## Ada Towers

Ada Towers is a solitaire card game. The main difference between Ada Towers and regular solitaire is that all of the cards are visible and cards can only be placed on top of cards of the same suit.

See the following subtopics for more information:

About Ada Towers<br>Rules for Playing Ada Towers<br>User Interface Controls<br>Moving Cards<br>Setting Options<br>Selecting Different Card Backgrounds

## Rules for Ada Towers

The objective of the game is to move all 52 cards, in the least number of moves, to their suit towers in ascending order. (i.e. Ace, 2,3 ...)

A row consisting of 8 towers (stacks of cards) is displayed along the top of the window. The left 2 and the right 2 towers are suit towers, one for each suit, onto which cards are automatically moved as they are freed (no other card is covering them). The middle 4 towers are "holding" towers onto which a player can move cards in order to free other cards. The cards are dealt to the 10 playing towers at the start of the game.

All 52 cards are dealt to the 10 playing towers with 5 cards in each tower and the last 2 cards are placed onto two of the holding towers. Cards are automatically moved onto the suit towers as they become uncovered. To uncover a card, you can move it onto another card or move it to one of the holding towers. To move a card onto another card, it must be of the same suit and it must be in descending sequential order. For example, you can only move the 8 of clubs onto the 9 of clubs. If all cards are moved from a playing tower so that it is empty, you can move a king (only a king) onto the empty playing tower.

You can move multiple cards at the same time if they are in descending sequential order and of the same suit. Also, in order to move multiple cards, at least one of the holding towers must be empty. For example, if 2 of the holding towers are empty then you can move up to 3 cards at one time. If all 4 of the holding towers are empty, then you can move up to 5 cards at one time. If all 4 of the holding towers are filled, however, then you can only move 1 card at a time.

To win the game, you must get all 52 cards onto the suit towers. Ada Towers keeps track of the number of moves that you made. Your score is determined by the number of moves made in conjunction with the difficultly rating of the game.

## User Interface Controls

Ada Towers is controlled by using the buttons at the bottom of the window. Pressing a button or the letter in parentheses selects that operation.

The buttons are:
New Game (N) - starts a new game. If you select this button while in the middle of a game or after you have made a move, your current game will be considered lost. This is the only way to lose a game. If you are in the middle of a game and press the New Game button a dialog box will pop-up asking if you really want to lose the game. This confimation prevents accidentally starting a new game.

Restart (R) - takes you back to the current game as it existed when it was first started. This is useful if you have gotten into a difficult situation and you want to go all the way back to the beginning of the game. Your current number of moves will not be reset by restarting a game. If you have chosen to play with the Undo Penalty on, your move count will increase by 10 .

Undo (U) - undoes the last move that you made. If any automatic moves were made as a result of your last move, they will be undone also. Undo only works for the current session. If you exited Ada Towers in the middle of a game and restarted Ada Towers you will only be able to undo to the state that the game was in when you quit. If you have chosen to play with the Undo Penalty on, your move count will increase by 2 each time you press the Undo button.

Redo (D) - redoes a move. If you have used undo to move back several moves and went back one too many, use Redo to get yourself back to where you want to be. You can only use Redo after using Undo. After a new move is made Redo cannot be used. Redo has no effect on the "moves" count.

Options (O) - displays a dialog box which enables you to set game options such as card background, speed, scoring, and difficulty level. (See Options)

Help (F1) - displays the help file for Ada Towers.
About (A) - displays the About Ada Towers dialog box.
Quitting - Use the Close option in the System menu to quit Ada Towers.
Your current scores can be viewed by pressing $\mathbf{s}$. Pressing $\mathbf{S}$ will also display the current scores but it will allow you to clear them.

## Moving Cards

Cards can be moved with either the mouse or the keyboard.
To move a card with the mouse. Move the mouse cursor to the card and press any mouse button. The card will be selected. You can now move the card by moving the mouse cursor. Place the mouse cursor over the card or tower that you wish to move the selected card to and press any mouse button. If the move is legal (see rules) the card will be placed there and the move count will increase by one. Otherwise, the card will move back to its starting location and the move count will not increase. If you attempt to select a card that cannot be moved, it will not be selected.

To move a card using the keyboard. Press the $\mathbf{C}$ or $\mathbf{c}$ key and a numeric key to select a card from one of the playing towers. The playing towers are numbered left to right $1,2,3 \ldots 9,0$. Press the $\mathbf{H}$ or $\mathbf{h}$ key and a numeric key to selected a card from one of the holding towers. The holding towers are numbered 1-4. Now select either a playing tower or holding tower using (C or $\mathbf{H}$ ) to move the card to that location. If the move is legal (see rules) the card will move and the move count will increase by one. If the move is illegal nothing will happen and the move count will not be affected. At present you can only move one card at a time with the keyboard interface.

## Options

The Options dialog box allows you to control the behavior of Ada Towers. You can control three areas: what is shown, the difficulty of the game, and how a card behaves when moving automatically.

The Show group allows you to select the displaying of scores, the current game's difficulty rating, and the number of moves made so far.

The Game Difficulty group allows you to select an easy, normal, hard or expert level game.
An Easy game is one in which the lower value cards (Aces, 2s, 3s) will be at the front of the playing towers. While the higher value cards will be at the back of the playing towers. Easy games will range in difficulty from 50 to 300 .

A Normal game is a random game where none of the cards are moved.
Normal games will range in difficulty from 200 to 800 .
A Hard game is where the higher value cards (Kings, Queens ..) are moved to the front of the playing towers.
Hard games will range in difficulty from 500 to 700.
An Expert game is where the lower value cards (Aces, 2s ..) are moved to the back of the playing towers and the higher value cards are moved to the front. Expert games will range in difficulty from 550 to 950 .

The Floating Cards group allows you to select the speed at which cards move when floating. Selecting:

No - will cause the cards to jump to the new location when automatically moved.
Slow - will cause the cards to slowly move across the window when automatically moved.

Fast - will cause the cards to zip across the window.
The Select Card Back button allows you to select a different card background. Currently, there are 16 different card backgrounds to choose from. Pressing the Select Card Back button will cause the Card Background dialog box to appear.

The Undo Penalty button makes using the Undo or Restart button add to your move score. Since more moves will make your score lower, using Undo or Restart will lower your score if the option is selected.

Pressing the Okay button confirms your selections and closes the dialog box. If the Card Background dialog box is opened it will also be closed.

Pressing the Cancel button cancels your selections and closes the dialog box. If the Card Background dialog box is opened it will also be closed.

Pressing the Help button displays this help information.

## Card Backgrounds

There are 16 card backgrounds that you can choose from. Place the cursor on the background that you like and press a mouse button. That background will be selected.

Pressing the Okay button confirms your selection and closes the dialog box.

Pressing the Cancel button cancels your selection and closes the dialog box.
Pressing the Help button displays this help information.

> About Ada Towers
> Ada Towers Version 1.00.
> Written by Bill Yow
> Copyrighted (c) by Dimensional Medial System 1993.

Ada Towers is written in Ada using the Meridian 2.0 Ada compiler and the Microsoft Windows SDK

The game is approximately 2,000 lines of semicolon counted Ada code and the User Interface library (VIA) that was used for doing the UI work is about 5,000 lines of semicolon counted Ada code.

Ada Towers is freeware and you are welcome to pass the game around as long as the Dimensional Media Systems copyright notice is not removed, no changes are made, and no charge is requested for the game. (You may charge a small distribution fee)

If you would like to get the latest version from Dimensional Media Systems, send 5 U.S. dollars to the address listed below. If you would like to get the source code from Dimensional Media Systems, send 15 U.S. dollars to the address listed below. Note: that the source code, bitmaps and help files used to create the game are not free and may not be distributed with the game or by anyone not authorized by Dimensional Media Systems.

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