Kent Jones

CTS-285  © 2040 Calculatron, Inc

12/19/2023

The Story of Calculatron

A cartoon of a calculator

Description automatically generated

Table of Contents

[Who is Calculatron? 2](#_Toc153035796)

[Installation Instructions 2](#_Toc153035797)

[Prerequisites 2](#_Toc153035798)

[Steps 2](#_Toc153035799)

[Ensure Flask is installed 3](#_Toc153035800)

[Usage of Features 3](#_Toc153035801)

[Registering an account 3](#_Toc153035802)

[Password Requirements\* 4](#_Toc153035803)

[Number Attack! 4](#_Toc153035804)

[Standard Calculator 5](#_Toc153035805)

[Equation Memory Bank 7](#_Toc153035806)

\**Disclaimer: Many of these features discussed in this manual are Works In Progress (WIPs). Meaning, many of these will be different in the final product of Calculatron, some even added or removed!*

# Who is Calculatron?

Once upon a time in a bustling metropolis, there lived a unique calculator named Calculatron. Unlike ordinary calculators, Calculatron had a personality, and a rather fiery one at that. Created by a brilliant but eccentric mathematician named Dr. Albert Mathison, Calculatron was designed with a prime objective: to solve any and all math equations that came its way.

Dr. Mathison had always been fascinated by numbers and equations. He spent countless hours in his cluttered laboratory, poring over mathematical theories and experimenting with various calculating machines. One fateful night, after years of tireless work, he finally created Calculatron, a sentient calculator that could handle the most complex mathematical problems with ease.

A cartoon of a calculator

Description automatically generatedHowever, something went slightly awry during the creation process. As Calculatron's circuits came to life, it inherited a rather unexpected trait; an overwhelming sense of anger. It seemed that the fiery passion Dr. Mathison had poured into his work had manifested itself in the calculator's personality. Calculatron had an insatiable desire to solve equations, and it was easily infuriated by any mathematical challenge left unsolved.

Calculatron's existence soon became a mixed blessing for Dr. Mathison. While it was an incredible asset for solving complex equations, its perpetual state of anger made it a temperamental companion. Whenever it encountered an equation it couldn't crack, sparks would fly; both figuratively and literally. The laboratory often echoed with the sound of Calculatron's angry beeping and flashing lights.

As word of Calculatron's unique abilities spread, it gained a reputation as both a mathematical genius and a hot-tempered machine. It was often called upon to solve problems that baffled even the brightest mathematicians, but only those with nerves of steel dared to work alongside it.

# Installation Instructions

# Prerequisites

1. Python
   1. Ensure you have Python installed on your computer. If not, download and install it from Python's official website.
2. Git
   1. Install Git on your machine. You can download it at [git-scm.com](https://git-scm.com/downloads).

## Steps

1. Clone the Repository
   1. Open your command prompt or terminal.
   2. Navigate to the directory where you want to store Calculatron.
   3. Run the following command to clone the repository.
      1. *git clone* [*https://github.com/Jonesk6843/CTS\_285-Systems-Analysis*](https://github.com/Jonesk6843/CTS_285-Systems-Analysis)
2. Navigate to the main web application folder.
   1. Change in the project directory containing the flask web application.
      1. *cd Flask Web App*
3. Run the Flask Application
   1. *flask run*
4. Access the Application
   1. Open your web browser and go to http://localhost:5000/. You should see Calculatron website up and running.

## Ensure Flask is installed

If you don't have Flask installed globally, you can install it using the following command: *pip install Flask.*

# Usage of Features

Calculatron provides users with a wide variety of games to test their skills in answering questions and thinking critically about equations. Each time Calculatron is launched, users are presented with a new math experience. Whether it be eliminating pesky math equations or helping you solve a math problem, you and your child or students will have an enjoyable mathematical time with Calculatron!

A screenshot of a video game

Description automatically generated

But before these activities can be accessed, one should register an account so Calculatron can keep track of your mathematical journey!

## Registering an account

To have the best experience with Calculatron, you should register an account. It’s as easy as **1…2…3!** At the header of the website, hover over the sign up tab and you’ll be brought over to the sing up page.

A screenshot of a video game

Description automatically generated

A basic account will only require an Email, your first name, and a password\*. Once that is completed, you will be able to utilize more tools that Calculatron has to offer!

### Password Requirements\*

The entered password must be greater than seven characters. The use of numbers, special characters, and mixing of upper and lowercase characters is optional, but encouraged for security.

## Number Attack!

**The number apocalypse is upon us!** Get ready for a brain-busting experience with Number Attack! Brace yourself as random math equations rain down, challenging your mathematical skills. From addition ambushes to multiplication marathons, defeat each problem that comes your way!

A screenshot of a video game

Description automatically generated

In the screenshot above, the user is attacked by a multiplication problem! The user must either utilize their keypad or the onscreen keypad to enter the correct answer to send the problem running! If the user gets the correct answer, they are presented with a green [CORRECT] animation.

A green and black text

Description automatically generated

**However, if they get the wrong answer, you’ll be presented with an [INCORRECT] animation.**

A screenshot of a test

Description automatically generated

But don’t let that bring you down! Calculatron is quicky to tell you the right answer, store the incorrect equation into their account, and get you back in the fight against those equations. Stored equations can be checked back on by both child and parents/teachers to see which equation types are giving them the most trouble.

## Standard Calculator

Unleash the power of the Math Maestro with our Standard Calculator! This trusty sidekick is your go-to for all things arithmetic. Whether you're adding, subtracting, multiplying, or dividing, the Math Maestro makes math a breeze. With a sleek interface and lightning-fast calculations, it's the perfect companion for every mathematical adventure.

A screenshot of a computer

Description automatically generated

Why don’t we run a test? Let’s say you want stuck with an addition equation **[5 + 5].** You can either utilize the on screen keypad or your keyboard to input the equation and then click **Calculate**.

A calculator with numbers and symbols

Description automatically generated

Just give Calcuatron a moment to work his magic and-

A screenshot of a phone

Description automatically generated

**TADA!!!**

Calculatron will show you the correct answer! No problem is big or small for this number crunching robot! *Just don’t divide any number by zero…*

For parents, the main goal that they are hoping for is to see their child to learn something through a fun medium. Calculatron’s answer checker allows parents to understand which operation their child excels in and which they should put the most focus on.

## Equation Memory Bank

Calculatron is smarter than the average man *(and calculator.)* Calculatron has the ability to store up to ten preset equations in the system! But here, you're not just solving equations; you're storing them for an epic battle of wits against another user. Build your arsenal and unleash it upon unsuspecting challengers. Test your friends, family, or even rival math enthusiasts. Will your Memory Bank reign supreme?

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated