

MATHWIZ

TEAM MEMBERS: 22PD25,22PD37

ABSTRACT:

"MathWiz" is a web-based application developed in the Java programming language to offer a robust solution to a wide spectrum of mathematical problems. It aims to address problems spanning descriptive statistics, algebra, elementary mathematics, and calculus. This project offers a flexible and approachable framework that helps users resolve a variety of mathematical issues.

FEATURES:

This comprehensive mathematical problem-solving project using Java servlet and JSP can offer a range of interactive features that enhance user engagement and learning. Here are some features that are included in the project:

- It is an interactive and user-friendly interface using Java servlets and JSP, allowing users to input data, equations, and mathematical expressions easily.
- The application is divided into modular sections, each catering to a specific mathematical domain, such as statistics, algebra and elementary mathematics.
- It computes statistical measures like mean, median, standard deviation, and correlation coefficients. It also displays histograms, pie charts, and other graphs to visualize data distribution.
- It generates graphs for the supplied equation and equation solvers

for algebraic and polynomial equations.

- It includes a calculator module for doing simple mathematical operations, and it offers tools for function differentiation and integration.

SYSTEM SPECIFICATION:

Hardware requirements:

- Hard Disk: PC with minimum 2GB
- Inter Core 2 Duo processor or high
- RAM: 3 GB

Software requirements:

- JDK
- IDE: Java EE eclipse for web developers
- Web server: Apache Tomcat
- Front-end: HTML , CSS

Packages required:

- jakarta.servlet
- org.apache.commons.math3
- lang.Math

Github project link:

CONCLUSION:

The user-friendly interface, interactive tools, and dynamic visualizations facilitate a deeper understanding of mathematical principles. "MathWiz" emerges as a comprehensive toolkit for mathematical problems.