



# Chalkboard Math for Windows™

## Version 1.5

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## **File Menu**

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The menu bar "File" command activates a drop-down menu containing the following commands:

### New Lesson

This command ends the current 20-problem lesson, discards the current score, and begins a new lesson.

If the current score qualifies for the Chalkboard Math Honor Roll, the player will be prompted for his or her name, and that score will be entered into the Honor Roll. If no name is entered, Chalkboard Math will supply a default "Anony-Mouse" nickname.

### Honor Roll

This command displays the current Chalkboard Math Honor Roll standings, listing the top five high scores.

### Clear Honor Roll

This command clears the contents of the current Chalkboard Math Honor Roll.

### Exit

This command closes Chalkboard Math.

When players close Chalkboard Math during a scored lesson, and have accumulated high enough scores to qualify for the Chalkboard Math Honor Roll, they will be prompted to enter their names for recording in the Honor Roll.

## **Options Menu**

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The menu bar "Options" command activates a drop-down menu containing the following commands:

### Scoring Mode

This command toggles Chalkboard Math between its two modes of operation: Scoring Mode and Practice Mode.

When Scoring Mode is on, the program tracks the total number of correct answers recorded during the 20-problem lesson. Two answer attempts are allowed for each problem, with points awarded for correct answers. Points are awarded according to the answer attempt (1st attempt or 2nd attempt) and the current difficulty level. The highest point scores are awarded when playing at difficulty level 8.

When Scoring Mode is off, the program provides practice problems, but does not track correct answers. No scores are kept in Practice Mode; as a result, players cannot qualify for the Chalkboard Math Honor Roll in this mode of operation.

**Note:** When the Scoring/Practice Mode setting is changed during a problem lesson, the current lesson score and problem tally is discarded and reset to zero.

### Auto-Advance

This command toggles Chalkboard Math's Auto-Advance feature on/off.

When Auto-Advance is on (indicated by a checkmark next to the pull-down menu selection), the program automatically increases the difficulty level when five correct answers are recorded at the current level.

When Auto-Advance is off or disabled, the current difficulty level will remain unchanged unless the player adjusts it manually through the menu bar "Options/Difficulty Level" command. Manual control of the current difficulty level is always available.

Auto-Advance is only available when Chalkboard Math is run with Scoring Mode turned on. However, Auto-Advance does **not** have to be on for scores to be tracked and recorded, or for a player's score to be eligible for the Chalkboard Math Honor Roll.

### Music

This command toggles the Chalkboard Math music feature on/off.

Chalkboard Math supports, but does not *require*, Windows-compatible sound cards or other audio hardware. If Chalkboard Math cannot detect any installed audio hardware, the program will play simplified music via the PC case speaker.

## Difficulty Menu

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The menu bar "Difficulty" command activates a drop-down menu allowing manual selection of Chalkboard Math's degree of difficulty.

Ranging from Level 1 (easiest) up to Level 8 (difficult), the menu selections allow the user to "fine tune" Chalkboard Math to accommodate a wide range of mathematical skill levels. Higher point scores are awarded for correct answers at increased difficulty levels.

Red stars "thumb-tacked" to the top-right of the chalkboard frame indicate the current difficulty level.

**Note:** Players are **not** allowed to change difficulty levels while an un-answered problem remains active on the chalkboard. The difficulty menu items are temporarily disabled whenever one of the Math Mode buttons is clicked, and are only enabled again when the displayed problem is answered or a new lesson is requested.

## **Help Menu**

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The menu bar "Help" command activates a drop-down menu containing the following commands:

### Contents

This command launches the Windows Help System and automatically loads the CBMATH.HLP file, which provides run-time help on a variety of topics dealing with the use of this program.

The Windows Help System also provides a quick and easy method of printing selected topics from this Help file via the Windows Help menu bar "File/Print Topic" command, a handy feature that allows you to turn this "manual on disk" into a hard copy reference.

### Registration Information

This command opens a dialog box with general registration information.

A more complete source of registration information is available in the Help System's General Topics "Product Registration" and "Registration Form" selections, accessible from the top-level Contents screen.

Additional registration information is also available in the text file CBMATH.TXT, which may be read and printed with Windows Notepad, or any ASCII compatible text editor.

### About Chalkboard Math

This command displays a dialog box with this program's version number and copyright information.

## **Troubleshooting**

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The following list contains a quick source of information for troubleshooting the overall performance of Chalkboard Math and some of its key features.

[General Program Operation](#)

[Program Set-Up](#)

[Program Start-Up](#)

[Memory Usage](#)

[Disk Space](#)

[Program Features](#)

[Music](#)

[Problem Randomization](#)

[Error Messages](#)

[Chalkboard Math Load Error \(Video\)](#)

[Chalkboard Math File Warning](#)

[Chalkboard Math .INI File Warning](#)

## **Program Set-Up**

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Chalkboard Math's only hard-and-fast requirement is that it be run under Microsoft Windows version 3.1 or later. Although the program supports a mouse or other pointing device and a Windows compatible sound card or other audio hardware, these peripherals are not *required* in order to run the program.

Chalkboard Math requires very little in the way of installation and set-up.

Depending on the version of Chalkboard Math you own, installation can be as easy as simply copying the program files from your master disk to a target directory (e.g., C:\CBMATH) on your hard drive (although Chalkboard Math can be run from a floppy drive, program performance will be greatly reduced; as a result, we *strongly* recommend its installation to a hard drive).

The DOS "Create Directory (CD)" command can be used to create a "home" directory for Chalkboard Math. For instance, "CD C:\CBMATH" would create the directory \CBMATH on your hard drive C:. Commands for creating a directory or subdirectory are always available within Windows File Manager.

There are no hidden files, "key" files, or other forms of copy protection employed by Chalkboard Math. Therefore, you can use the DOS "COPY" command, or the Windows File Manager "File/Copy" command or drag-and-drop commands to copy the files.

You can easily assign the CBMATH.EXE file to a Windows Program Manager group and select for display one of the Chalkboard Math icons embedded in the .EXE file.

The ASCII text files "README.TXT" and "CBMATH.TXT" contain information on preparing a Chalkboard Math directory and copying the required program files. These text files can be read with Windows Notepad, Windows Write, or any DOS or Windows-based text editor or word processor.

See also...

[Disk Space](#) and [Getting Started](#)

## **Program Start-Up**

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Chalkboard Math's only hard-and-fast requirement is that it be run under Microsoft Windows version 3.1 or later. Although the program supports a mouse or other pointing device and a Windows compatible sound card or other audio hardware, these peripherals are not *required* in order to run the program.

Like any Windows application, Chalkboard Math can be run in a variety of ways.

If a Chalkboard Math icon has been properly installed into a Windows Program Manager group, starting Chalkboard Math can be as simple as *double-clicking* on the icon with the mouse pointer. From Program Manager, Chalkboard Math can also be run by *selecting* (single-clicking) the icon with the mouse pointer and then selecting the Program Manager "File/Run" menu bar command.

From Windows File Manager, Chalkboard Math can be run by *double-clicking* on the file "CBMATH.EXE" or by *selecting* (single-clicking) the file with the mouse pointer and then selecting the File Manager "File/Run" menu bar command.

The ASCII text files "README.TXT" and "CBMATH.TXT" contain complete information on getting Chalkboard Math up and running. These text files can be read with Windows Notepad, Windows Write, or any DOS or Windows-based text editor or word processor.

The Microsoft Windows User's Guide is the best source of information for additional questions you may have about loading and/or running Windows applications.

See also...

[Memory Usage](#) and [Using Chalkboard Math](#)



## **Memory Usage**

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Chalkboard Math's memory requirements are relatively small, considering the number of bitmapped images and sound effects that must be loaded into memory when the program is run. Nevertheless, depending on the amount of RAM installed on your machine and the number of other applications you are running at any given time, it is possible that Windows will be unable to set aside enough memory for Chalkboard Math to run.

When this occurs, you may get an "Out of Memory" or "Not Enough Memory To Load Application" message.

If this happens, you may have to close one or more applications to free up the memory needed by Chalkboard Math.

The Microsoft Windows User's Guide contains information on optimizing your available installed memory, as well as configuring some of your available hard disk space as "virtual memory." Whenever a question arises as to how to get the most out of your available hardware, the User's Guide is usually the best place to turn.

See also...

[Disk Space](#)

## **Disk Space**

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The standard Chalkboard Math files require approximately 240,000 bytes of disk space.

While we **do not** recommend deleting any of the installed files, there are a few files that *can* be deleted without handicapping Chalkboard Math's basic functions.

If disk space is at an *absolute* premium, you may delete the following files:

CBMATH.HLP

Chalkboard Math's run-time help file.

CBMATH.TXT

ASCII text file documentation.

README.TXT

ASCII release/version documentation.

CM\_01.MDF - CM\_08.MDF

Chalkboard Math's music data files (required for sound card / audio hardware music support). If these files are missing, you will receive a warning message when starting Chalkboard Math, but the program will still function.

Removing all of the above files will save approximately 60,000 - 70,000 bytes of disk space, but will prevent you from taking advantage of Chalkboard Math's sound card music support, run-time help, and text file documentation. For most users, the disk space saved by deleting non-essential files is not worth the functionality that is sacrificed.

See also...

[Memory Usage](#)

## Music

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Chalkboard Math will auto-detect the presence of any Windows-compatible sound cards or audio hardware. If this hardware is correctly configured for Windows, Chalkboard Math will attempt to make use of it in its music routines. Otherwise, Chalkboard Math will play simplified tunes over the PC case speaker.

If you have a sound card or other audio hardware installed, but Chalkboard Math is not playing its music routines over the connected speakers or earphones, it is very likely that the sound card is not correctly configured for Windows. In this event, you should consult your Windows User's Guide (particularly the sections dealing with Control Panel configuration and music/sound settings) for information on correcting this problem.

Chalkboard Math requires that your Windows MIDI synthesizer be correctly set up. Toward this end, both the Windows User's Guide *and* your sound hardware documentation can be of great use.

**Note:** As a general rule, if waveform (\*.WAV) and MIDI (\*.MID) files can be played via the Windows Media Player accessory, your sound hardware is correctly configured.

## **Problem Randomization**

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Chalkboard Math creates its arithmetic problems using random problem generation routines.

These routines are influenced by two important factors:

### **1. Problem Complexity Ceiling**

The problem complexity ceiling, imposed by the current difficulty level, effectively keeps the "easy" problems easy and the "difficult" problems difficult. This constitutes a "hard" ceiling that Chalkboard Math will *not* violate under any circumstances.

### **2. Repeat-Trapping Functions**

The repeat-trapping functions are a set of safeguards designed to prevent the duplication of problems that may have been displayed earlier in a given math lesson. These trapping functions ensure good variety in the math problems generated, particularly at the higher difficulty levels. The repeat-trapping functions are only absolutely effective over a span of five consecutive problems, and constitute a "soft" ceiling that Chalkboard Math will *occasionally* override in order to maintain a constant flow of problems.

Usually, these two factors work together to maintain a constant, consistent stream of challenging math problems throughout any Chalkboard Math lesson. At the lowest difficulty levels, however, the problem complexity ceiling can be so low that the repeat-trapping functions cannot *absolutely* prevent problem duplication in a given lesson.

As a rule of thumb, if problem variety is the *top* priority, Chalkboard Math should be run at difficulties of Level 3 or higher.

## **Load Error (Video)**

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Chalkboard Math 1.5 requires a minimum video resolution of standard VGA (640x480) or higher in order to run.

Video resolutions below 640x480 do not offer a high enough resolution for the Chalkboard Math interface screen and animation routines. If you attempt to start Chalkboard Math on a system not equipped or configured for VGA or higher, Chalkboard Math will post a video error message and abort.

**Note:** Many video cards offer utilities for changing the video resolution setting during a Windows session, without having to close Windows or reboot. We do not recommend leaving Chalkboard Math active while the Windows video settings are changed in this manner.

## **File Warning**

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Chalkboard Math auto-detects the presence of all its required support files whenever it is run. All of these files must be located in the same directory as the main program file (CBMATH.EXE). If they are not found, Chalkboard Math will post a warning message to this effect, but will continue to run.

Depending on the actual files that are missing, certain features (run-time help, music routines, etc.) may not be available.

You can always check the contents of the Chalkboard Math directory against the file lists provided here and in the CBMATH.TXT file. If any files are missing, simply copy them from the program master disk to the Chalkboard Math directory.

See also...

[.INI File Warning](#) and [Disk Space](#)

## **.INI File Warning**

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Chalkboard Math auto-detects the presence of its initialization file (CBMATH.INI) whenever it is run. This file contains configuration information and all entries in the Chalkboard Math Honor Roll, and must be located in the same directory as the main program file (CBMATH.EXE). If it is not found, Chalkboard Math will post a warning message to this effect, and will automatically replace the missing file with a new, blank CBMATH.INI.

If this file is ever accidentally deleted, it is best to simply run Chalkboard Math and let the program itself create a replacement file. Bear in mind, though, that the new CBMATH.INI file will not contain any entries or high scores in the Chalkboard Math Honor Roll.

See also...

[File Warning](#)

## Introduction

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Chalkboard Math for Windows (1.5) is an easy-to-use math tutor program for the Microsoft® Windows™ operating environment.

Chalkboard Math was designed to be fun and easy to use -- educational software that sharpens elementary math skills, but still "feels" like a game to the user.

In addition, the program is a fun way of making young children comfortable with computer use. The program interface uses oversized text and extra-large pushbutton controls to make its operation easy; a number of pushbutton safeguards make it difficult to press the "wrong" button at the "wrong" time.

The program's detailed animation sequences -- involving a pesky mouse loose in the classroom and an articulated chalkboard-drawn "happy face" -- are sure to delight young users and keep them motivated!

**Hint:** Speaking of delight and motivation, rumor has it that the happy face has a ticklish nose!

Progress through a given Chalkboard Math lesson can be extended across up to five different difficulty levels. A player's performance can be measured via a Scoring Mode option, in which correct answers are tracked and difficulty levels are automatically adjusted.

Chalkboard Math may also be run in Practice Mode, allowing pressure-free practice at any level of difficulty.

**Note:** Chalkboard Math can be used by children to sharpen math skills on their own, but the program is even **more** valuable when used by an adult and child together. We strongly recommend this "team" approach, particularly when Chalkboard Math is introduced to a young user for the first time.



## **Getting Started**

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Before running Chalkboard Math, you should make sure that the following files are all present in the same drive and directory: CBMATH.EXE, CBMATH.INI, CBMATH.HLP, and CM\_01.MDF - CM\_08.MDF. The ASCII text files, README.TXT and CBMATH.TXT, are useful sources of program information, but are not necessary for running the program.

You can run Chalkboard Math by selecting and "double-clicking" its listing in Windows File Manager or its assigned icon in a Windows Program Manager group. Chalkboard Math can also be run from File Manager or Program Manager's menu bar "File/Run" command.

When run, Chalkboard Math presents the player with a blank chalkboard area in which elementary math problems are drawn, answered, and evaluated. The white status window just under the chalkboard displays information on whether the most recent answer was correct or incorrect, and the player's current score.

### **Using a Mouse**

The mouse is used to move the pointer (arrow) across the Chalkboard Math screen and to select menu items or window buttons.

Using the **mouse** and the **window buttons**, the user can:

- 1) Select what type of math problem the program will display next.
- 2) Enter an answer to the current math problem.
- 3) Erase the current answer and enter a new one.
- 4) Check the answer to see if it is correct.

Please note that some program window pushbutton controls are disabled at times, and cannot be selected.

### **Using a Keyboard**

For users who do not have a mouse or other pointing device, or simply prefer to use the keyboard, the following keyboard "short-cut" commands are available:

Numeric Keypad + key ("Add" button) - Generates addition problem.  
Numeric Keypad - key ("Minus" button) - Generates subtraction problem.  
Numeric Keypad × key ("Times" button) - Generates multiplication problem.  
Numeric Keypad ÷ key ("Divide" button) - Generates division problem.

Keyboard number keys 0-9 or Numeric Keypad keys 0-9 are used for entering answer numbers.

Keyboard "B" ("Back" button) - Erases the current answer and allows the user to start over.  
Keyboard "G" ("Go" button) - Enters the current answer and tests to see if it is correct.

Please note that when a program window pushbutton control is disabled, its corresponding keyboard command is disabled as well.

**Note:** For full use of the numeric keypad, your keyboard's "NumLock" feature must be turned on.

See also...

[Program Set-Up](#) and [Program Start-Up](#)

## Using Chalkboard Math

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A Chalkboard Math lesson is comprised of twenty elementary math problems created at random. The player controls the *type* of problem (addition, subtraction, multiplication, or division) as well as the *degree of difficulty* (levels 1-8).

To begin, the player simply moves the mouse pointer to one of the four problem mode buttons located along the left side of the window display. When "clicked," these buttons create a new problem based on the selected operation and draw it to the chalkboard. Players can also select a problem mode by pressing the keyboard's numeric keypad keys (+, \*, /).

Once a new problem is drawn, the player is given two attempts to provide the correct answer. A player may also skip the current problem by clicking one of the Math Mode buttons again.

Answers are entered by clicking the numbered buttons (0-9), which draw an answer on the chalkboard (from left to right) in the appropriate location. The keyboard or numeric keypad number keys can also be used for entering an answer.

If a mistake is made while entering an answer, clicking the "BACK" button or pressing the keyboard "B" key will erase the current answer and allow the player to start over.

Chalkboard Math checks the entered answer when the "GO" button is clicked or the keyboard "G" key is pressed, and notifies the player if the answer is correct or incorrect.

Two answer attempts are allowed per problem. Chalkboard Math will prompt the user to try a second time if the first answer is incorrect.

Score updates are provided in the large status window just under the chalkboard. If answers on both the first and second attempts are incorrect, both the problem and its correct answer are shown in the status window.

The "LED" bar display located just below the chalkboard tracks the total number of problems given in the current lesson. When the 20th problem has been completed (or skipped), the player will be prompted to start a new lesson.

See also...

[Options Menu](#)

## **Product Support**

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If you have a problem with Chalkboard Math, and can't find the answer in the Help System or text file documentation, you can contact Pegasus Development's Tech Support Hotline (courtesy of Advanced Support Group, Inc.) by telephone Monday through Friday from 9:00 a.m. to 5:00 p.m. C.S.T.

Our number is: (314) 965-5630.

Please be prepared to furnish us information regarding your PC hardware, operating system, and version of Microsoft® Windows™ you are currently running.

And, if you manage to stump us, we can usually get back to you within a day with a solution.

## **Limited Warranty**

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Before release, our applications software is tested on a wide variety of hardware configurations, under the most rigorous test conditions possible. We therefore warrant that the software will perform in substantial compliance with the specifications set forth in this text and in the accompanying text file, provided that the software is used on the computer hardware and operating system(s) for which it was designed.

Pegasus Development makes no other warranties, expressed or implied, with respect to this software (or media, if registered), including its quality or fitness for a particular purpose.

In no event will Pegasus Development be liable for any direct, indirect, special, incidental, or consequential damages arising from the use of or the inability to use this software, even if Pegasus Development has been advised of the possibility of such damages.

Pegasus Development is not responsible for any costs including, but not limited to, those incurred as a result of lost profits or revenues, loss of time or use of the software, loss of data, the cost of recovering software or data, the cost of substitute software, claims by third parties, or similar costs. In no event will Pegasus Development's liability exceed the amount of the paid registration fee.

## **Product Registration**

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Chalkboard Math is shareware, not freeware. Product registration is necessary if companies like ours are to continue providing quality software for the shareware marketplace.

Registered users receive the registered version of this product (available in 3.5" or 5.25" disk formats).

Registered users also receive advance notice of upcoming Pegasus Development releases, including upgrades to Chalkboard Math. Registration entitles you to a substantial discount when ordering a program upgrade -- often as much as 50% off the standard registration fee.

Finally, as a registered user, you can qualify for free beta copies of upcoming program releases, giving you the chance to "test drive" versions of exciting new programs months before their official release dates.

**Note:** All credit card registrations are handled by Advanced Support Group, Inc., and will appear on your statement as "ASG, Software - Services."

The Windows Help system you are using has a convenient feature for printing any topic or topics from this file. This feature may be used to print individual topic screens for reference -- or for easy printing of the Registration Form included in this Help file (see "Registration Form" section). To use this feature, select the desired topic from the Help Contents screen (or browse forward until it appears on the screen). When the topic of your choice appears, click the Windows Help menu bar and select "Print Topic." Windows Help will prompt you for instructions.

Complete registration information is also provided in the enclosed text file, CBMATH.TXT.

**Registration Form**

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Please return this form along with your remittance to:

Pegasus Development  
Chalkboard Math 1.5 Registration  
11900 Grant Place  
St. Louis, MO. 63131  
U.S.A.

You can also register by telephone using your credit card through  
Advanced Support Group's software order line: 1-800-788-0787.

\_\_\_\_ Chalkboard Math Registration(s) @ \$16.00 U.S. each

Orders outside the continental U.S., please add \$2.00 shipping  
and handling -- checks and money orders must be drawn on a U.S.  
bank.

Total enclosed . . . . . \$\_\_\_\_\_

Payment by:

Check     MasterCard  American Express  VISA

Card # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Signature of Cardholder \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State / Province \_\_\_\_\_

Zip / Postal Code \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) \_\_\_\_\_

Disk Size/Format Required:  3.5" (720 K)     5.25" (360 K)

Please indicate where you obtained this version of Chalkboard Math:  
(Mail Order, BBS, etc.) \_\_\_\_\_

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## About Chalkboard Math

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**Chalkboard Math** (1.5) was written for use in the Microsoft® Windows™ operating environment (versions 3.1 and higher).

We at Pegasus Development hope you enjoy this program and find it useful. We encourage users to contact us and let us know what they like, or don't like, about our applications. Customer comments and suggestions represent an important, and highly valued, source of ideas.

For further information about this product, please contact:

### **Pegasus Development**

Product Information  
11900 Grant Place  
St. Louis, MO. 63131  
U.S.A.



## **Chalkboard Math for Windows Version 1.5**

**P E G A S U S   D E V E L O P M E N T**

Concept, Design, and Programming:  
Matthew Taylor Smith

This program is dedicated with love and respect to Mrs. Bettie Brakebill, whose talents in and out of the classroom have consistently re-defined the title "teacher" and who continues to educate, enlighten, and inspire everyone whose lives she has touched.

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