Four Games for Your Computer

Pete Matthews Jr – https://3nt.xyz – © May 7, 2022

The free DOSBox application can be used to run my four old 16-bit DOS games on 32- or 64-bit Windows – or presumably on any system that supports DOSBox – Mac, Linux, etc. The games are:

Mastermind: The object of Mastermind is to guess a four-digit number. Each digit is from one to six. After each guess, you will be told how many digits were exactly right (exact), but not which ones. You will also be told which of the digits were right, not counting the exact hits, but were in the wrong place (near). If a guess could not possibly be correct, the number of the turn which proves it false is shown (check). You can play against the computer or another player – who guesses against a different number. Against the computer, you can select an easy game, where the computer sometimes makes an impossible guess (gets a check). This is a super brain game, like Wordle with numbers.

Battleship: Elements of the invading enemy navy are approaching, The enemy is known to be intelligent and of great determination, with a squadron of the same strength as yours. This will be a battle to the death! Each squadron consists of four ships occupying horizontal or vertical lines on a grid:

Ship	Symbol	Sectors	Shots
Battleship	BB	5	2
Heavy Cruiser	CA	4	1
Light Cruiser	CL	3	1
Destroyer	DD	2	1

Aim all your shots for a turn at the same time, specifying each shot as a box on the 8x8 grid, from A1 to H8. Use the backspace to cancel a shot. When all shots have been aimed, Y or Enter fires the salvo. At the start, if you disallow touching ships, they will not touch at corners. The easy game makes enemy shots less accurate, equivalent to you using your gyro gunsights to fire with normal accuracy from farther away. This is another super brain game.

Biorhythm: This program draws a biorhythm plot for one month (plus a few days before and after) for a person, based on birth date. If you want to print it, use Ctrl+Alt+PrintScreen – then paste it into Paint or another application. See https://en.wikipedia.org/wiki/Biorhythm_(pseudoscience).

Game of Life: This is a rudimentary implementation of a game invented by John Conway in 1970. A far better one is at https://playgameoflife.com/.

Installation

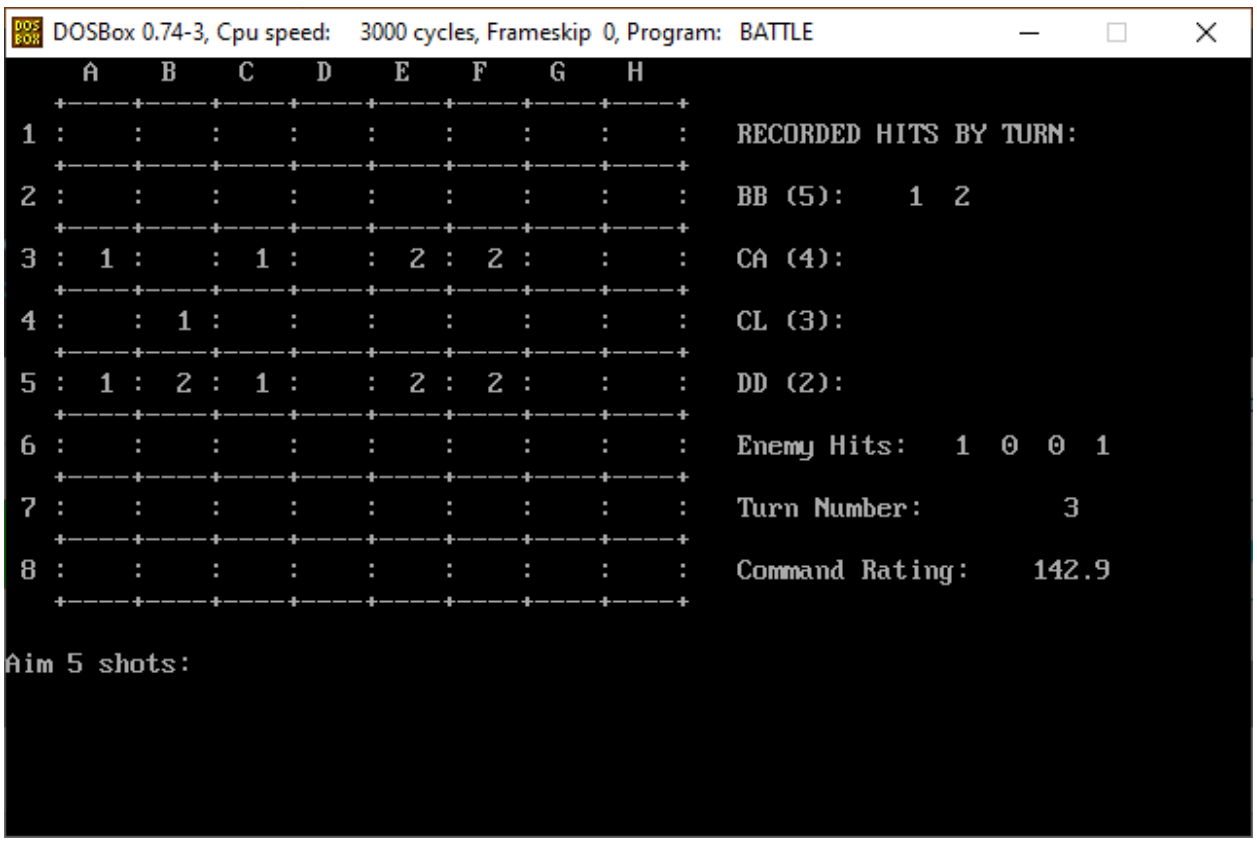
Go to https://sourceforge.net/projects/dosbox/. Assuming you will use DOSBox only to run these games, download version 0.74-3 (DOSBox0.74-3-win32-installer.exe). I am giving you my pre-configured shortcuts for that version. Run the installer. Its default is to create a shortcut on the desktop, which you may need to run other programs (or to run these with another version).

Download DOSgames.zip from 3nt.xyz > Ideas > Games, and expand it. Move the DOSgames folder to C:\DOSgames. Copy shortcuts for games you like from the folder to anywhere you want them, such as onto your desktop.

Each shortcut is the default shortcut, but with the option '-userconf' replaced with, for example, 'c:\DOSgames\BATTLE.EXE'. If you need to make such a change, right-click on the shortcut (or a copy) and click Properties. Make the change to the end of the Target field.

Operation

Double-click on the shortcut, and two black-background windows will open. The second, larger window will be underneath, and you can ignore or minimize it. The smaller one is your DOS box, with the game running. Here is a sample of a Battleship game after turn 2 (as usual, I set up the game with N, N, and my standard first salvo of five shots):



So, the enemy battleship, which was hit on turns 1 and 2, is in the B column.

The Escape key will ask you if you want to exit the program – and you will also be asked at the end of the game. While the window remains open, you can start any of the four games: BATTLE.EXE, BIOPLOT.EXE, LIFE.EXE or MRMIND.EXE – type the start of any name, press Tab, then Enter.

License

The entire DOSgames package is freely available with an MIT license, included in _LICENSE.txt in the distribution. Enjoy!

Backstory

All these programs except Life originated on an IBM mainframe in 1976 or 1977. I wrote them while learning the PL/I language, which I then used in building tools for my work. By 1978, these three games ran effectively the same as they do now, but on an IBM 3270 CRT terminal.

In 1983, I bought an IBM PC with two 5.25" truly-floppy disk drives – the new double-sided ones holding 360K bytes each! – and no hard disk. Upgraded to 384K RAM, with printer and 1200 baud modem, it cost almost $5,000! The computer came with IBM BASIC built in. I learned lots that helped my career in computer support – especially working on game and other programs.

Battleship was converted to BASIC in December, 1983; I probably later converted the Biorhythm program as well. I also wrote the Game of Life in BASIC. In 1984, I decided that IBM BASIC was not portable, so I bought the DeSmet C compiler. I converted Mastermind and Battleship to C in 1984. In 1985 I converted Life to C using the BASIC_C library from C_Source. The Biorhythm program, probably using the same library, was last built in 1988; I don't have its history, as I have lost its source code.

> *Note:* For my first attempt to run these games on 64-bit Windows, I used otvdm/winevdm. Battleship and Mastermind both worked, but I could not package them up to be icon-startable. Furthermore, MRMIND.EXE ran in test mode, displaying the answer right under where the guess is entered! Its first executable line is:
>
> ```
> if (argc>1)   test = TRUE;
> ```
>
> For normal use, the program expects to receive only one argument, the name of the command itself (MRMIND or MRMIND.EXE). So, otvdm must have added something.

The source code that I do have is in the Source folder of the DOSgames folder of the distribution. Rebuiding with a modern C compiler is probably not worth the effort. Recoding Battleship and Mastermind to somehow run on the web and/or a smartphone could make sense – but there are Android versions already, using colors in Mastermind. Not only easier for coding, I think digits are better for solving Mastermind. GIFs with colors and numbers could work well.