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## **About NimSim**

NimSim is a shareware game developed by Art & Darcy Araya of DARTCY productions. It is an adaptation of the mathematical game Nim. Nim is one of the oldest of all two-person mathematical games.

<u>Click here</u> for a detailed history of the development of Nim-playing computer programs.

I would like to dedicate NimSim to my two children, Heather & Josh. We played many a game of Nim using sugar packets while waiting for our meals in restaurants. Thanks guys for helping me to become a *Nim Master*.

# **How To Play**

In this exciting game, you and the computer take turns removing marbles from the table. The player who removes the last marble from the table is the loser. At the start of the game there are five rows of marbles. During your turn you may remove any number of marbles from one of the rows. You must remove at least one marble on every turn; you cannot skip your turn. The computer will then make its move.

Please note that this explanation is only valid for the default setup. The number of rows can change as can whether the taker of the last marble is the winner or loser of the game. These items and more can be configured from the Options Menu.

## **How To Remove Marbles**

First, select the desired marbles by clicking on them with the left mouse button. You will notice that a border appears around the marbles as you select them. If you change your mind about a selection just click on the marble again and the border will disappear. You can also select more than one marble by dragging the mouse until the desired marbles are enclosed in the bounding box. After you have selected all of the marbles that you wish to remove, right mouse click anywhere on the game table. All the marbles which have borders around them will then disappear.

\*Note: The status bar will provide you with step-by-step assistance during the course of the game.

# **Menu Options**

## **Actions Menu**

## **Switch Sides**

Force the computer to make the next move.

### Take Back Last

Resets the marble layout to the state it was in before your last move.

## Take Back All

Resets the marble layout to the state it was in at the beginning of the game. This menu option is the only way to replay a game if you are in the Random Layout mode.

#### Hint

Shows you a winning move, if one exists.

## **Options Menu**

## First Move

This menu option allows you to select who makes the first move, you or the computer.

### Layout

Choose from three sample layouts; 2-3-4, 3-4-5, or 1-2-3-4-5. These numbers represent how many marbles will appear in each row. For example, in the 2-3-4 layout there will be two marbles in row one, three marbles in row two, and four marbles in row three. In the random layout, anywhere from 2 to 30 marbles will be randomly positioned among five rows. The custom layout option allows you to create any layout of your choosing. Your custom layout must not have more than 5 rows, and each row must not have more than 6 marbles. When specifying a layout the dashes are optional. For example, you could enter either 6-4-2-1, or 6421.

## Last Marble

Historically, Nim and its derivative games have been played with the taker of the last marble being the loser. This option allows for the interesting twist of the last taker being the winner.

## Difficulty

Playing at its highest level, *Nim Master*, NimSim plays flawlessly. That is, given a game board position that is winnable, NimSim will find and make the winning move. Well, this is certainly frustrating to play against, especially if you are a child attempting to learn the game. Therefore, NimSim offers two easier levels, *Child*, and *Adult*.

### Marbles...

Choose from a large variety of marbles of different colors and styles.

# **How To Register**

NimSim is shareware. If you wish to keep this game, you need to register it. To register your copy, send the paltry sum of \$5.00 U.S. dollars to:

DARTCY Productions P.O. Box 714 Carmel, NY, 10512 USA

You will find a registration form called REGISTER.TXT in the same directory as NimSim, which can be viewed and printed from any text editor. Please fill out this form and send it along with your registration fee.

Registering will provide you with free upgrades to any future upgrades of NimSim as well as to unlimited free technical support. Most importantly, registering will give you that warm fuzzy feeling you get when you know you've listened to your conscience and done the right thing.

Once you register you will be sent a version without the various registration reminders. This new file will be sent to you electronically. You will need to have a way to accept files mailed to you electronically. At the low registration fee of \$5.00, I cannot afford to mail out the upgrade. If you need to have the file mailed to you, add an additional \$2.00 to cover the cost of diskette and mailing. **Updates will be mailed only to locations within the continental United States.** 

Thanks for your support!

# **Nim History**

Nim possibly originated in China. Children play it with bits of paper, while adults can be found playing it with coins on the counter of a bar.

Nim was given its name by a Charles Bouton who named it after an archaic English word meaning to steal or to take away. Bouton was an associate professor of mathematics at Harvard University. In the year 1901 Bouton published a full analysis and proof containing a winning strategy for Nim. His strategy was based on the binary number system. Since the native language of a computer is based on the binary system, the creation of a Nim-playing computer was inevitable.

The first Nim-playing computer, called the *Nimatron*, was created in 1940. This **one ton** machine was built by the Westinghouse Electrical Corporation and was exhibited at the New York Worlds Fair. It played 100,000 games against spectators and attendants, and won an impressive 90% of the games. Many of the loses came at the hands of the attendants who had to show the incredulous spectators that the *Nimatron* could be beaten.

In 1951 a Nim-playing robot, called *Nimrod*, was exhibited at the Festival of Britain, and later at the Berlin trade fair. The machine was so popular that spectators entirely ignored a bar at the other end of the room where free drinks were being offered. Eventually the local police had to be called in to control the crowds.

There are many games derived from, or closely related to Nim. Two of the more notable ones being Tac Tix, and Match 23. Those of you who become *Nim Masters* and desire more of a challenge should look into Tac Tix (a.k.a. Nimbi).

NimSim is the first Nim-playing program for Windows that I have ever encountered. I will be very pleased if this version generates as much excitement as its predecessors... <Grin>

A word of thanks and acknowledgment must go to Martin Gardner who provided much of this historical account in his highly interesting book <u>Hexaflexagons and other Mathematical</u> <u>Diversions.</u>

# **System Requirements**

NimSim requires the following:

386/20 mHz 4 meg RAM 305 kb Hard Disk space free 256-color capable video card and monitor Microsoft compatible mouse MS Windows 3.1 or greater

# **Troubleshooting**

Problem #1 - "File Not Found" error message at startup.

Solution - Refer to the read me file for the list of required files and correct installation procedure.

Problem #2 - Marble images don't look good.

Solution - NimSim requires a minimum 256-color video resolution.

If you are experiencing a different problem, contact us at:

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E-mail address:

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compuserve: 104336.1735@compuserve.com ISP: DARTCY\_productions@juno.com

Internet: http://members.aol.com/dartcypro/

# Other Games from DARTCY productions

Be sure to check out our other freeware and shareware games. All of these are available on CompuServe and America OnLine. If you have difficulty locating any of these, just e-mail us and we will point you in the right direction.

Cribbage Squares - A fun new solitaire game based on cribbage scoring rules.

Cals Brain Strain - A solitaire game based on the classic, Broken Intervals. This card game is the king of skill requiring solitaires. Cals Brain Strain has received highly flattering reviews from both Ziff-Davis publishing and WinOnLine magazine and will soon be available on several CD-ROM collections.

FreeJack - A freeware version of Black Jack. Double Down, Split the Pair, and Insurance features are included. Professional black jack advice is available via a Hint feature. Best of all, you cant beat the price!

Codebreaker - A logic game based on the game MasterMind. Try to crack the computers secret color code within ten guesses. Codebreaker is another freeware game of ours!

## **Legal Stuff**

#### **NIMSIM**

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# **Help on Life**

Help files are great! Whenever you need a bit of information or assistance, it is only a click away. Do you wish that life came with a help file? When ever you were stuck,...click...you could get some help? Ahhh, that would be great you say.

Well, we at DARTCY productions believe that there is such a help file. We have personally tested it and its Author for over 30 years collectively. To date, we have not found any bugs except those that are user generated. Because we have found it to be a very reliable source of help, we want to share it with you. If you come across an awesome "Freeware" program you just have to share it with others!

We all come across situations that generate the questions: How do I deal with this? What is going on here anyway? What is the purpose of my life? This help file for life deals with those questions & more! More importantly, you will have a new dimension added to your life by having your relationship with your Creator restored! There is nothing more exciting than cultivating that relationship! It is not old time religiosity, it is more like ...adventures with God!

Tell me more about this help file.

# More about the help file for life.

The Bible has 66 different books, written by at least 39 different authors over a period of 1500 years. Yet it all fits together and makes sense about God. Different people for over 2000 years have found that God speaks to them through the pages of the Bible. (That is amazing!) What is also amazing, is that when we compare our modern version of the Bible to the ancient scrolls archeologists dig up, they say the same thing! Imagine that! Just think of the game telephone you know... you start at the front of a line and whisper a secret, it is then passed down to the end and when the last person speaks it out it barely resembles what it originally was! That alone proves it took divine intervention to keep the message straight!

Which version should I read?

Where is a good place to start?

# Which version should I read?

There is no magic in a particular version, get a version that is easy for you understand & examine it yourself! Ask the Author for help as well! (That is true On-line Help!)

# Where is a good place to start?

You do not have to start from the beginning and read to the end. It is less of a novel and more of a handbook. We enjoy the Gospel of John as a starting point in the New Testament.