Numerical calculator

Authors:

* Marcelino Emad Kadry
* Mark Roby Shafik
* Martina Tharwat Milad

Under Supervision of:

* DR. Rania Ahmed
* DR. Mahmoud Mokhtar
* DR. Nagham Yahya

**Numerical Analysis**

**Why do we use Numerical Methods and Analysis:**

Numerical analysis is the study of algorithms that use numerical approximation (as opposed to symbolic manipulations) for the problems of mathematical analysis (as distinguished from discrete mathematics). Numerical analysis naturally finds application in all fields of engineering and the physical sciences. The growth in computing power has revolutionized the use of realistic mathematical models in science and engineering, and subtle numerical analysis is required to implement these detailed models of the world. For example, ordinary differential equations appear in celestial mechanics (predicting the motions of planets, stars, and galaxies); numerical linear algebra is important for data analysis;[2][3][4], and differential equations are essential in simulating living cells for medicine and biology.

Before the advent of modern computers, numerical methods often depended on hand interpolation formulas applied to data from large printed tables. Since the mid-20th century, computers calculate the required functions instead, but many of the same formulas nevertheless continue to be used as part of the software algorithms.[5]

Numerical analysis continues this long tradition: rather than exact symbolic answers, which can only be applied to real-world measurements by translation into digits, it gives approximate solutions within specified error bounds.

Then we use Web Development (Frontend) to Calculate the numerical analysis easily and faster than past.

**The Languages:**

* Hypertext Markup Language (HTML)
* Cascade Style Sheet (CSS)
* JavaScript (JS)

**The Libraries:**

* **JavaScript Libraries:**

1. jQuery
2. Browser
3. Breakpoints
4. Math
5. Latex

**A screenshot of a computer

Description automatically generated with medium confidenceScreenshots: Graphical user interface

Description automatically generated**

**A screenshot of a computer

Description automatically generated with medium confidence**

**A screenshot of a computer

Description automatically generated with medium confidence**

Graphical user interface

Description automatically generated

**A screenshot of a computer

Description automatically generated**

**Graphical user interface, text

Description automatically generatedA screenshot of a computer

Description automatically generated with medium confidence**

**Graphical user interface

Description automatically generated**