Scrabble [en]

A board of Scrabble,

with words or not.

Scrabble™, from Hasbro™ and Mattel™.

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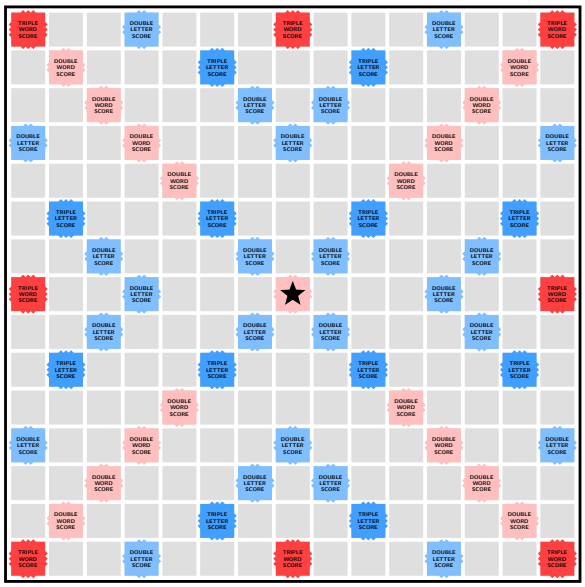
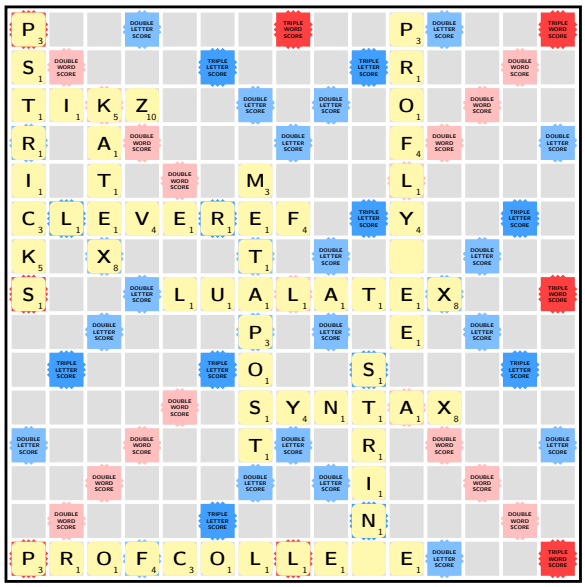
https://github.com/cpierquet/latex-packages/tree/main/scrabble
https://forge.apps.education.fr/pierquetcedric/packages-latex

- 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





Thanks to Denis Bitouzé, Patrick Bideault, quark67, Patrick Jenty and jmbeckers for help and ideas !

LaTeX pdfLaTeX LuaLaTeX TikZ TeXLive MiKTeX

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:

Code LaTeX

```
\usepackage{Scrabble}
```

It's mostly compatible with latex, pdflatex, lualatex or xelatex compilation!

It loads the following packages and libraries:

- `tikz` with ⟨**calc**⟩ with the tikzlibraries ⟨**calc**⟩ and ⟨**shapes.geometric**⟩;
- `pgf` and `pgffor`;
- `xstring`, `xparse`, `simplekv` and `listofitems`.

1.3 The package itself

The idea is to, thanks to Ti*k*Z, propose commands or environments to display a Scrabble™ board:

- *independent*;
- in an *environment* with words.

Code LaTeX

```
%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

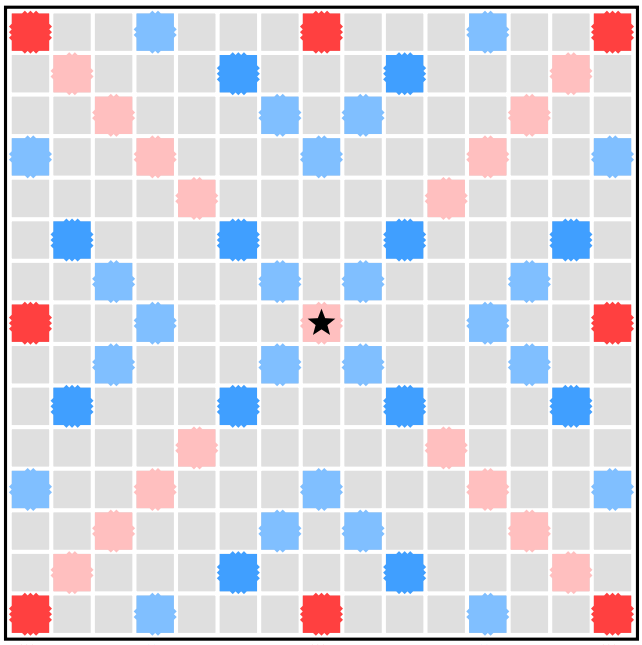
The first argument, *optional*, between <...> is the ⟨**langage**⟩ of the display, form the list:
⟨**EN**⟩ (english, default), ⟨**FR**⟩ (french), ⟨**DE**⟩ (german) et ⟨**ES**⟩ (spanish).

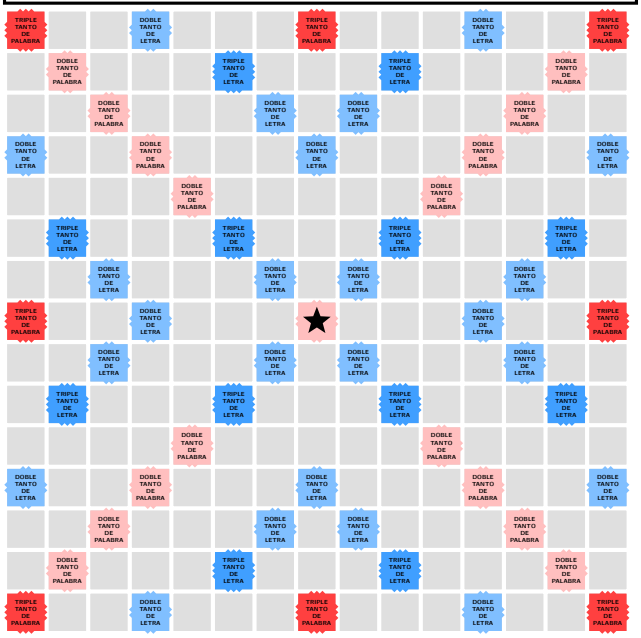
The second argument, *optional*, between [...] give the ⟨**keys**⟩:

- ⟨**Scale**⟩ for the display (the initial unit is 1 cm); default: ⟨**1**⟩
- ⟨**ScaleLabels**⟩ for the cell's names; défaut: ⟨**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**⟩

Code LaTeX

```
\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

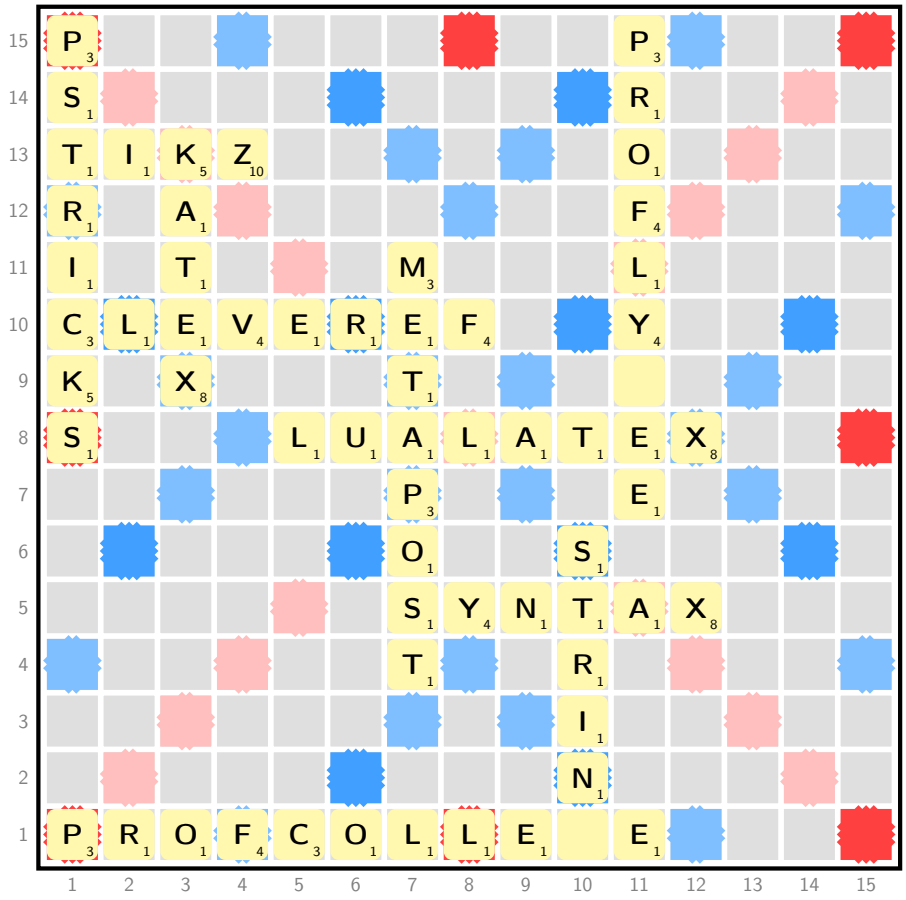
Here we can use the environment with the specific command in order to print words on the board.
For the *environment*, the options are the same as for the independent command!
For putting word on the board:

- the first argument, *optional*, between `[...]` is the orientation of the word, ⟨**H**⟩ (by default) or ⟨**V**⟩;
- the second argument, *mandatory*, between `{...}`, is the word, with uppercase or lowercase letters;
- the last argument, *mandatory*, between `{...}`, is the coordinates of the first cell for fisrt lettre (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 `*`.

Code LaTeX

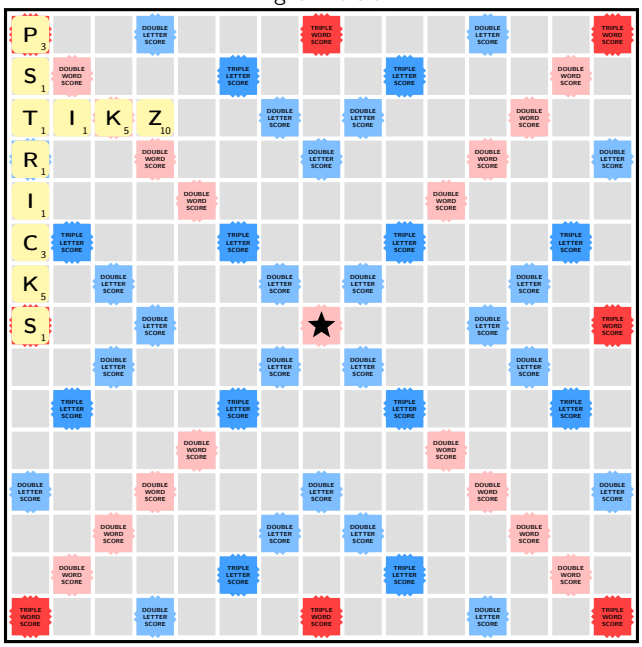
```
\begin{EnvScrabble}[Scale=0.75,Labels=false,Help]
    \ScrabblePutWord{TIKZ}{1,13}
    \ScrabblePutWord[V]{pstricks}{1,15}
    \ScrabblePutWord[V]{KaTeX}{3,13}
    \ScrabblePutWord{cleveref}{1,10}
    \ScrabblePutWord[V]{METAPOST}{7,11}
    \ScrabblePutWord{LUALATEX}{5,8}
    \ScrabblePutWord[V]{ProfLy*ee}{11,15}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



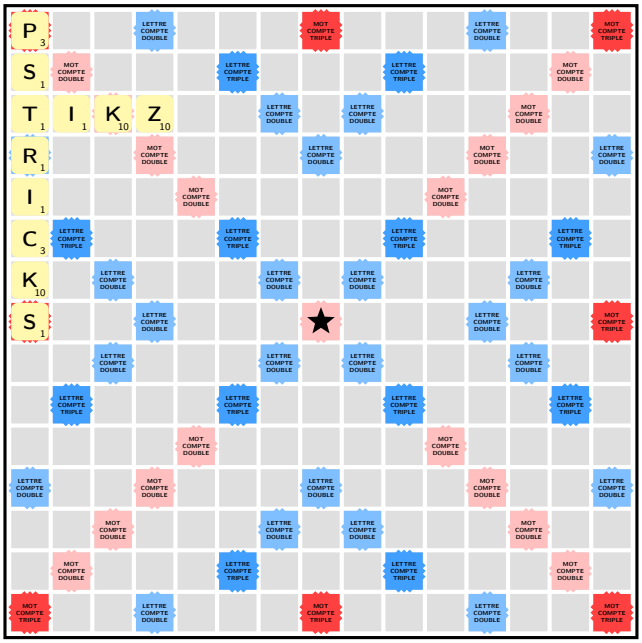
Code LaTeX

```
\begin{EnvScrabble}[Scale=0.55]
    \ScrabblePutWord{tikz}{1,13} \ScrabblePutWord[V]{PSTRiCKS}{1,15}
    \draw (7,15) node[font=\LARGE\sffamily] {English version} ;
\end{EnvScrabble}~~~
\begin{EnvScrabble}<FR>[Scale=0.55]
    \ScrabblePutWord{tikz}{1,13} \ScrabblePutWord[V]{PSTRiCKS}{1,15}
    \draw (7,15) node[font=\LARGE\sffamily] {French version} ;
\end{EnvScrabble}\\
\begin{EnvScrabble}<DE>[Scale=0.55]
    \ScrabblePutWord{tikz}{1,13} \ScrabblePutWord[V]{PSTRiCKS}{1,15}
    \draw (7,15) node[font=\LARGE\sffamily] {German version} ;
\end{EnvScrabble}~~~
\begin{EnvScrabble}<ES>[Scale=0.55]
    \ScrabblePutWord{LaTeX}{1,14} \ScrabblePutWord[V]{Madrid}{2,15}
    \draw (7,15) node[font=\LARGE\sffamily] {Spanish version} ;
\end{EnvScrabble}
```

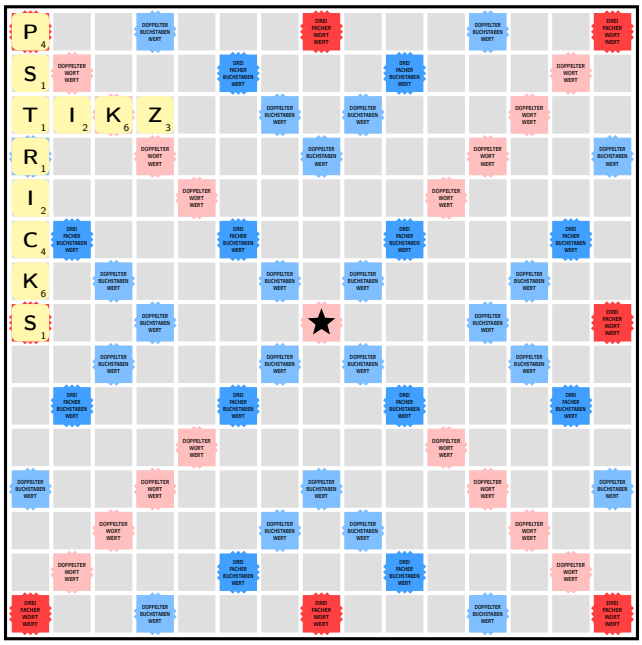
English version



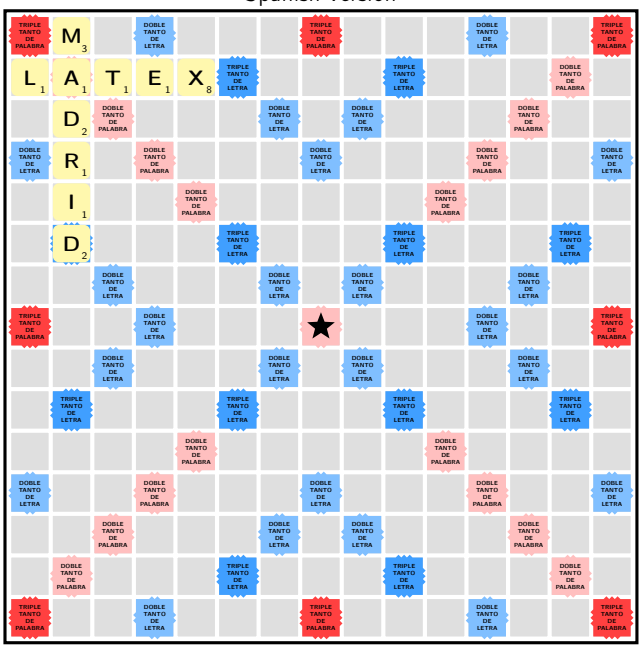
French version



German version



Spanish version



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.

Code LaTeX
```
%command to put inline word
\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**⟩
- ⟨**Shuffle**⟩ (boolean) to mix letters; — default: ⟨**false**⟩
- ⟨**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 `*`.

Code LaTeX
```
Online Scrabble word test positioning \ScrabbleWord{TE*ST} to see!
```

Online Scrabble word test positioning T E S T to see!

Code LaTeX
```
{\Huge\sffamily Test positioning \ScrabbleWord[Colback=teal!5,Colfonte=orange]{PYTHAG*RE} to see!}
```

Test positioning P$_3$ Y$_4$ T$_1$ H$_4$ A$_1$ G$_2$ R$_1$ E$_1$ to see!

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

Positioning P$_4$ G$_2$ R$_1$ H$_2$ Y$_{10}$ A$_1$ E$_1$ T$_1$ to see!

Code LaTeX
```
{\LARGE Test positioning \ScrabbleWord[Score=false,Offset=1pt,Colback=orange!50]{PSTRICKS} to see!}
```

Test positioning P S T R I C K S to see!

2.4 Special letters

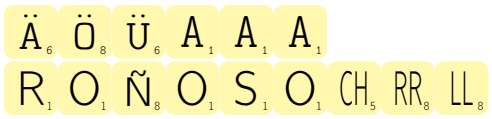
It is possible to use special characters, for the languages <DE> and <ES>, but for compatibility reasons, special characters are *coded* by numbers:

- `0` code the letter Ö with 8 points;
- `1` code the letter Ä with 6 points;
- `4` code the letter Ü with 6 points;
- `6` code the *letter* CH with 5 points;
- `7` code the letter Ñ with 8 points;
- `8` code the *letter* RR with 8 points;
- `9` code the *letter* LL with 8 points.

Code LaTeX

```
{\Huge \ScrabbleWord[Lang=DE,Font=\ttfamily,Scale=0.75]{104AAA}}

{\Huge \ScrabbleWord[Lang=ES,Font=\sffamily,Scale=0.75]{RO7OSO689}}
```



2.5 Colors

The colors used can be redefined using the aliases given below.

Code LaTeX

```
\colorlet{triplewordscore}{red!75}
\colorlet{doublewordscore}{red!25}
\colorlet{tripleletterscore}{blue!50!cyan!75}
\colorlet{doubleletterscore}{blue!50!cyan!50}
\colorlet{scrabblebgtile}{yellow!40}
\colorlet{scrabblebloard}{gray!25}
```

History

`v0.1.9` : Bugfix (forgotten 'cells') + colors
`v0.1.8` : Bugfix
`v0.1.7` : Key [Shuffle] for inline words
`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