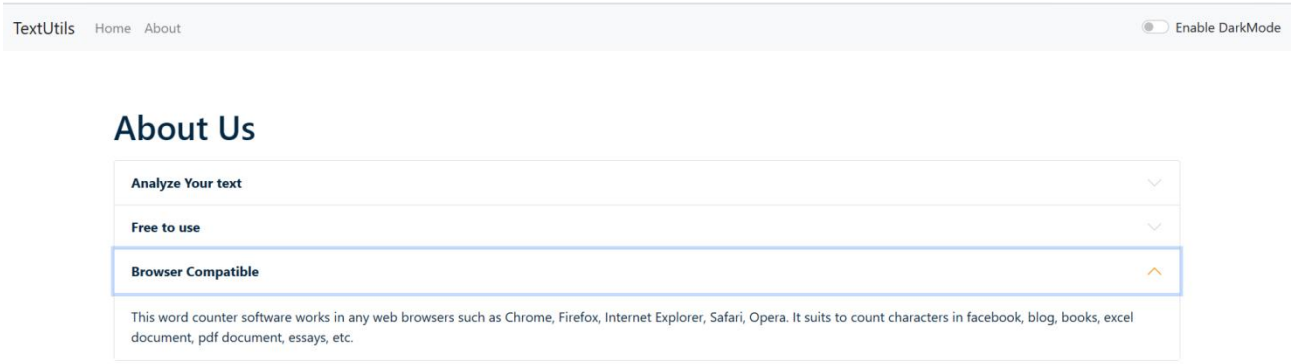

Fig 2: About Us Page

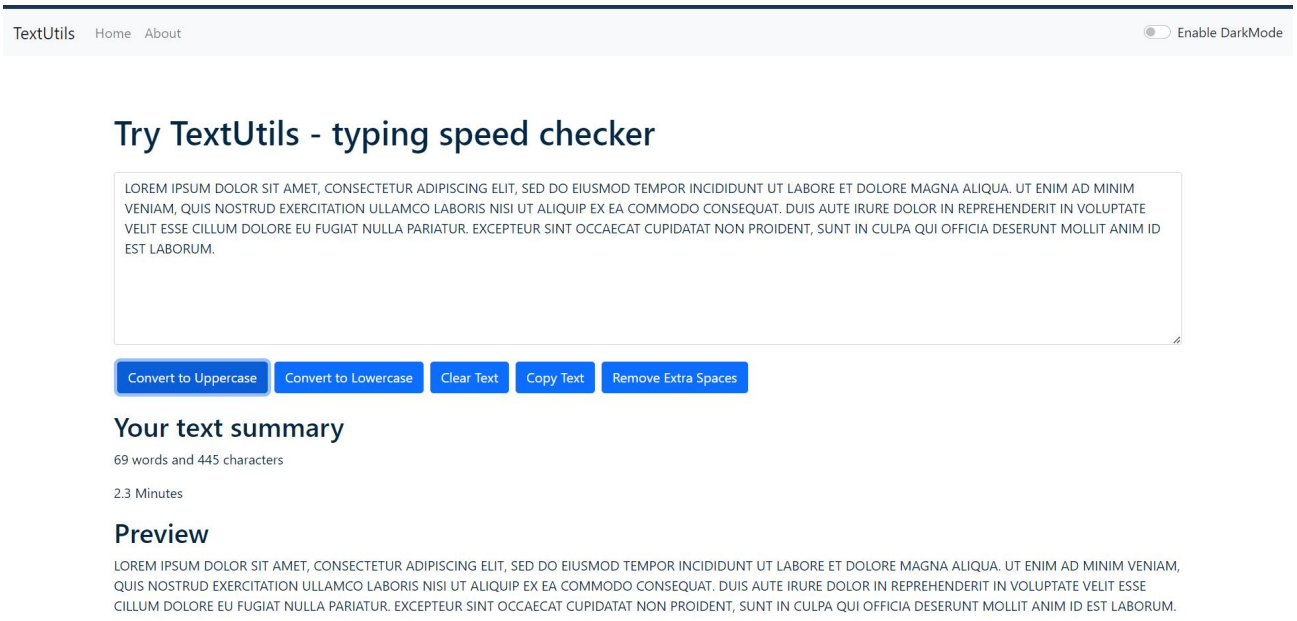

Fig 3: Converting words to upper case along with speed count

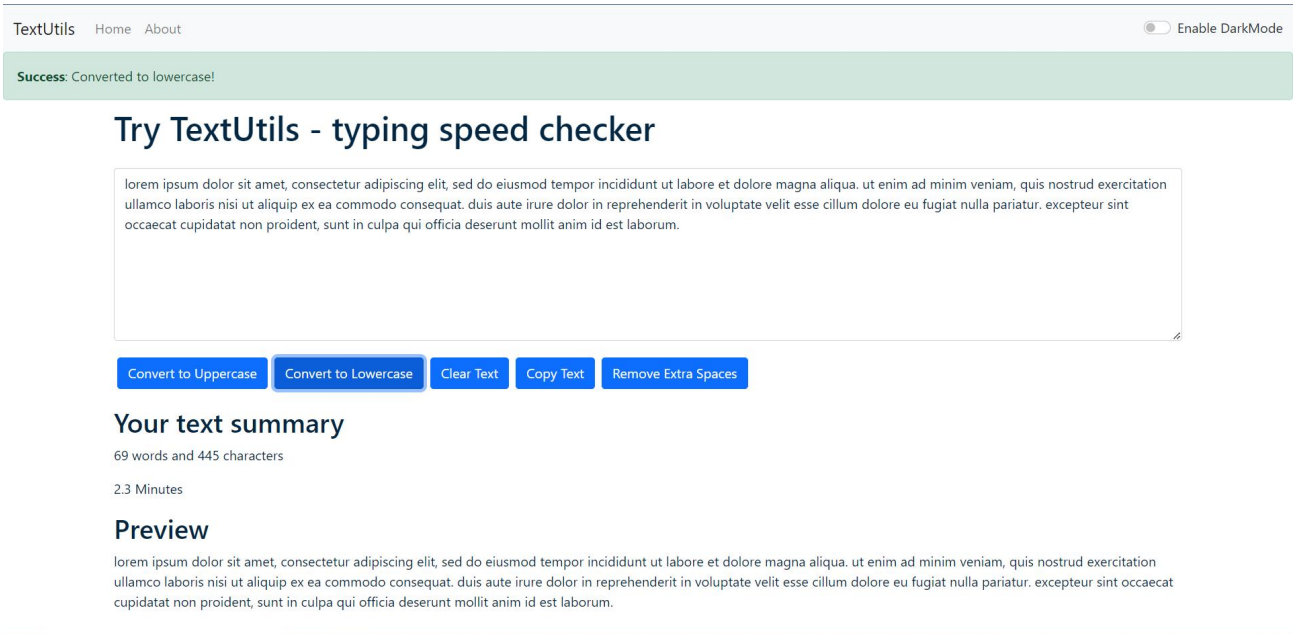

Fig 4: Converting words to lower case along with speed count

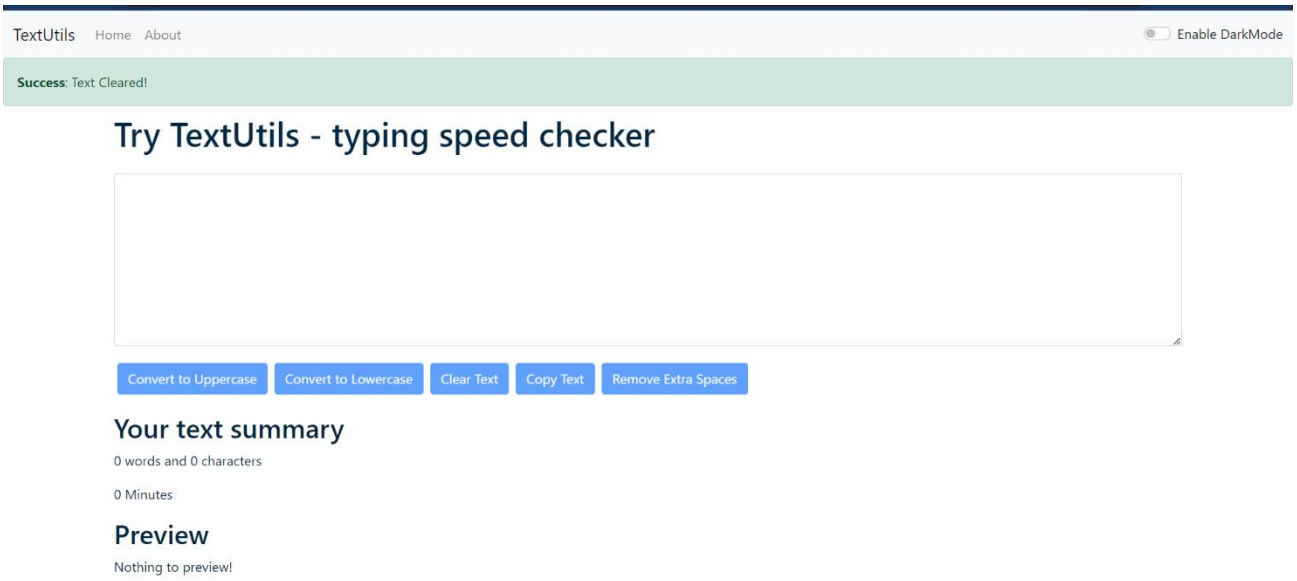

Fig 5. Cleared Text along with speed count

Figma Model for the project:

Please check the below link for the application model:

https://www.canva.com/design/DAFdnBO_Azw/exguxfyhypImyC2H8lgunQ/view?utm_content=DAFdnBO_Azw&utm_campaign=designshare&utm_medium=link&utm_source=publishsharelink

CHAPTER 9

CONCLUSION

9. CONCLUSION

- In conclusion, the development of a words per minute (WPM) website can be a valuable tool for individuals looking to improve their typing skills.
- This website provides users with a convenient and efficient platform to practice their typing speed and accuracy, track their progress, and receive guidance and feedback on their technique.
- The implementation of this project involves various stages, such as planning, designing, development, and testing. Each stage plays an essential role in ensuring that the website is functional, user-friendly, and meets the needs of its users.
- Proper testing is particularly important in ensuring that the website is free of bugs, errors, and security vulnerabilities.
- The use of the MERN stack, which consists of MongoDB, Express.js, React.js, and Node.js, offers a powerful and flexible framework for developing web applications such as a WPM website.
- The MERN stack allows for quick and efficient development and customization, as well as seamless communication between the frontend and backend components of the website.
- Thorough testing is essential for ensuring that the website functions correctly and provides users with a positive experience.
- The testing phases of the project include unit testing, integration testing, acceptance testing, security testing, and usability testing. By following best practices and carrying out thorough testing, we had created a high-quality website that meets the needs of the users.

CHAPTER 10

REFERENCES

10. REFERENCES

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