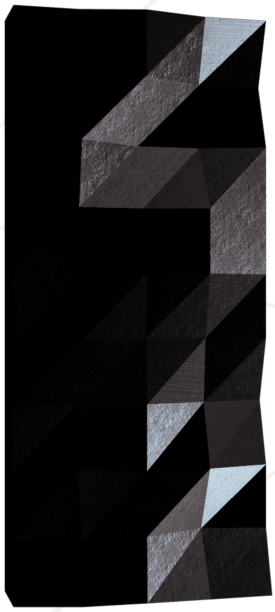

Wordle

Guess the Wordle

Summary: In this rush, you will study the popular word game Wordle and write a series of programs related to it.

Version: 1

Contents

Chapter I

Preamble

I.1 Problem

Given a group of students, What are the odds that two of them will have their birthday on the same day?

I.2 Solution

The threshold to attain 50% of shared birthday is 23 peoples.
The key is to ask yourself what the odds are that no pair of people were born on the same day. For each person added to the room, the number of dates not already taken decreases. The first person therefore has 365 choices, the second 364, the third 363, the fourth 362, and so on.
The problem is to ask whether any pair of individuals in the room have the same birthday. In a group of twenty-three people, there are 23 x 22 $\div$ 2 = 253 possible pairs, which is more than half the number of days in a year. From 28, the number of pairs exceeds the number of days, which obviously does not mean that it is impossible to find a group of 28 people whose birthday is different.
Indeed, the number of pairs gives an intuition of the problem but does no explain the associated probability because that would amount to adding the probabilities of events which are not disjoint.

source: https://en.wikipedia.org/wiki/Birthday_problem

Chapter II

Introduction

Wordle is a web-based word game developed by Josh Wardle. Players have six attempts to guess a five-letter word, with feedback given for each guess in the form of colored tiles indicating when letters match or occupy the correct position. The mechanics are nearly identical to the 1955 pen-and-paper game Jotto and the US television game show Lingo. Wordle has a single daily solution, with all players attempting to guess the same word.

Wardle initially created the game for himself and his partner to play, eventually making it public in October 2021. The game gained a large amount of popularity in December 2021 after Wardle added the ability for players to copy their daily results as emoji squares, which were widely shared on Twitter. Many clones and variations of the game were also created, as were versions in languages besides English. The game was purchased by The New York Times Company in January 2022 for an undisclosed seven-figure sum, with plans to keep it free for all players; it was moved to their website in February 2022.

Chapter III

General guidelines

III.1 Game rules

The official game is at https://www.nytimes.com/games/wordle/index.html. The rules are simple:

- The goal is to guess a 5 letter word from the English language.
- Players have 6 guesses.
- After each guess, the game indicates which letters from the guess are not in the word, which are but not in the right spot, and which are in the correct spot.
- Players attempt to guess the word in as few attempts as possible.

Figure III.1: Figure 2.1: Screenshot of Wordle

The game offers only one word per day, the same for all players, allowing people to compare their results on social media.

Chapter IV

Mandatory part

- The goal of this rush is to reproduce the game and be able to play
- You can use the languages, librairies, frameworks and tools of your choice.
- No norm.
- Player have to guess the given word in six goes or less.
- Every words used and given must be in the given words dictionnary.
- Each word is strictly equal to five letters.
- A correct letter turn `green`.
- A correct letter in the wrong place turn `yellow`.
- An incorrect letter turn `grey`.
- Letters can be used more than once.
- All words in this game are strictly equal to five letters.

`obviously, using a fully already written wordle program is strictly forbidden.`

Chapter V

Example

This example was made in console, but you are free to do however you like (Web, GUI...)

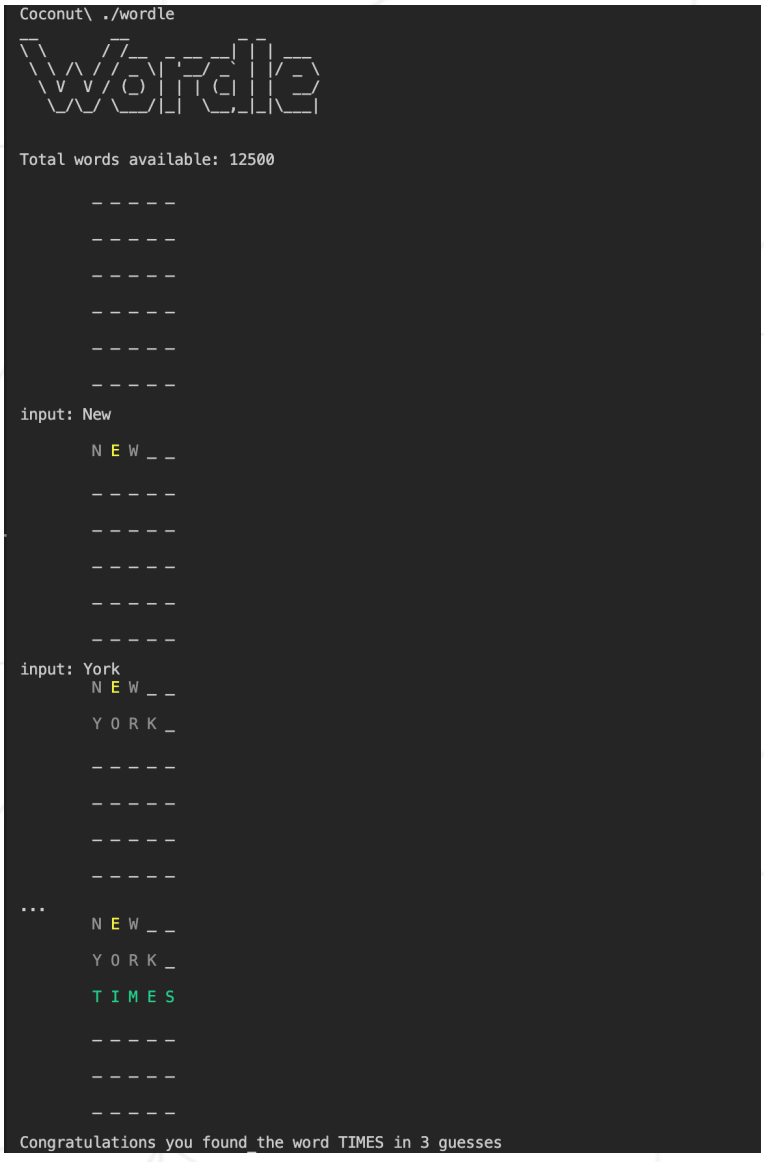

Figure V.1: The game

Chapter VI

Turn-in and peer-evualation

Turn in your assignment in your Git repository as usual. Only the work inside your repository will be evaluated. Don't hesitate to double check the names of your files to ensure they are correct.