

PROJECT 1: TYPING SPEED CALCULATOR



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ACKNOWLEDGMENT

We are incredibly grateful to our internship supervisor, for their invaluable guidance and support throughout our internship. From the moment we started, we took the time to get to know and understand our goals for the internship. They provided us with clear direction and expectations .

This project is a source to learn a programming language but also we inculcated many qualities like responsibility ,punctuality , confidence and so on .This is a way to know our intelligence towards making code individually .

The journey of making this project was so nice . We are thankful to the trainer who cleared doubts , the parents also supported us to do this project and our friends too helped us. Through this project we have improved our timings and also it has made our thinking skills better .

A project is a bridge between theoretical and practical learning and with this thinking we worked on the project and made it successful due to timely support and efforts of all who helped us.

Finally, we would like to thank to Certiefy training team for providing the support that enabled us to complete this internship. Without their assistance, we would not have been able to gain this valuable experience.

ABOUT THE COMPANY

Varcons Technologies is a digital service provider that aims to provide software, designing and marketing solutions to individuals and businesses. Varcons offers a wide range of IT Professional Services, providing innovative, customised, and cost-effective End-to-end Product support to the Commercial and Public sector clients. Our certified experts have decades of experience delivering IT solutions to the Public Sector and enterprise.

We are successfully stabilising and modernising the legacy applications. We provide a proven cloud journey from governance, security, and risk to automated deployments. We focus on results, as we help our customers to uncover new possibilities to put them on the leading edge of cloud innovation in their industry.

Specialties:

Professional IT Services, Web and Mobile App Development, Cloud IT Solutions, Cloud Infrastructure Solutions, and Application Performance Monitoring. Services included in Varcons company:

Development - we develop responsive , functional and super fast websites. We keep user experience in mind while creating websites . We develop sophisticated customisable software using Java and other programming languages as per the clients needs.

Mobile Application - We offer a wide range of professional android , iOS and Hybrid app development services for our global clients , from a start up to a large enterprise.

Design - We offer professional Graphic design , Brochure design and Logo design . We are experts in crafting visual content to convey the right message to the customers .

Consultancy - We are here to provide you with expert advice on your design and development requirements .

Videos - We create a polished professional video that impresses your audience

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A BRIEF OVERVIEW ON THE PROJECT

Java is a widely-used programming language for coding web applications. It has been a popular choice among developers for over two decades, with millions of Java applications in use today. Java is a multi-platform, object-oriented, and network-centric language that can be used as a platform in itself.

Java is one of the most popular and widely used programming languages and a platform that was developed by James Gosling in the year 1982. It is based on the concept of Object-oriented Programming. A platform is an environment that develops and runs programs written in any programming language. Java is a high-level, object-oriented, secure, robust, platform-independent, multithreaded, and portable programming language.

Creating Java projects helps sharpen your skills and boosts your confidence as a developer. It provides practical application of theoretical knowledge. Building a portfolio showcasing completed projects empowers you for job interviews, giving you solutions, code, apps, and projects to display to recruiters.

2 . ADVANTAGES AND CHALLENGES

WHILE COMPLETING THE PROJECT

Java is a versatile and powerful programming language that offers numerous advantages, such as an easy learning curve, object-oriented programming, enhanced security, and platform independence. However, it also faces challenges, including performance limitations, licensing costs, and GUI development difficulties

SOFTWARE AND HARDWARE REQUIREMENTS FOR JAVA PROJECT :

Hardware Requirement for Java :

Minimum hardware requirement to download Java on your Windows operating system as follows:

- Minimum Windows 95 software
- IBM-compatible 486 system
- Hard Drive and Minimum of 8 MB memory
- A CD-ROM drive
- Mouse, keyboard and sound card

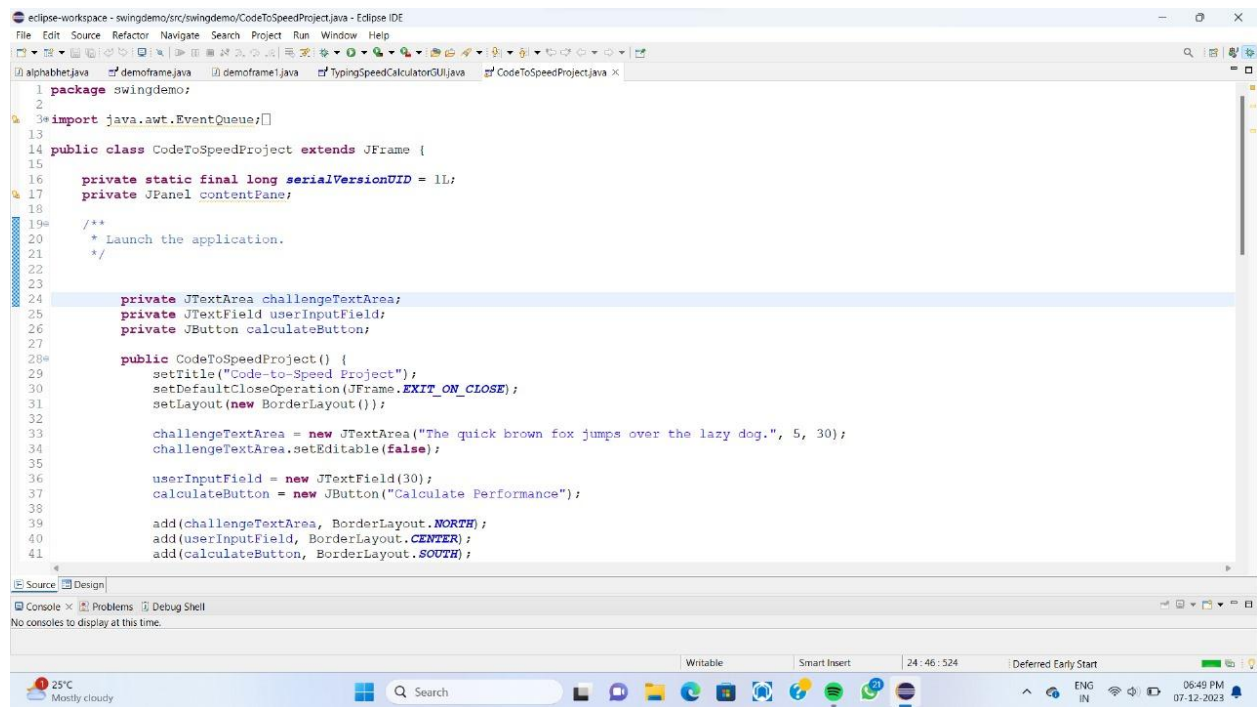
Software requirement for Java :

Nowadays, Java is supported by almost every operating system. Windows, Macintosh and Unix all support Java application development. So you can download any of the operating systems on your personal computer. Here are the minimum requirements.

The software required for the project includes the package necessary to successfully compile and build the program.

- Operating System
- Java SDK or JRE 1.6 or higher
- Java Servlet Container (Free Servlet Container available)
- Supported Database and library that supports the database connection with Java.

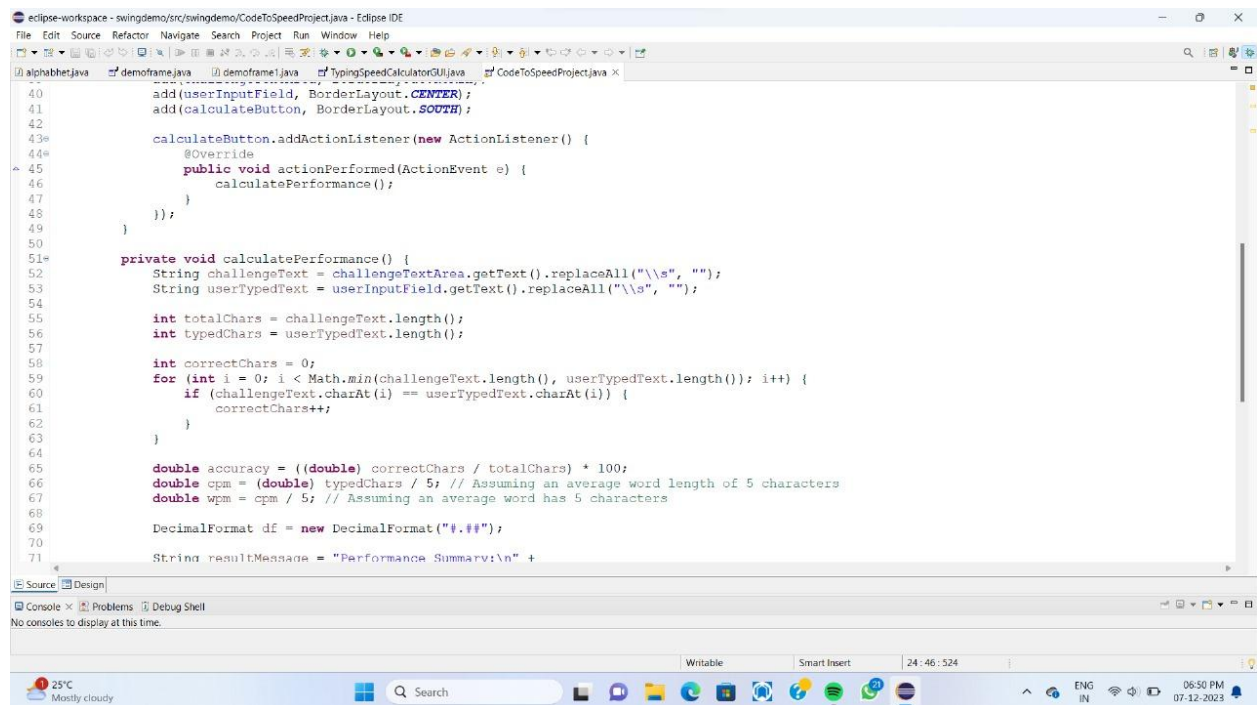
IMPLEMENTATION OF PROJECT:



```

1 package swingdemo;
2
3 import java.awt.EventQueue;
4
5 public class CodeToSpeedProject extends JFrame {
6
7     private static final long serialVersionUID = 1L;
8     private JPanel contentPane;
9
10    /**
11     * Launch the application.
12     */
13
14    private JTextArea challengeTextArea;
15    private JTextField userInputField;
16    private JButton calculateButton;
17
18    public CodeToSpeedProject() {
19        setTitle("Code-to-Speed Project");
20        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21        setLayout(new BorderLayout());
22
23        challengeTextArea = new JTextArea("The quick brown fox jumps over the lazy dog.", 5, 30);
24        challengeTextArea.setEditable(false);
25
26        userInputField = new JTextField(30);
27        calculateButton = new JButton("Calculate Performance");
28
29        add(challengeTextArea, BorderLayout.NORTH);
30        add(userInputField, BorderLayout.CENTER);
31        add(calculateButton, BorderLayout.SOUTH);
32    }
33
34    public static void main(String[] args) {
35        EventQueue.invokeLater(new Runnable() {
36            public void run() {
37                new CodeToSpeedProject().setVisible(true);
38            }
39        });
40    }
41
42    private void calculatePerformance() {
43        String challengeText = challengeTextArea.getText().replaceAll("\\s", "");
44        String userTypedText = userInputField.getText().replaceAll("\\s", "");
45
46        int totalChars = challengeText.length();
47        int typedChars = userTypedText.length();
48
49        int correctChars = 0;
50        for (int i = 0; i < Math.min(challengeText.length(), userTypedText.length()); i++) {
51            if (challengeText.charAt(i) == userTypedText.charAt(i)) {
52                correctChars++;
53            }
54        }
55
56        double accuracy = ((double) correctChars / totalChars) * 100;
57        double cpm = (double) typedChars / 5; // Assuming an average word length of 5 characters
58        double wpm = cpm * 60; // Assuming an average word has 5 characters
59
60        DecimalFormat df = new DecimalFormat("#.##");
61
62        String resultMessage = "Performance Summary:\n" +
63            "Challenge Text: " + challengeText + "\n" +
64            "Typed Text: " + userTypedText + "\n" +
65            "Correct Characters: " + correctChars + "\n" +
66            "Accuracy: " + df.format(accuracy) + "%\n" +
67            "Characters Per Minute (CPM): " + df.format(cpm) + "\n" +
68            "Words Per Minute (WPM): " + df.format(wpm) + "\n";
69
70        JOptionPane.showMessageDialog(this, resultMessage, "Performance Summary", JOptionPane.INFORMATION_MESSAGE);
71    }
72
73 }

```



```

40    add(userInputField, BorderLayout.CENTER);
41    add(calculateButton, BorderLayout.SOUTH);
42
43    calculateButton.addActionListener(new ActionListener() {
44        @Override
45        public void actionPerformed(ActionEvent e) {
46            calculatePerformance();
47        }
48    });
49
50    private void calculatePerformance() {
51        String challengeText = challengeTextArea.getText().replaceAll("\\s", "");
52        String userTypedText = userInputField.getText().replaceAll("\\s", "");
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54        int totalChars = challengeText.length();
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72            "Typed Text: " + userTypedText + "\n" +
73            "Correct Characters: " + correctChars + "\n" +
74            "Accuracy: " + df.format(accuracy) + "%\n" +
75            "Characters Per Minute (CPM): " + df.format(cpm) + "\n" +
76            "Words Per Minute (WPM): " + df.format(wpm) + "\n";
77
78        JOptionPane.showMessageDialog(this, resultMessage, "Performance Summary", JOptionPane.INFORMATION_MESSAGE);
79    }
80
81 }

```



```

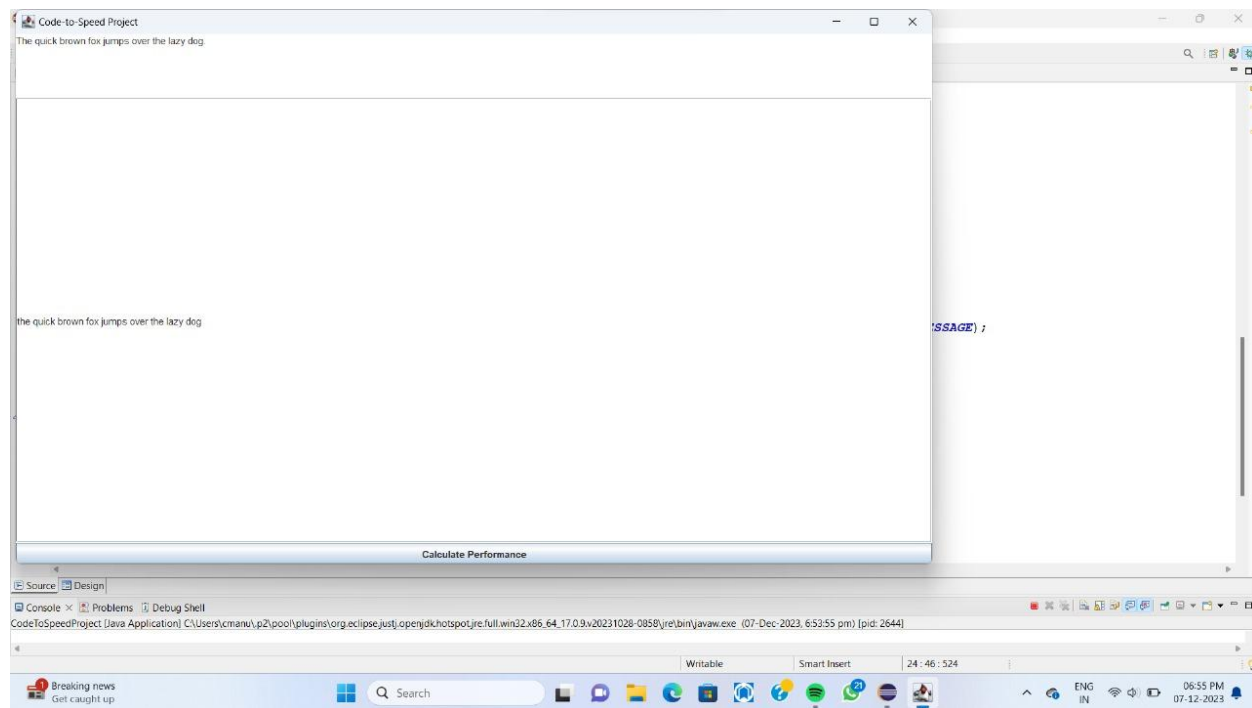
68
69
70     DecimalFormat df = new DecimalFormat("#.##");
71
72     String resultMessage = "Performance Summary:\n" +
73         "Accuracy: " + df.format(accuracy) + "%\n" +
74         "Characters Per Minute (CPM): " + df.format(cpm) + "\n" +
75         "Words Per Minute (WPM): " + df.format(wpm) + "\n";
76
77     if (accuracy >= 90 && wpm >= 40) {
78         resultMessage += "Excellent! Keep it up!";
79     } else if (accuracy >= 80 && wpm >= 30) {
80         resultMessage += "Good job! Aim for higher accuracy and speed.";
81     } else {
82         resultMessage += "Practice more to improve your typing skills.";
83     }
84
85     JOptionPane.showMessageDialog(this, resultMessage, "Performance Results", JOptionPane.INFORMATION_MESSAGE);
86
87
88     public static void main(String[] args) {
89         SwingUtilities.invokeLater(new Runnable() {
90             @Override
91             public void run() {
92                 CodeToSpeedProject codeToSpeedProject = new CodeToSpeedProject();
93                 codeToSpeedProject.setSize(400, 200);
94                 codeToSpeedProject.setVisible(true);
95             }
96         });
97     }
98
99

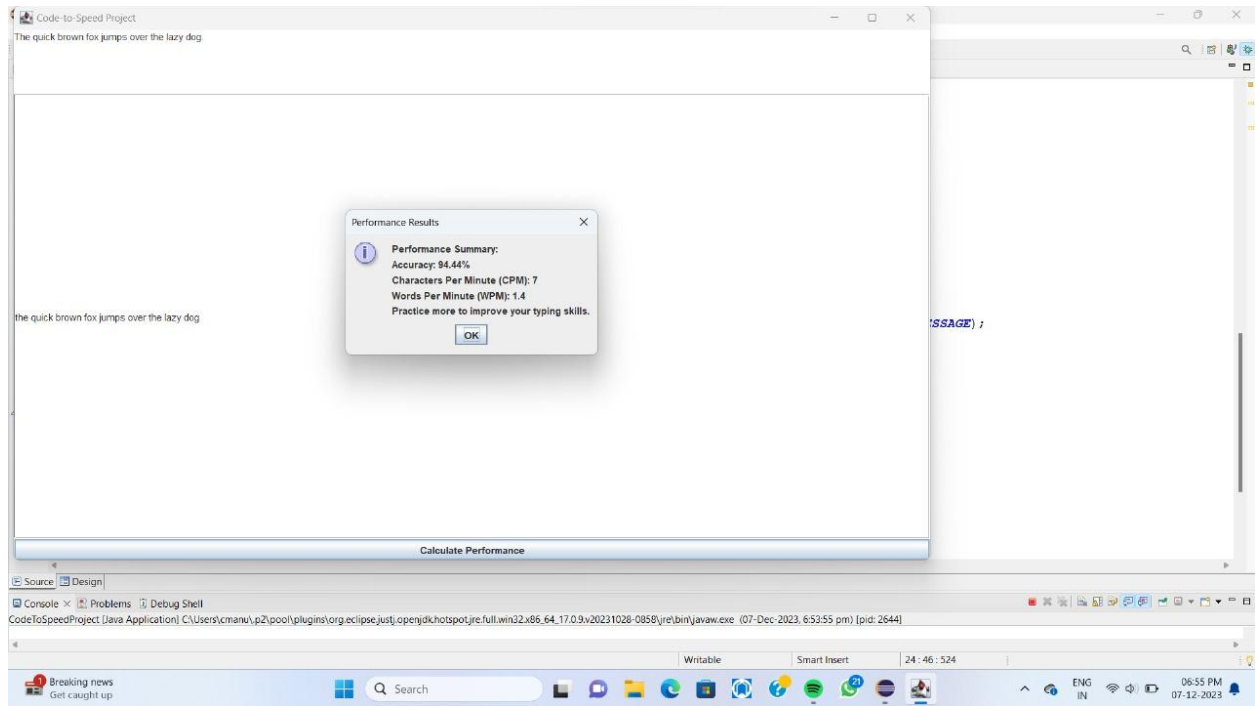
```

swingdemo.CodeToSpeedProject.CodeToSpeedProject
0
Press F12 for focus

Source | Design
Console | Problems | Debug Shell
No consoles to display at this time.

Writable | Smart Insert | 24 : 46 : 524





CONCLUSION:

This internship has been an excellent and rewarding experience. We can conclude that there have been a lot we've learnt from our work at VARCONS. Needless to say, the technical aspects of the work we've done are not flawless and could be improved provided enough time. As someone with no prior experience with varcons whatsoever I believe our time spent in research and discovering it was well worth it and contributed to finding an acceptable solution to build a fully functional web service. Two main things that we've learned are the importance of time-management skills and self-motivation.

BIBLIOGRAPHY:

Java: The Complete Reference, Twelfth Edition, by Herbert Schildt,
November 2021, McGraw-Hill, ISBN:

9781260463422

Reference Books

1. Programming with Java, 6th Edition, by E Balagurusamy,
Mar-2019, McGraw Hill Education, ISBN:

9789353162337.

2. Thinking in Java, Fourth Edition, by Bruce Eckel, Prentice Hall,
2006

(https://sd.blackball.lv/library/thinking_in_java_4th_edition.pdf)

THANK YOU