



## T1A3 – Terminal Application

DON KOUNTOURIS

- I thought this was a very good assignment for students.
- It was challenging, lots of work & forced me to work efficiently.
- Time management was a factor while learning how to execute new concepts that made stressful but in a good way. And although I felt like I was way out of my depth at the start of the assignment, it wasn't long before pieces of the puzzle started to all make sense.

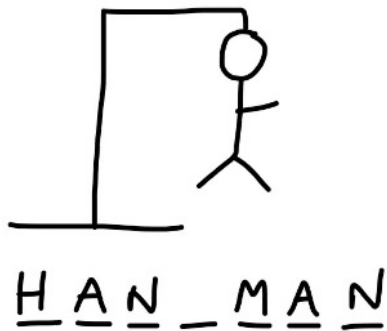


# Word Game Application

DON KOUNTOURIS

- Looking over the assignment I immediately thought I would choose a game of some kind with either words or numbers.
- I wanted it to be simple, given my ability and time restraints. So I chose something I'm always buying for my parents and that is word puzzles.

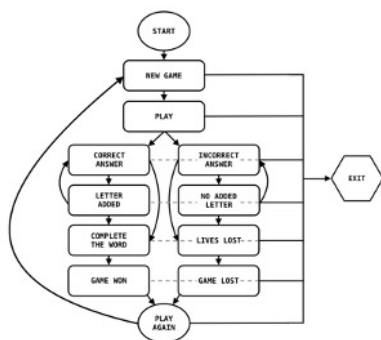
## How to play HANGMAN



- Hangman is a word game to find missing letters that complete a word.
- Blank space represent missing letters.
- With the aid of a clue, players begin by guessing a letter.
- Correct guesses fill in the blank spaces.
- Incorrect guesses lose players lives.
- Solve the puzzle before the hangman dies.

- So, I chose... HANGMAN.
- If you don't know how to play hangman:
  1. There is a series of blank spaces that represents a mystery word.
  2. One at a time, you need to guess each letter of the word and fill-in the blanks.
  3. If you guess wrong a section of the hangman is drawn. Usually a line.
  4. The aim is to guess the word and save the hangman by not completing the drawing so he doesn't get hanged.

## Ready to play

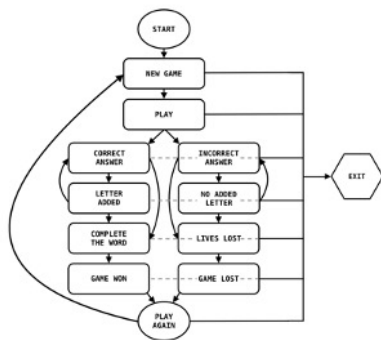


START: Terminal CMD.  
NEW GAME: Introduction, Instructions & Clue.  
PLAY: Guess a letter.



- Planning how I was going to create this app was fairly straight forward.
- Once we initiate the game, there needs to be some sort of introduction, a set of brief instructions and a clue or a phrase that helps the player guess the word.
- Then, the player begins playing the game and guessing letters.
- And from here, the game obviously branches into two paths: you either win or you lose.

## If you win...

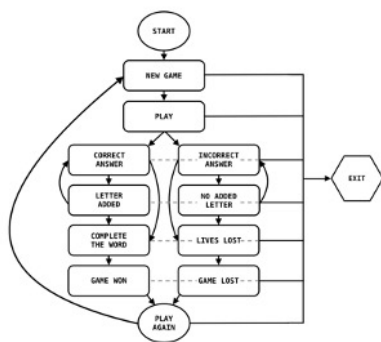


START: Terminal CMD.  
 NEW GAME: Introduction, Instructions & Clue.  
 PLAY: Guess a letter.  
 CORRECT ANS: Adds a letter to the word.  
 LETTER ADDED: Loops the operation to complete the word.  
 COMPLETED WORD: Loop ends once the word is completed.  
 GAME WON: Option to play a new game.  
 PLAY AGAIN: Loops to the start of a new game and new word.



- If you win (following the left hand side of the chart).
- Correct answers fill in the blanks.
- You complete the word.
- And you win the game.

## If you lose...



START: Terminal CMD.  
 NEW GAME: Introduction, Instructions & Clue.  
 PLAY: Guess a letter.

INCORRECT ANS: Notifies the error.

NO ADDED LETTER: Loop the operation to guess again.

LIFE LOST: Incorrect answers result in lose of guesses.

GAME LOST: If guesses run out the game ends.

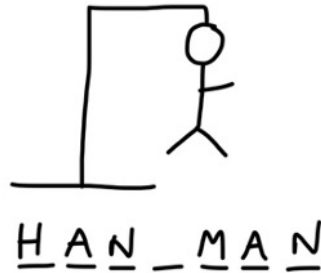
PLAY AGAIN: Loops to the start of a new game and new word.



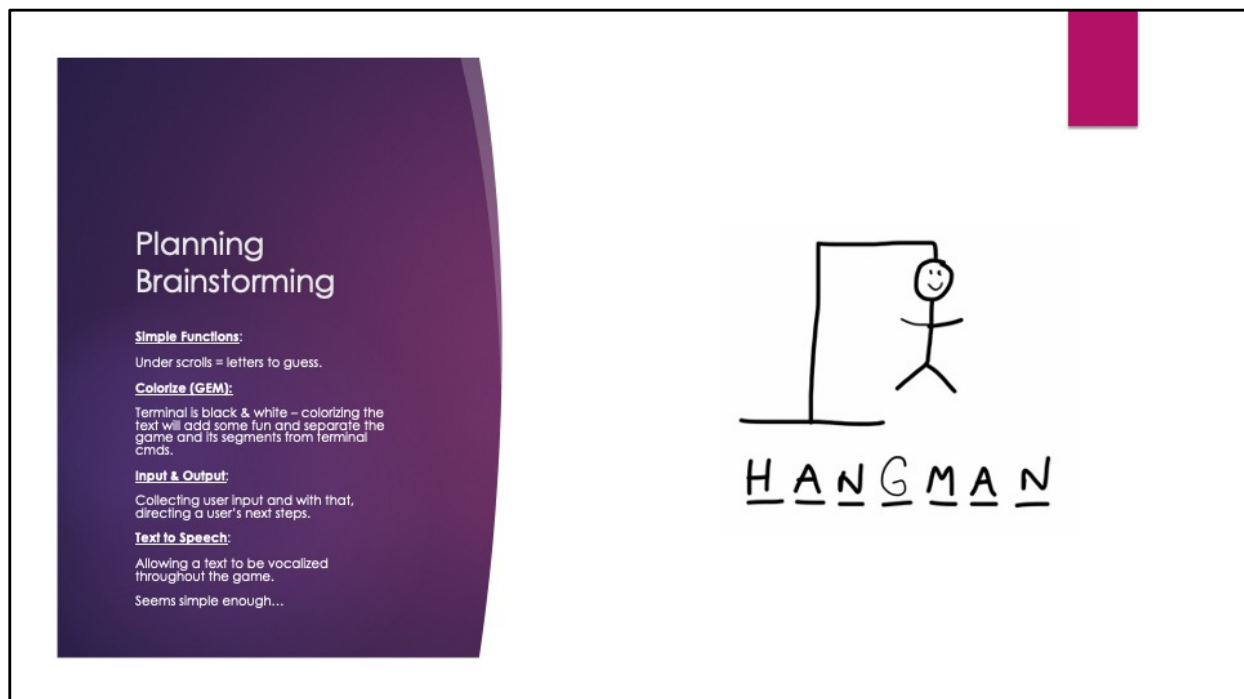
- If you lose (following the right hand side of the chart).
- Incorrect answers don't fill in the blanks.
- You lose a game life (which you have 6).
- And if you run out of lives, you lose the game.
- It's important to note that an option to exit the game, particularly if you're terrible at word games, exists at any point and time.

## Planning

- Choosing a simple game.  
But was it simple...?



- As I said before, I chose a simple game to make this assignment easy for me.
- After all, Hangman is a very simple game.
- But was it so simple to create...?



- Some initial ideas that I had were...
- Having under-scrolled lines for blank spaces.
- Terminal can appear a little monotonous so to jazz things up, I thought adding colour to text would be good (which may satisfy the requirement of adding a Ruby Gem).
- There needs to be a lot of input and output (which is always fun to create).
- And another element to spice things up in the Terminal could be to add tts aka Text to Speech. So there is a greater interactive experience in the game (is that a Ruby Gem - not sure yet, we'll see...).



## Planning No Brainers

### Variables:

As a game there will be many variables.

### Conditionals:

Allowing for different outcomes dependent on answers.

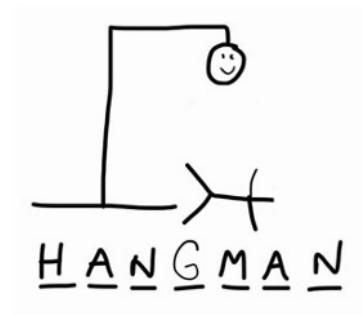
### Arrays:

Collecting answers to complete the word.

### Loops:

Returning to an operation in order to complete the game.

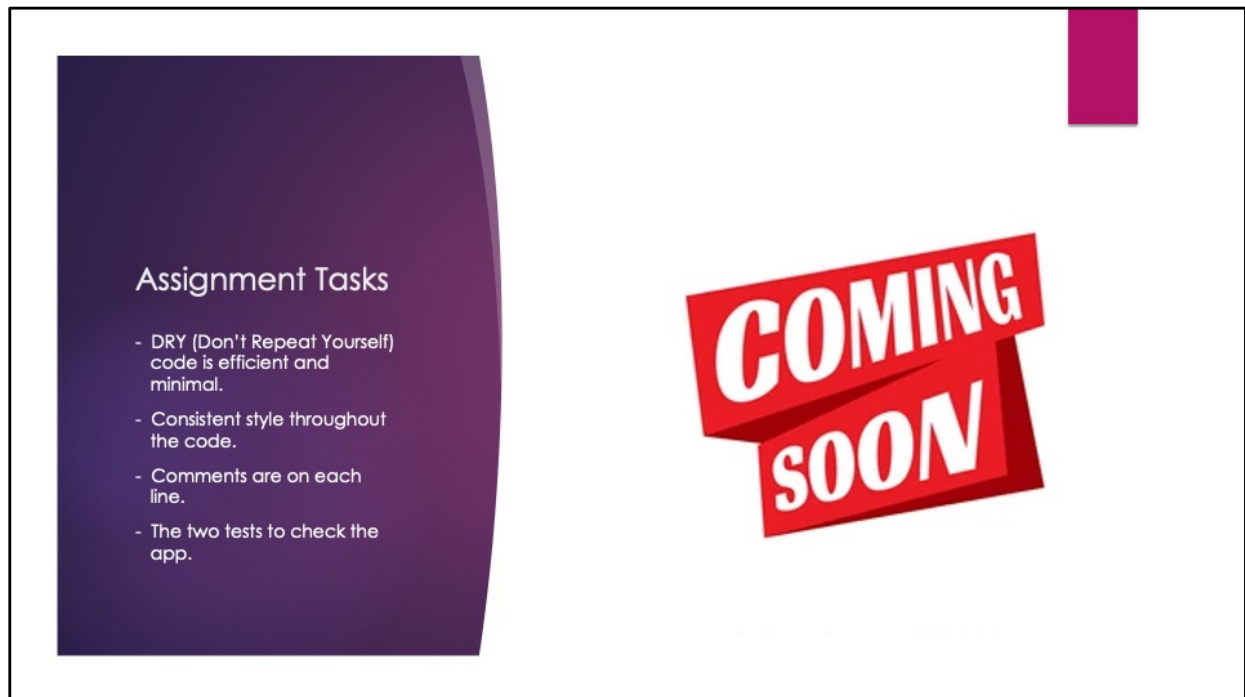
Seems simple enough....



- The no-brainers are:
- Variables.
- Conditionals.
- Arrays.
- and Loops.
- which are obvious necessities for the game.



- The features for this game are...
- Instructions on how to play the game and direct the player as to what they need to do next or the outcome of their actions and answers.
- A clear & concise set of rules to follow.
- Colourised text.
- Text to speech (like a game show host).
- and if you chicken out... an exit plan.

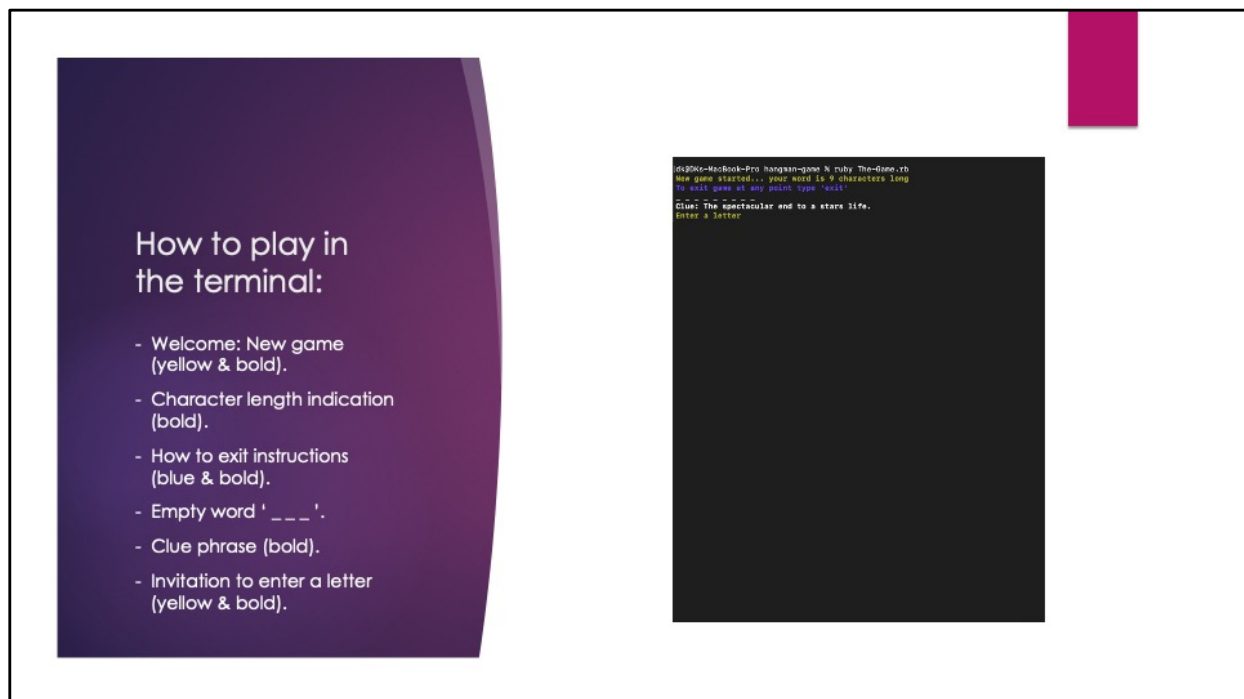


**Assignment Tasks**

- DRY (Don't Repeat Yourself) code is efficient and minimal.
- Consistent style throughout the code.
- Comments are on each line.
- The two tests to check the app.

**COMING SOON**

- Requirements for the assignment such as DRY, keeping a consistent style of code, comments and tests will all be included in my submission along with the source code.



- Now let's take a look at how we play the game.
- Once we start the game, there is a welcome note and a clue as to how many letters exist in the mystery word.
- Below that, there is also instruction on how to exit the game at any time.
- We can then see a number of under scrolls indicating the missing letters that we will need to guess.
- And a second clue that is a phrase.
- Then there's an invitation to guess a letter.
- Both colours and bold text separate the game text from the normal Terminal text.

## How to play in the terminal:

- Enter a correct letter.
- A correct answer notifies the player (green & bold).
- The correct letter occupies the allocated empty space.
- An opportunity to enter the next letter.

```
ds@MacBook-Pro:hangman-game$ ruby TheGame.rb
New game started... your word is 9 characters long
to exit game at any point type 'exit'
Clue: The spectacular and to a stars life.
Enter a letter
a
You are correct!
a _ _ _ _ _
Enter a letter
```

- If we enter a correct letter, the game tells us (in green) that we are correct.
- It fills in the empty space with our correct guess.
- And invites us to enter another letter.

## How to play in the terminal:

- Enter another letter.
- An incorrect answer notifies the player, they lose a life (red & bold).
- The user is given an opportunity to try again.

```
ids@MacBook-Pro:hangman-guess$ ruby TheGame.rb
New game started... your word is 9 characters long
to exit game at any point type 'exit'
Clue: The Spectacular and to a stars life.
Enter a letter
a
You are correct!
a _ _ _ _ _
Enter a letter
k
Sorry... you have 5 lives left. Try again!
Enter a letter
```

- If we enter an incorrect letter, the game notifies us (in red) that we are wrong.
- And we lose a life.
- So, we go from starting with 6 lives down to 5.
- Again, we are asked to guess another letter.

## How to play in the terminal:

- Enter two letters at once.
- An incorrect answer notifies the player (red & bold).
- The player does not lose a Life but is told answering with two letters at once is not permitted (red & bold).
- The user is given an opportunity to try again.

```
ids@MacBook-Pro:hangman-guess N ruby The-Guess.rb
New game started... your word is 9 characters long
to exit game at any point type 'exit'
Guess The Spectacular and to a stars life.
Enter a letter
a
You are correct!
Enter a letter
K
Sorry... you have 5 lives left. Try again!
Enter a letter
ad
Only guess 1 letter at a time please!
Enter a letter
```

- If we enter two letters at once, the game notifies us (in red) that we are not allowed to do something like that.
- No letters are recorded, either correct or incorrect.
- And no lives are lost.

## How to play in the terminal:

- Completing the game.
- If all letters are correct, they complete the word.
- Once successful, the player is notified that they have won (green & bold).
- The player can begin a new game with a new word.

```
ds@MacBook-Pro:~$ hangman-game N ruby The-Game.rb
New game started... your word is 9 characters long
to exit game at any point type "exit"

Clue: The Spectacular and to a stars life.
Enter a letter
a
You are correct!
e _ _ _ _ _
Enter a letter
k
Sorry... you have 5 lives left. Try again!
Enter a letter
o
Only guess 1 letter at a time please!
Enter a letter
u
You are correct!
e u _ _ _ _ _
Enter a letter
o
You are correct!
e u o _ _ _ _
Enter a letter
e
You are correct!
e u o e _ _ _
Enter a letter
r
You are correct!
e u o e r _ _
Enter a letter
n
You are correct!
e u o e r n _ _
Enter a letter
p
You are correct!
e u o e r n p _
Enter a letter
v
You are correct!
e u o e r n p v
Congratulations... you have won this round!
ds@MacBook-Pro:~$ hangman-game N
```

- If we win the game, the word is completed and we are congratulated by the game.
- And obviously the opposite happens if we lose the game.





## – Problems:

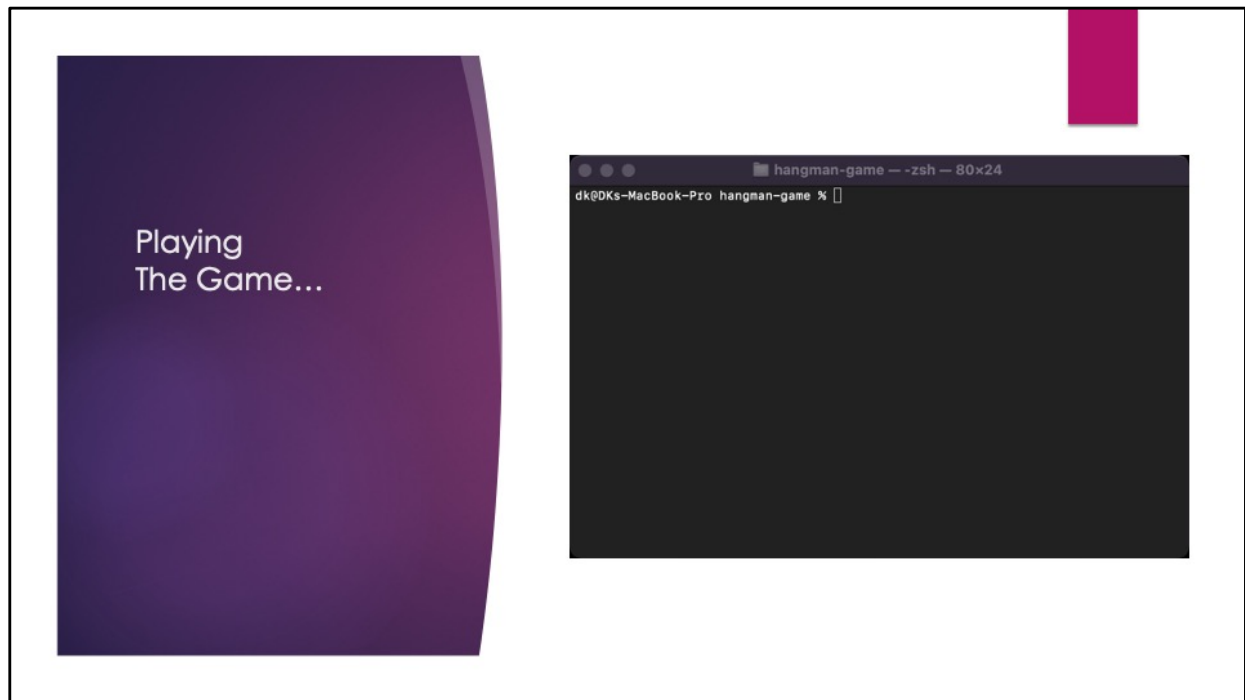
1. a tts Gem didn't happen. The reason for this, and to be quite honest, it appeared a complicated addition when the code for this app is very simple. I did not want to risk DRY or deviating from the simplistic theme of the code – and I was able to add it without a Gem keeping it all simple.
2. I found it hard to find particular colors when using the color Gem.
3. I wasn't able to loop the end of the game back to the start, without it going to a Terminal cmd out of the game.
4. If you hit enter without a letter, the game returns with a correct answer. But no letter is added.

## Problems

- It's over complications and possible errors - used an alternative instead.
- Colorize Gem: found difficulty in choosing particular colours.
- Looping the end of game to its beginning rather than exiting out of the app.
- If you hit enter without entering a letter the game responds with a correct answer.
- If you lose the last phrase repeats itself as previous incorrect answers have returned - it starts to try again when the game has ended.
- Uppercase letters do not read as lowercase are only considered correct answers.
- Would love to include a picture of hangman correspond to the game.
- When given only 1 life left, the game returns it as a plural.



5. Upper case letters are not recognised by the game, only lowercase letters.
6. I would love to have an evolving picture of a hanged man corresponding to the guesses in the game.
7. When given only 1 life left, the game states it as plural and not singular.



Now let's have a look at the game in action.



**And that's it!**

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