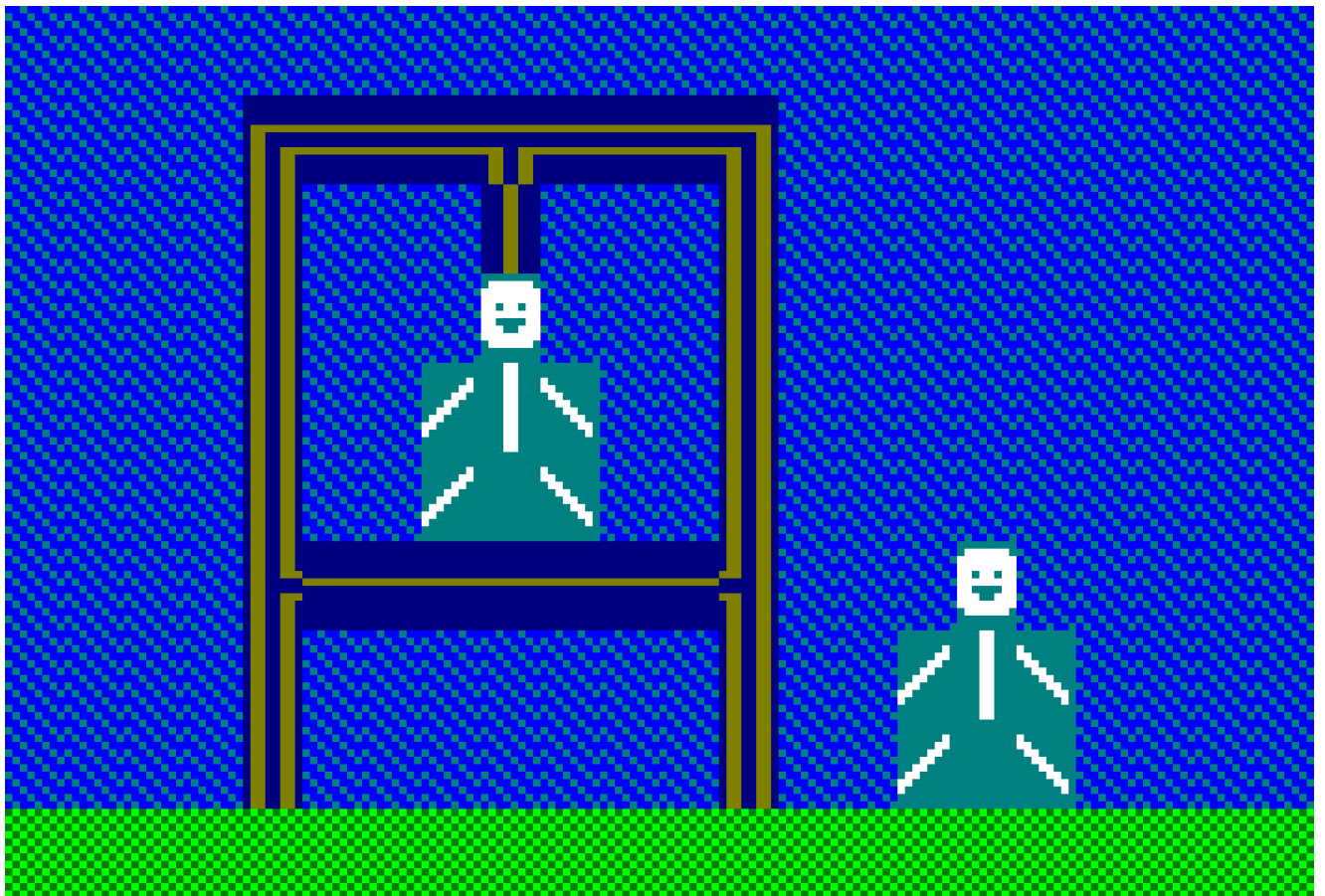


How to Play

Super Hangman

C++ Assignment 4

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No stick people were harmed during the making of this game.

Contents

Preface	1
Quick Start	2
TO START THE GAME:	2
For Commodore 64/128:	2
For Apple II:	2
For IBM:	2
TO QUIT THE GAME	3
For Commodore 64/128:	3
For Apple II:	3
For IBM:	3
The Game	4
Your first game	4
Making your first guess	4
The results of guessing	5
Correct guesses	5
Incorrect guesses	6
Repeated guesses	6
Winning a game	7
Losing a game	7
Hangman Rules	9
The graphics	9
The field	9
The gallows	10
The hangman	11
The condemned	11
Commodore Disk Loading Problems	12
DOS problems	13
Frequently Asked Questions	14
GNU Free Documentation License	16
1. APPLICABILITY AND DEFINITIONS	16

2. VERBATIM COPYING	18
3. COPYING IN QUANTITY	18
4. MODIFICATIONS	19
5. COMBINING DOCUMENTS	21
6. COLLECTIONS OF DOCUMENTS	21
7. AGGREGATION WITH INDEPENDENT WORKS	21
8. TRANSLATION	22
9. TERMINATION	22
10. FUTURE REVISIONS OF THIS LICENSE	23
11. RELICENSING	23
ADDENDUM: How to use this License for your documents	23
GNU General Public License	25
Terms and Conditions	26
How to Apply These Terms to Your New Program	36

Preface

This document is the manual for my submission of assignment 4 for Dr Mike Evans' C++ course. It is written in the style of a game manual produced in the 1980s for the early IBM PC and PC clone market, and tries not to take itself too seriously.

Writing the code for this assignment was a lot of fun, mostly due to the fact that I have not used a text user interface toolkit since the days of Borland's TURBO C++ product, and I certainly have never written my own. I am quite tempted to see if I can improve upon the basic (and somewhat rough) framework I wrote for this assignment and release the result under the GPL—it would certainly be an interesting experience, and would hopefully end up containing similar features to probably the most well-known TUI, Borland's TURBO VISION.

I would like to thank my friends for putting up with endless hours of my whinging about the Windows console API.

I hope you enjoy playing this game as much as I enjoyed writing it.

Quick Start

You are about to pit your wits against a clever hangman in a high-definition graphical contest of language skill! Do you have what it takes to save lives and be the hero? Can you remain calm under pressure? If you think you do, then prove it with SUPER HANGMAN!

TO START THE GAME:

For Commodore 64/128:

1. Turn on your Commodore 64 or 128, disk drive and monitor.
2. After the red "busy" light on the disk drive goes off, insert the SUPER HANGMAN disk into the disk drive with the label side up and close the disk drive door.
3. Type: LOAD "*",8,1 and press RETURN.

For Apple II:

1. Insert the SUPER HANGMAN disk into the disk drive with the label side up and close the disk door.
2. Turn on your Apple computer.

For IBM:

1. Insert the SUPER HANGMAN disk into the disk drive.
2. Turn on your IBM PC/PCjr or clone.
3. Start the game by typing HANGMAN, the location of your word file, and the number of guesses:

```
A:\>HANGMAN B:\WORDS.DAT 8
```

TO QUIT THE GAME

For Commodore 64/128:

1. Remove the SUPER HANGMAN disk from the drive.
2. Turn off the Commodore 64 or 128.
3. Turn off the disk drive and monitor.

For Apple II:

1. Remove the SUPER HANGMAN disk from the drive.
2. Turn off the Apple computer.
3. Turn off the monitor.

For IBM:

1. Press the CONTROL and C keys together.
2. Remove the SUPER HANGMAN disk from the drive.
3. Turn off the IBM PC/PCjr or clone.
4. Turn off the monitor.

The Game

Your first game

When you first launch `SUPER HANGMAN`, you will be presented with a game screen similar to that in [Figure 1](#). This screen has two main parts which display various aspects of the current game session.

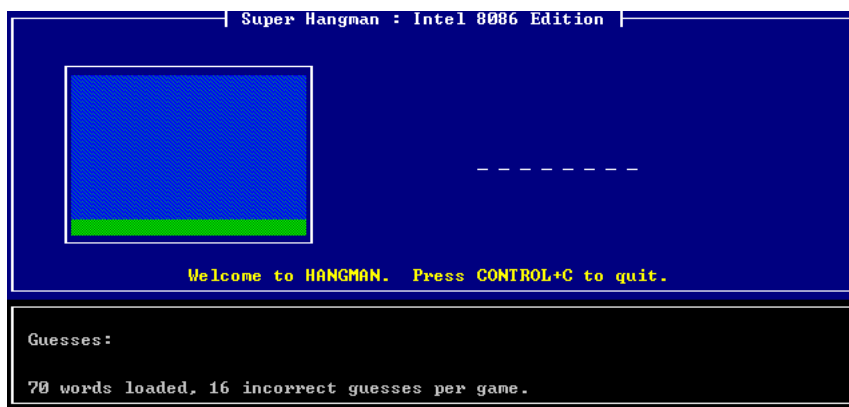


Figure 1: Initial load screen

The first part, the black portion, displays the letters you have currently guessed, the number of incorrect guesses you have left before the game ends, and information about the current game (such as the number of words the game can choose from).

The second part, the blue portion, displays the word you must guess, information on your current guess, and a traditional Hangman-like pictorial.

Once this screen has loaded, you are ready to make your first guess.

Making your first guess

Simply press any alphabetic key on your keyboard to start making a guess. You need not worry about pressing the `SHIFT` or `CAPS LOCK` keys, as all words and guesses are

automatically be treated as being in capital letters. Any non-alphabetic keys will be ignored without being treated as incorrect guesses.

Once you have made your guess, the game will indicate whether your guess is correct or incorrect. If your guess completes a word, the game will end and you will be informed of your success. Likewise, if you have used up all your guesses, you will be informed of your loss. Either way, you will be asked if you want to start a new game. Simply press Y for a new game, or N to exit SUPER HANGMAN.

The results of guessing

As we saw in the previous section, several things will happen after you make a guess and there will be various changes to the screen. Let us look at some of these changes.

Correct guesses

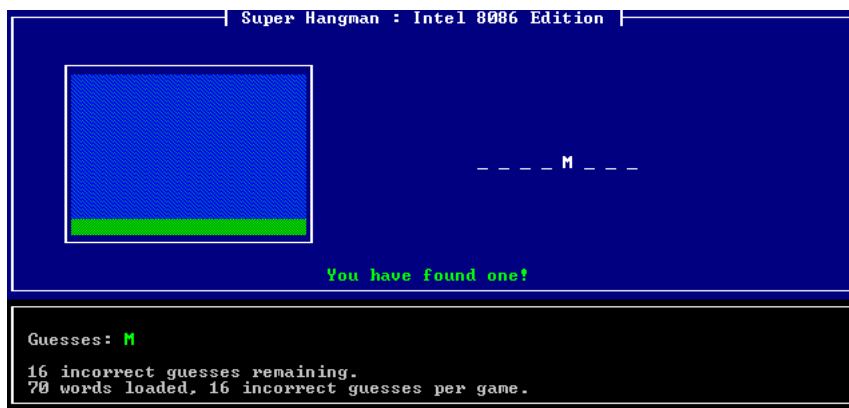


Figure 2: A correct guess

When you make a correct guess, the letter will be added to the “Guesses” section, coloured green. This is to remind you that you have previously guessed this letter, and that it was correct. The placeholders on the right-hand side of the blue section will display each letter that has been correctly guessed. Should the word contain more than one instance of a letter, then they will all be shown. The game will also indicate that it was correct. The screen for this will look similar to [Figure 2](#).

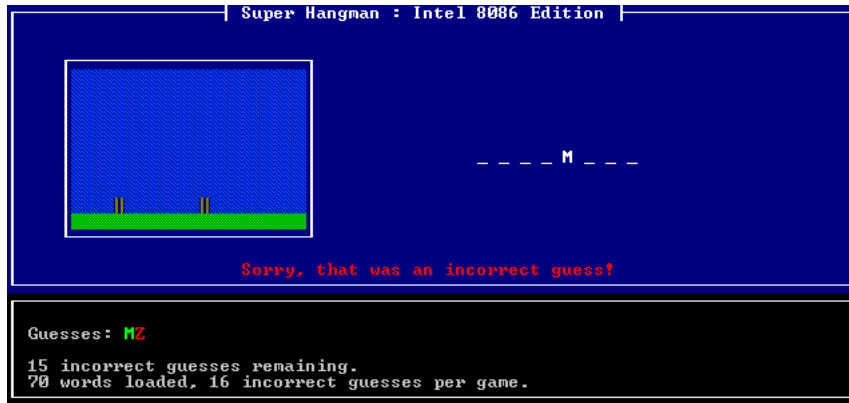


Figure 3: An incorrect guess

Incorrect guesses

When you make an incorrect guess, the letter will be added to the “Guesses” section, coloured red. This is to remind you that you have previously guessed this letter, and that it was incorrect. The game will also indicate that your guess was wrong. The screen for this will look similar to [Figure 3](#).

Repeated guesses



Figure 4: A repeat guess

When you repeat a previous guess, the game will indicate this and will not add the letter to the “Guesses” section. The number of incorrect guesses that you have left

The results of guessing

will go down by one and the stick figure will be one step closer to oblivion. The screen for this will look similar to [Figure 4](#).

Winning a game



Figure 5: Winning a game

When you have correctly guessed all the letters in the word, you will have won the game. Congratulations! The game will inform you of your success and congratulate you. The screen will look similar to that in [Figure 5](#).

Losing a game



Figure 6: Losing a game

The results of guessing

If you are unlucky and use up all your guesses, you will have lost the game. Hard luck! Do not worry, though, the stick figure is perfectly fine, he is immortal—that's why both he and the hangman have smiles on their faces¹. When you lose, the game field will change from blue to red, and the word the game chose will be displayed. The screen will look similar to that in [Figure 6](#).

¹Actually, they both smile because the old DOS extended character set—code page 437—doesn't have a glyph that represents a sad face for some reason. I guess Microsoft wanted [the illusion of] everyone [appearing] to be happy!

Hangman Rules

The core of this game is based on the old pencil and paper game of hangman with a few limitations due to modern computer hardware:

- Your word list may have as many words as your computer can handle—we have had up to 128 words loaded!²
- The number of guesses specified when you load the game cannot be higher than 16, due to limitations with Intel CPUs.³
- The Intel version requires at *least* 256 kilobytes of memory.

The graphics

Just like the pencil and paper game of Hangman, `SUPER HANGMAN` uses a graphical representation of the game and, just like the pencil and paper game, there is a specific order in which the game “state” is drawn, so that the player can see how far from oblivion the stick figure is.

The graphics chosen for each new game will depend on the total number of guesses that the player can have, always allowing the last guess to be the stick figures positioned on the gallows, at the edge of oblivion.

The field

If the game is run with 16 guesses, the game will start with a picture of an empty field, after which incorrect guesses will result in the gallows being formed, and then the hangman, and finally the condemned stick figure.

The field will look as it does in [Figure 7](#).

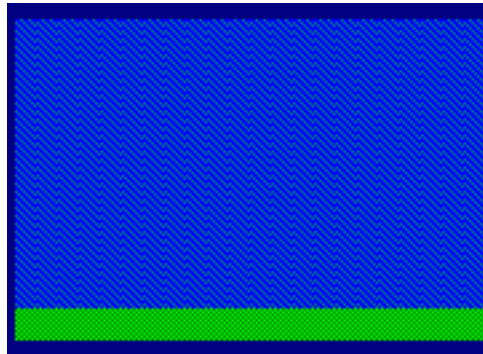


Figure 7: An empty field

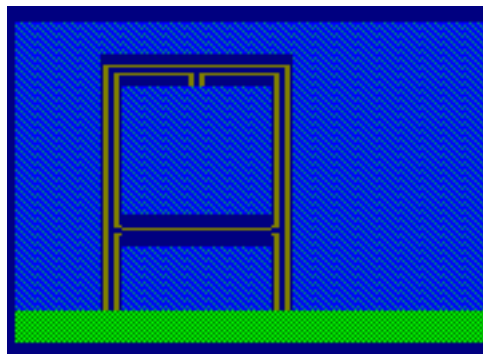


Figure 8: The gallows

The gallows

If the game is run with between 15 and 8 guesses, or you have between 15 and 8 guesses remaining, then the gallows⁴ will be constructed. Once built, your next incorrect guess will start drawing the hangman.

The gallows will look like those in figure [Figure 8](#).

²Of course, this is only for our imaginary 8086! On recent hardware, you can have many thousands of words loaded.

³While probably true in the 1980s, the '16 guess' limit is purely down to the graphics. More than 16 guesses presented the problem of having to design and partition too many graphical elements to visually display the hangman game in an easy manner.

⁴If you look really close, you'll spot a glitch with some of the characters. Specifically, the joints between a double border and a single line. This is due to the Windows command prompt failing to use the correct glyphs from code page 437 for some reason. I couldn't use the Unicode alternatives either.

The hangman

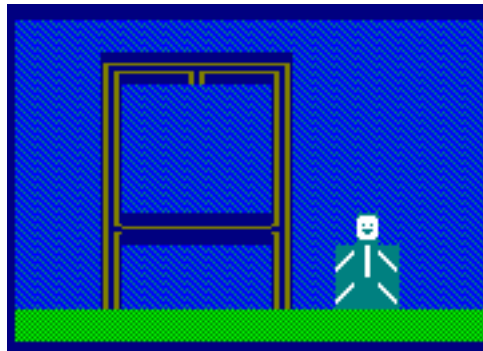


Figure 9: The hangman

If the game is run with between 7 and 5 guesses, or you have between 7 and 5 guesses remaining, then the hangman will start to appear. Once he has fully appeared, your next incorrect guess will start drawing the condemned.

The hangman standing proudly next to the gallows will look like [Figure 9](#).

The condemned

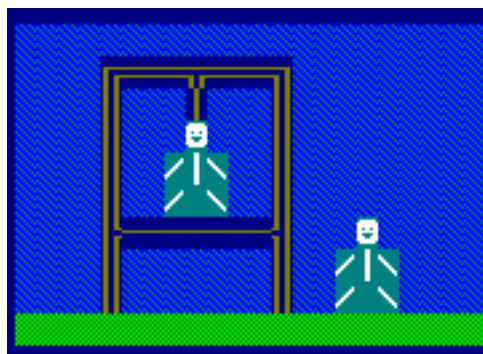


Figure 10: The condemned

Once the gallows and the hangman have been drawn, you will have 5 guesses remaining, with each incorrect guess resulting in the condemned arriving at the noose, piece by piece. When you are down to 1 guess left, the condemned will have been completely drawn, and the next incorrect guess will send him to his maker.

The condemned in his noose will look like [Figure 10](#).

Commodore Disk Loading Problems

Brand of disk drive

At present, our C64 product line only supports Commodore disk drives (i.e. 1541 & 1571). We cannot guarantee compatibility with other brands. We have a built-in "fast loader" that can load programs over 10 times faster than a normal 1541 load. This requires the internals of the disk drive to be very close to what a Commodore disk drive looks like.

Random boot problems

We have found that a variety of problems can be caused by equipment being attached to your C64. We therefore recommend that all peripherals and cartridges (particularly "fast loaders") be removed from your C64 computer prior to running any of our games. People are surprised to find out that just turning the power off to these devices is not enough. Our software utilizes all 64K of RAM in the system and uses memory configurations that differ from other game software. This tends to upset modems and printers and the like.

Drive alignment problems

We have found that our original "fast loader" required 1541 and 1571 disk drive alignment to be in close adjustment. A weakness in Commodore's 1541 disk drive design (along with the fact that other companies' older protection schemes involved the stepper motor banging itself against the track zero stop) causes many disk drives to become out of alignment. Both Commodore and other companies have wised up, but it still leaves a lot of disk drives partially out of alignment. We have therefore improved our "fast loader" software to be more forgiving. Of course, the best long-term solution is to get your disk drive aligned.

DOS problems

Not enough memory

`SUPER HANGMAN` requires at least 256K of RAM to run, and will not start up with anything less than 256K.

Not enough disk space

The DOS version of `SUPER HANGMAN` was designed to allow you to use a word file on another disk. If you do not have two disk drives in your IBM PC/PCjr or clone, then you will need to have a second disk ready to use once the system prompts you to insert it. This disk will contain the word file as indicated by the command you type to start the game.

Monochromatic displays

`SUPER HANGMAN` was designed for systems with CGA or better (preferably EGA systems with at least 16 colours). It will still work on a monochrome display, but it will not look as good.

Frequently Asked Questions

Is this game too violent for my children?

SUPER HANGMAN is based on the pencil and paper version of Hangman and, although it does depict capital punishment and the taking of a life, it does so in a non-violent and non-graphic manner.

Do you have a port for my machine?

As well as the Commodore 64/128, Apple II, and IBM PC/PCjr versions of SUPER HANGMAN, we also have versions for the Apple Macintosh, the Sun-3 series of workstations from Sun Microsystems, the VAX-11 minicomputers from Digital Equipment Corporation, and the Apollo Domain workstations.

It's spelled 'color', not 'colour', what is wrong with you people?

We're British, thus this manual uses British spellings of words, ergo it's spelt 'colour'.

Wo ist das Deutsche Computerspiel bitte?

Nein. Das ist verboten unter das Strafgesetzbuch⁵.

ROMANES EVNT DOMVS

Go away, Brian⁶.

⁵A few german friends of mine laughed when they read this, and then begged me to leave it in this form, rather than the correct "Wo ist die deutschsprachige Version dieses Computerspiels bitte?".

⁶This, of course, should be "ROMANI ITE DOMVM". Graham Chapman and John Cleese at their best.

I have the VAX version, but it doesn't work with VMS.

The VAX-11/780 we have access to here runs Berkely Unix, so we cannot write a VMS port at this time.

I cannot find the cheat codes.

You need to look harder.

The cheat codes do not work.

Did you try standing on your head while entering the codes?

When I get to the second level, the door leading to the toilet is locked, and I cannot find the key at all, even if I complete the McDonalds level. Help!

Wrong game.

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Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>

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