Some commands to display a Scrabble board, with or without words.

- English, French, German or Spanish version for points and labels.
- Ideas from https://tex.stackexchange.com/questions/194780/tikz-drawing-a-rectangle-with-spikes-on-borders

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Introduction

1 The Scrabble package

1.1 Source

Some ideas are from https://tex.stackexchange.com/questions/194780/tikz-drawing-a-rectangle-with-spikes-on-borders, with proposition from Mark Wibrow. This package is build within styles and ideas from Mark Wibrow.

1.2 Loading of the package, used packages

The package Scrabble loads within the preamble:

\usepackage{Scrabble}

It’s mostly compatible with \texttt{latex}, \texttt{pdflatex}, \texttt{lualatex} or \texttt{xelatex} compilation!

It loads the following packages and libraries:

- \texttt{tikz} with \texttt{〈calc〉} with the tikzlibraries \texttt{〈calc〉} and \texttt{〈shapes.geometric〉};
- \texttt{pgf} and \texttt{pgffor};
- \texttt{xstring}, \texttt{xparse}, \texttt{simplekv} and \texttt{listofitems}.

1.3 The package itself

The idea is to, thanks to TikZ, propose commands or environments to display a Scrabble™ board:

- \textit{independent};
- in an \textit{environment} with words.

%independent command for the empty board
\ScrabbleBoard<language>[keys]

%environment with word(s)
\begin{EnvScrabble}<language>[keys]
  \ScrabblePutWord[orientation]{word}{coordinates of the beginning cell}
\end{EnvScrabble}

1.4 Languages

The commands, environments et keys are in english, but cells can be displayed in:

- english (code ISO 639-1 EN);
- french (code ISO 639-1 FR);
- german (code ISO 639-1 DE);
- spanish (code ISO 639-1 ES).
2 Commands, keys and options

2.1 The board, standalone

The first argument, optional, between `<...>` is the (language) of the display, form the list:

- (EN) (english, default), (FR) (french), (DE) (german) et (ES) (spanish).

The second argument, optional, between `[...]` give the (keys):

- (Scale) for the display (the initial unit is 1 cm); default : (1)
- (ScaleLabels) for the cell’s names; default : (1)
- the boolean (Border) pour print a border outside the board; default : (true)
- the boolean (Labels) to print names of the special cells; default : (true)
- the boolean (Help) pour print numbers to reperate th cells; default : (false)

\ScrabbleBoard[Labels=false,Scale=0.55] %board without cell’s names
\ScrabbleBoard<ES>[Scale=0.55,Border=false] %board in spanish, without border
2.2 The board with words

Here we can use the environment with the specific command in order to print words on the board. For the environment, the options are the same as for the independent command!

For putting word on the board:

- the first argument, optional, between \ldots is the orientation of the word, \( \{H\} \) (by default) or \( \{V\} \);
- the second argument, mandatory, between \{\ldots\}, is the word, with uppercase or lowercase letters;
- the last argument, mandatory, between \{\ldots\}, is the coordinates of the first cell for first letter (the cell \((1,1)\) is south-west corner).

Observation 1: the chosen language will display the right points in the til!

Observation 2: the white (or joker) is coded by the character \(*\).

\begin{verbatim}
\begin{EnvScrabble}[Scale=0.75,Labels=false,Help]
  \ScrabblePutWord[\{TIKZ\}]{1,13}
  \ScrabblePutWord[\{pstricks\}]{1,15}
  \ScrabblePutWord[\{KaTeX\}]{3,13}
  \ScrabblePutWord[\{cleveref\}]{1,10}
  \ScrabblePutWord[\{METAPOST\}]{7,11}
  \ScrabblePutWord[\{LUALATEX\}]{5,8}
  \ScrabblePutWord[\{ProLy*ee\}]{11,15}
  \ScrabblePutWord[\{PROFCOLLE*E\}]{1,1}
  \ScrabblePutWord[\{SYNTAX\}]{7,5}
  \ScrabblePutWord[\{STRIN*\}]{10,6}
\end{EnvScrabble}
\end{verbatim}
2.3 *Inline word*

The idea is to propose a command to insert a word in *online* mode, with automatic adjustment of size and position.

\[
\text{\texttt{\ScrabbleWord\{keys\}\{word\}}}
\]

The first argument, *optional*, between \[...] allows you to configure the *(keys)*:

- *(Colback)* for the color of the pieces ;  
  default: *(yellow!40)*
- *(Font)* for the font ;  
  default: *(\bfseries\sffamily)*
- *(Colfonte)* for the color of the characters ;  
  default: *(black)*
- *(Lang)* to choose the language (for the number of points) ;  
  default: *(EN)*
- *(Offset)* to specify horizontal spacing between pieces ;  
  default: *(0.1pt)*
- *(Scale)* to specify a base scale for texts ;  
  default: *(0.6)*
- *(Score)* which is a boolean to display the score of each piece.  
  default: *(true)*

**Note 1:** the code is responsible for positioning the pieces for *satisfactory* alignment and scaling based on the active font.

**Note 2:** the *blank* (or *wildcard*) is obtained by the character *.

```latex
\ScrabbleWord{T\text{E}ST} to see !
```

```latex
\ScrabbleWord[Colback=teal!5,Colfonte=orange]{PYTHAG*RE} to see !
```

```latex
\scalebox{3}[3]{\ScrabbleWord[Lang=DE,Font=\ttfamily,Scale=0.75]{PYTHAG*RE} to see !}
```

```latex
\ScrabbleWord[Score=false,Offset=1pt,Colback=orange!50]{PSTRICKS} to see !
```
2.4 Special letters

It is possible to use special characters, for the languages `<DE>` and `<ES>`, but for compatibility reasons, special characters are *coded* by numbers:

- 0 code the letter \(\ddot{O}\) with 8 points;
- 1 code the letter \(\ddot{A}\) with 6 points;
- 4 code the letter \(\ddot{U}\) with 6 points;
- 6 code the letter \(\text{CH}\) with 5 points;
- 7 code the letter \(\ddot{N}\) with 8 points;
- 8 code the letter \(\text{RR}\) with 8 points;
- 9 code the letter \(\text{LL}\) with 8 points.

\[
\text{Ä, Ö, Ü, A, A, A, R, O, Ñ, O, S, O, \text{CH}, \text{RR}, \text{LL}}
\]
History

v0.1.6: Bugfix with joker; enhancements for <DE> board
v0.1.5: Special letters for <DE> and <ES>
v0.1.4: Command to insert inline words
v0.1.3: Words in uppercase or lowercase, adjusted codes for language (ISO 639-1)
v0.1.2: Key <ScaleLabels> to modify scale of the cell’s names
v0.1: Initial version