Programming Practices Mini Project

Latex Code for Function Calculator

\documentclass{article}

\usepackage{graphicx} % Required for inserting images

\title{Programming Practices MINI PROJECT

\vspace{2mm} Function Calculator\textbf{}}

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\date{30 October 2023}

\begin{document}

\maketitle

\section{Description of Project}

\begin{center}

\Large{Aim\textbf{}}

\end{center}

The function calculator aims at calculating functional values of the functions chosen by the user. The standard calculator performs only simple arithmetic calculations, whereas the scientific calculator is hectic to be purchased and also it is not convenient to use it for a beginner. This calculator simplifies the common operations which are lengthy to be performed on paper.

\vspace{6mm}

\begin{center}

\Large{Utility}\textbf{}

\end{center}

Suppose when performing a complex task or when working on a giant project, if the user needs the values of simple mathematical operations, he/she goes for the calculator. But for performing simple function calculations, generally scientific calculator provides this functionality, which the general public may not have in hand. This calculator can be very easily used in such cases, as it is a feasible solution to this problem.

\vspace{6mm}

\begin{center}

\Large{Why am I designing this?}\textbf{}

\end{center}

I had a more aligned interest towards algebra, especially polynomials. So, I decided to merge the concepts of Algebraic mathematics and programming to create this tool which I think is very beneficial for the users out there. It was my shear interest in both of these subjects.

I also found very high utility of this project.

\newpage\section{Some of the outputs of the Project}

\begin{enumerate}

\item[Example 1.]

I started with selecting "Polynomial" as the function to work on:\\

\vspace{4mm}

\includegraphics[scale=0.55]{Polynomial1.png}

\vspace{4mm}

\\

By entering the coefficients, I got the output: \\

Your polynomial is: $4x^8 + 3x^7 + 2x^6 + 1x^5 + 5x^4 + 6x^3 + 3x^2 + 0x^1 + 3$

\vspace{6mm}

\\

\large Next, I decided to find its value at x = 4: [P.T.O.] \\

\vspace{4mm}

And I got the output as: $$4(4^8) + 3(4^7) + 2(4^6) + 1(4^5) + 5(4^4) + 6(4^3) + 3(4^2) + 0(4^1) + 3 = 322227$$

\\

\includegraphics[scale=0.5]{Polynomial2.png}

\item[Example 2.]

This time, I chose "Logarithm" to work with: \\

\vspace{4mm}

\includegraphics[scale=0.55]{Logarithm1.png}

Further, I selected the function as $\log(x^{1/6})$ and decided to get its graph: \\

\includegraphics[scale=0.49]{Logarithm2.png}

Hence, I printed a link as output which the user "ctrl+click"(ed) on to get redirected to Wolfram Alpha website, which showed his/her required graph, as per his/her selection: \\

\includegraphics[scale=0.6]{LogarithmWAop.png}

\begin{center}

---------X---------

\end{center}

\end{enumerate}

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