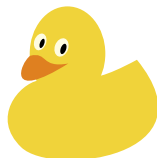


# The TikZducks package

## using ducks in TikZ



samcarter

<https://github.com/samcarter/tikzducks>

<https://www.ctan.org/pkg/tikzducks>

Version v1.9 – 2024/12/10

## 1 Introduc(k)tion

Rubber ducks can be made of latex, but can they also be made with  $\text{\LaTeX}$ ? Yes! The TikZducks package is a  $\text{\LaTeX}$  package for rubber ducks to be used in TikZ pictures. This project is a continuation of [How can we draw a duck?](#).

This package is work in progress (and will probably never be really finished as there is an infinite amount of things which could be added), therefore I would be happy to hear your feedback and ideas how to improve the package. The head version of the source code can be found on <https://github.com/samcarter/tikzducks>, including a bug tracker – please make constructive use of it! A more stable package version can be found on CTAN (<https://www.ctan.org/pkg/tikzducks>) and is included in both  $\text{MiKTeX}$  and  $\text{\TeX Live}$  as TikZducks. If you seek any other assistance (not bug reports/feature requests), I suggest asking a question at <https://topanswers.xyz/tex>.

### 1.1 Acknowledgements

Without the friendly and helpful community of  $\text{\TeX}$  users this package would not exist. I would like to thank a few fellow users in particular:

First of all Carla Maggi for pointing out the overwhelming need of having a TikZducks package and valuable contribution to the package code, in particular the [football ducks](#), Paulo Cereda for his contagious enthusiasm for ducks (*Quack!*) and Ulrike Fischer for her useful TikZ advices and contributions to the package and coming to rescue for keyword highlighting in the package documentation.

Many other users contributed to this package (in random order): Enrico Gregorio helped to implement the `\tikzset{}` interface which makes it much easier to adjust the properties of the ducks to fit the user needs, Andrew Stacey contributed the TikZ Library “ducks”, Symbol 1 solved a few problems with default key values, Mihikma created the duck’s beard, Yudai Nakata



helped with problems of [\pdfrandomseed](#), @marmot for his seemingly infinite knowledge of TikZ which he shared with the world, @JairoAdelRio for contributing the ConTeXt User Module and last but not least my thanks go to Martin Schröder for his feedback to the code review.

The ducks mostly consist of basic geometric shapes drawn in TikZ. Some of the more complex shapes (e.g. the different hair styles) are first drawn in inkscape (<https://inkscape.org>) and then exported to TikZ paths using the svg2tikz extension (<https://github.com/xyz2tex/svg2tikz>).

## 1.2 License

Copyright © samcarter. Permission is granted to copy, distribute and/or modify this software under the terms of the LaTeX project public licence, version 1.3c or later <https://www.latex-project.org/lppl.txt>.

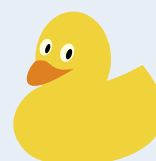
The shown example ducks are purely fictional characters, any resemblance to real ducks or persons is purely coincidental and no copyright infringement is intended.

## 2 Usage

The basic usage is fairly simple, to draw a duck:

### Basic duck

```
\begin{tikzpicture}  
  \duck  
\end{tikzpicture}
```



To customise this basic duck, the package uses pgf keys. For almost all parts the colour can be changed using `<shape name>=<colour name>`. For example to change the colour of the duck:

### Blue duck

```
\begin{tikzpicture}  
  \duck[body=blue]  
\end{tikzpicture}
```



If the keyword consists of multiples words, it works both with and without spaces. In the following usually the version without spaces is given.



In addition to the keys defined in this package, all usual TikZ and pgf keys can also be used. For example if the size of the ducks should be changed or shifted:

### Scaled duck and *The Ugly Duckling*

```
\begin{tikzpicture}[scale=0.6]
  \duck
  \duck[xshift=90pt, scale=.3, yshift=150pt]
  \duck[xshift=60pt, scale=.3, yshift=100pt]
  \duck[body=gray!50!white, head=gray!50!white,
        xshift=80pt, scale=.3, yshift=50pt]
\end{tikzpicture}
```



To make the usage easier for the TikZ-savvy users, Andrew Stacey contributed a TikZ library. It can be loaded with `\usetikzlibrary{ducks}`. In addition to the normal functionality of the TikZducks package, the ducks are now also available as pic. A short example:

### TikZ library “ducks”

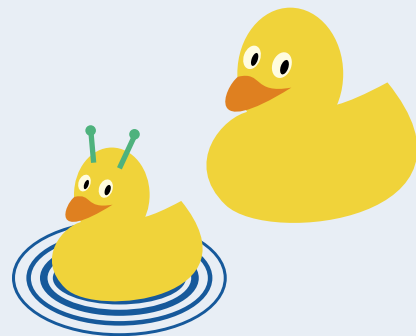
```
\documentclass{standalone}

\usepackage{tikz}
\usetikzlibrary{ducks}

\begin{document}

\begin{tikzpicture}
\draw (0,0) pic[
  duck/water=blue,
  duck/alien,
] {duck};
\draw (4,0) pic[
  scale=1.4,
] {duck};
\end{tikzpicture}

\end{document}
```



For everybody suffering from anatidaephobia, there is also a special option to not draw the duck:

### Invisible duck

```
\begin{tikzpicture}
  \duck[invisible]
\end{tikzpicture}
```

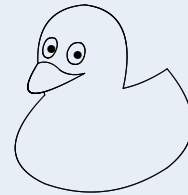
This can also be useful to recycle some of the accessories presented in 2.4.



For the T<sub>E</sub>X purists, there is also a picture mode variant:

#### picture mode duck

```
\begin{picture}(42,44)
  \picduck
\end{picture}
```



And thanks to @JairoAdelRio there is even a ConT<sub>E</sub>Xt User Module available. Some of the colours might look different and not being a ConT<sub>E</sub>Xt user myself, I can't guarantee maintenance of this module.

#### ConT<sub>E</sub>Xt User Module

```
\usemodule[tikzducks]
\usecolors[xwi]
\starttext

\starttikzpicture
  \duck[tophat,bowtie]
\stoptikzpicture

\stoptext
```



For those who prefer to work with pdfT<sub>E</sub>X:

#### pdfT<sub>E</sub>X

```
\input tikzducks-plain.tex

\tikzpicture
  \duck[bobblehat,cheese]
\endtikzpicture

\bye
```



## 2.1 Body parts

The various parts of the duck can also be coloured independently, i.e. body, head or bill:

#### Harlequin duck

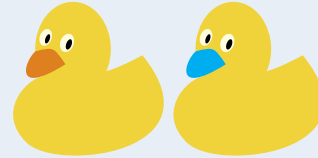
```
\begin{tikzpicture}
  \duck[body=yellow,
        head=yellow!50!orange,
        bill=red,
        eye=green]
\end{tikzpicture}
```



Furthermore using the keywords grumpy, laughing or parrot the shape of the bill can be changed:

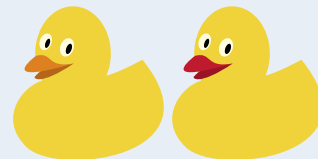
### Grumpy duck

```
\begin{tikzpicture}  
  \duck[grumpy]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[grumpy, bill=cyan]  
\end{tikzpicture}
```



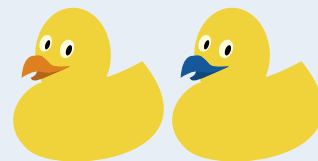
### Laughing duck

```
\begin{tikzpicture}  
  \duck[laughing]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[laughing, bill=red]  
\end{tikzpicture}
```



### Parrot duck

```
\begin{tikzpicture}  
  \duck[parrot]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[parrot, bill=blue]  
\end{tikzpicture}
```



## 2.2 Hair styles

Some duck also like to have nice hair cuts, several different hair styles are available:

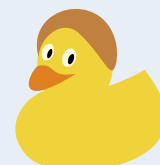
### Long hair duck

```
\begin{tikzpicture}  
  \duck[longhair]  
\end{tikzpicture}
```



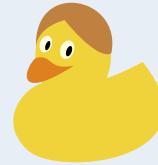
### Short hair duck

```
\begin{tikzpicture}  
  \duck[shorthair]  
\end{tikzpicture}
```



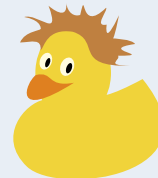
### Parting hair duck

```
\begin{tikzpicture}  
  \duck[parting]  
\end{tikzpicture}
```



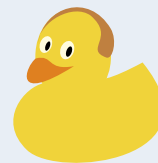
### Crazy hair duck

```
\begin{tikzpicture}  
  \duck[crazyhair]  
\end{tikzpicture}
```



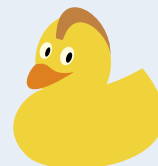
### Receding hair duck

```
\begin{tikzpicture}  
  \duck[recedinghair]  
\end{tikzpicture}
```



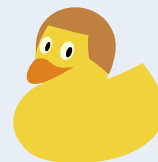
### Mohican duck

```
\begin{tikzpicture}  
  \duck[mohican]  
\end{tikzpicture}
```



### Mullet duck

```
\begin{tikzpicture}  
  \duck[mullet]  
\end{tikzpicture}
```



And of course the colour of each hair style can be adjusted:

### Coloured hair duck

```
\begin{tikzpicture}  
  \duck[longhair=teal]  
\end{tikzpicture}
```



Eyebrows and a beard are also part of the package. The colour choice is more tricky for them – if a colour is explicitly specified (eyebrow=<colour name> or beard=<colour name>) this colour



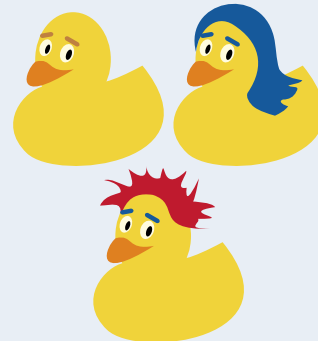
is of course used, but if no colour is given, it first falls back to the hair colour and only if the duck does not have any hairs, the default colour is applied.

### Eye brow duck

```
\begin{tikzpicture}
  \duck[eyebrow]
\end{tikzpicture}

\begin{tikzpicture}
  \duck[longhair=blue,eyebrow]
\end{tikzpicture}

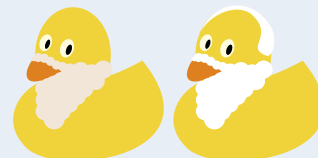
\begin{tikzpicture}
  \duck[crazyhair=red,eyebrow=blue]
\end{tikzpicture}
```



### Beard duck<sup>1</sup>

```
\begin{tikzpicture}
  \duck[beard=white!80!brown]
\end{tikzpicture}

\begin{tikzpicture}
  \duck[recedinghair=white,beard]
\end{tikzpicture}
```



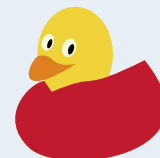
Please note that not all of the accessories, especially hats, shown in the following sections, will suite every hairstyle. In case the desired combination of hair style and hat does not work well, there is always the possibility to look up the original definition of the hat in the tikzducks source code and recreate it with a more suitable position or size.

## 2.3 Clothing

A respectable duck needs a suitable wardrobe. It can choose from several different garments. In it's infinite wardrobe these items are available in all colours definable in the current colour model.

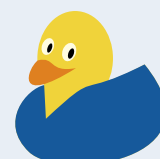
### T-shirt duck

```
\begin{tikzpicture}
  \duck[tshirt=red]
\end{tikzpicture}
```



### Jacket duck

```
\begin{tikzpicture}
  \duck[jacket=blue]
\end{tikzpicture}
```



<sup>1</sup> The beard is based on an answer by Mihikma, see <https://tex.stackexchange.com/a/401777/36296>



### Tie duck

```
\begin{tikzpicture}  
  \duck[tshirt,  
        jacket=gray,  
        tie]  
\end{tikzpicture}
```



### Bowtie duck

```
\begin{tikzpicture}  
  \duck[tshirt,  
        jacket=gray,  
        bowtie]  
\end{tikzpicture}
```



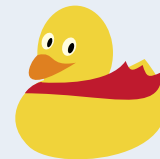
### Áo dài duck

```
\begin{tikzpicture}  
  \duck[tshirt=cyan,  
        aodai=blue!65!black]  
\end{tikzpicture}
```



### Cape duck

```
\begin{tikzpicture}  
  \duck[cape]  
\end{tikzpicture}
```



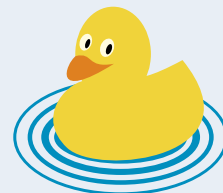
For more ways to customise the clothing also have a look at the [football ducks](#) in [Section 5](#).

## 2.4 Accessories

There is a multitude of things a duck might need. The following examples all also work without specifying a colour, but giving both an example with and one without explicit colour just makes this overview unnecessary long, so only one is given.

### Swimming duck

```
\begin{tikzpicture}  
  \duck[water=cyan!50!blue]  
\end{tikzpicture}
```





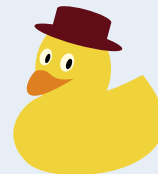
### Alien duck

```
\begin{tikzpicture}  
  \duck[alien=green!50!brown]  
\end{tikzpicture}
```



### Hat duck

```
\begin{tikzpicture}  
  \duck[hat=red!50!black]  
\end{tikzpicture}
```



### Tophat duck

```
\begin{tikzpicture}  
  \duck[tophat=blue!20!black]  
\end{tikzpicture}
```



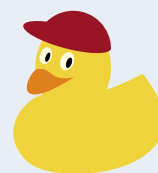
### Strawhat duck

```
\begin{tikzpicture}  
  \duck[strawhat=brown!50!white,  
        ribbon=gray]  
\end{tikzpicture}
```



### Basecap duck

```
\begin{tikzpicture}  
  \duck[cap=red!80!black]  
\end{tikzpicture}
```



### Conical hat duck

```
\begin{tikzpicture}  
  \duck[conicalhat=brown]  
\end{tikzpicture}
```



### Santa Duck

```
\begin{tikzpicture}
  \duck[santa=red!80!black,
        beard=white!80!brown]
\end{tikzpicture}
```



### Graduate duck

```
\begin{tikzpicture}
  \duck[graduate=gray!20!black,
        tassel=red!70!black]
\end{tikzpicture}
```



### Beret duck

```
\begin{tikzpicture}
  \duck[beret=red!70!black]
\end{tikzpicture}
```



### Peaked cap duck

```
\begin{tikzpicture}
  \duck[peakedcap=blue!50!black]
\end{tikzpicture}
```



### Harlequin duck

```
\begin{tikzpicture}
  \duck[harlequin=blue,
        niuqelrah=red]
\end{tikzpicture}
```



### Sailor duck

```
\begin{tikzpicture}
  \duck[sailor=white]
\end{tikzpicture}
```



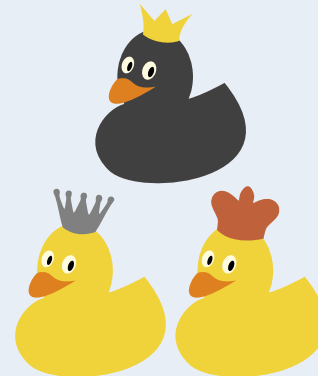
### Bobble hat duck

```
\begin{tikzpicture}  
  \duck[bobblehat=red!70!red]  
\end{tikzpicture}
```



### Crown duck

```
\begin{tikzpicture}  
  \duck[body=black!75!white,  
        crown=yellow!70!brown]  
\end{tikzpicture}  
  
\begin{tikzpicture}  
  \duck[queencrown=gray]  
\end{tikzpicture}  
  
\begin{tikzpicture}  
  \duck[kingcrown=brown!70!red]  
\end{tikzpicture}
```



### Knight duck

```
\begin{tikzpicture}  
  \duck[helmet=gray]  
\end{tikzpicture}
```



### Viking duck

```
\begin{tikzpicture}  
  \duck[viking=gray]  
\end{tikzpicture}
```



### Devil duck

```
\begin{tikzpicture}  
  \duck[devil=red]  
\end{tikzpicture}
```



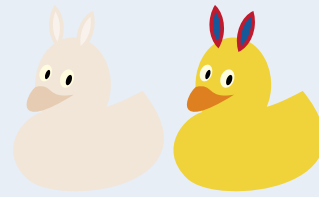
### Unicorn duck

```
\begin{tikzpicture}  
  \duck[body=pink,  
        unicorn=magenta!60!violet,  
        longhair=magenta!60!violet]  
\end{tikzpicture}
```



## Bunny duck<sup>2</sup>

```
\begin{tikzpicture}
  \duck[body=white!80!brown,
        bill=white!60!brown,
        bunny]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[bunny=red, inear=blue]
\end{tikzpicture}
```



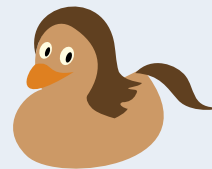
## Sheep duck<sup>3</sup>

```
\begin{tikzpicture}
  \duck[body=white!80!brown,
        bill=white!60!brown,
        sheep]
\end{tikzpicture}
```



## Horse duck<sup>4</sup>

```
\begin{tikzpicture}
  \duck[body=brown!80!white,
        longhair=brown!50!black,
        horsetail]
\end{tikzpicture}
```



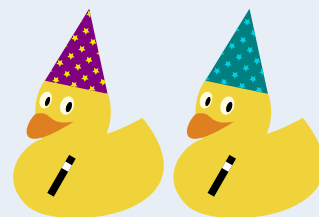
## Witch duck

```
\begin{tikzpicture}
  \duck[witch=black!50!gray,
        longhair=red!80!black,
        jacket=black!50!gray,
        magicwand]
\end{tikzpicture}
```



## Magic duck

```
\begin{tikzpicture}
  \duck[magichat,magicwand]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[magichat=teal,
        magicstars=blue!30!cyan,
        magicwand]
\end{tikzpicture}
```



<sup>2</sup> Unless an explicit colour is specified, the bunny ears will take the body colour as default colour, the inner parts will be drawn in a lighter shade.

<sup>3</sup> The in-ear colour of the sheep is chosen to be the same as the bill

<sup>4</sup> If no colour is specified, the horse tail will have the same colour as the hair

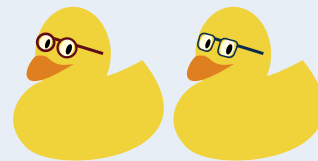
## Sombrero Duck<sup>5</sup>

```
\begin{tikzpicture}
  \duck[
    sombrero=orange!70!yellow,
    sombreroa=green!70!blue,
    sombrerob=red,
    sombrerooc=blue
  ]
\end{tikzpicture}
```



## Glasses duck

```
\begin{tikzpicture}
  \duck[glasses=red!50!black]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[squareglasses=blue!50!black]
\end{tikzpicture}
```



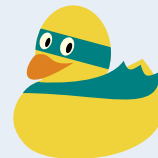
## Sunglasses duck

```
\begin{tikzpicture}
  \duck[sunglasses=blue]
\end{tikzpicture}
```



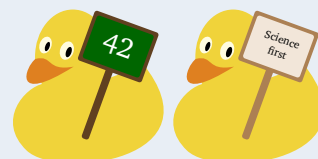
## Superhero duck

```
\begin{tikzpicture}
  \duck[mask=teal,cape=teal]
\end{tikzpicture}
```



## Signpost duck

```
\begin{tikzpicture}
  \duck[signpost=42]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[signpost=\scalebox{0.4}{
    \parbox{2cm}{\color{black}
      \centering Science\\ first}},
    signcolour=brown!70!gray,
    signback=white!80!brown]
\end{tikzpicture}
```

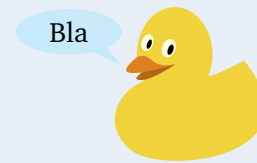


<sup>5</sup> The sombrero was kindly contributed by Carla Maggi



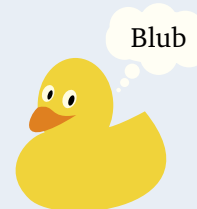
### Speaking duck<sup>6</sup>

```
\begin{tikzpicture}
  \duck[speech={Bla},
        bubblecolour=cyan!20!white,
        laughing]
\end{tikzpicture}
```



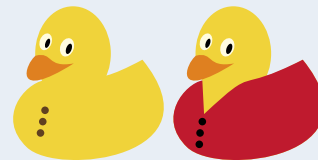
### Thinking duck<sup>6</sup>

```
\begin{tikzpicture}
  \duck[think={Blub},
        bubblecolour=white!95!yellow]
\end{tikzpicture}
```



### Buttons duck<sup>7</sup>

```
\begin{tikzpicture}
  \duck[buttons=brown!50!black]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[jacket=red,buttons]
\end{tikzpicture}
```



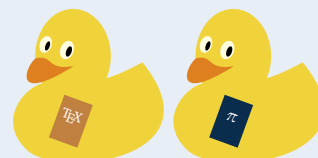
### Dinner jacket duck

```
\begin{tikzpicture}
  \duck[jacket=gray,
        lapel=black,buttons]
\end{tikzpicture}
```



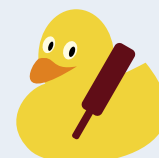
### Book duck

```
\begin{tikzpicture}
  \duck[book=\scalebox{0.5}{\TeX}]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[book=\scalebox{0.6}{\pi},
        bookcolour=blue!50!black]
\end{tikzpicture}
```



### Cricket duck

```
\begin{tikzpicture}
  \duck[cricket=red!50!black]
\end{tikzpicture}
```



<sup>6</sup> Both the speech and thought bubble are inspired by the wonderful [ducksay package](#)

<sup>7</sup> In case the duck is wearing a jacket, the buttons are positioned a bit lower



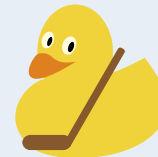
### Football duck<sup>8</sup>

```
\begin{tikzpicture}
  \duck[football=white!85!yellow]
\end{tikzpicture}
```



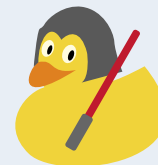
### Hockey duck

```
\begin{tikzpicture}
  \duck[hockey=brown!70!black]
\end{tikzpicture}
```



### Lightsaber duck<sup>9</sup>

```
\begin{tikzpicture}
  \duck[lightsaber=red,
        darthvader=black!30!gray]
\end{tikzpicture}
```



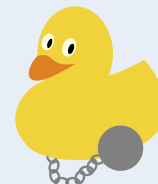
### Torch duck

```
\begin{tikzpicture}
  \duck[torch=black!30!gray]
\end{tikzpicture}
```



### Prison duck

```
\begin{tikzpicture}
  \duck[prison=gray]
\end{tikzpicture}
```



### Shepherd duck

```
\begin{tikzpicture}
  \duck[crozier=brown!80!black]
\end{tikzpicture}
```



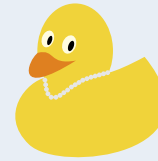
<sup>8</sup> The football duck is simplified version from an answer by Carla Maggi, <https://tex.stackexchange.com/a/387126/36296>

<sup>9</sup> Dedicated to the Counter Wizard (aka Christian Hupfer)



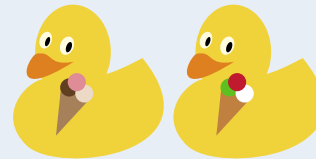
### Necklace duck

```
\begin{tikzpicture}
  \duck[necklace=gray!20!white]
\end{tikzpicture}
```



### Icecream duck

```
\begin{tikzpicture}
  \duck[icecream]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[icecream=brown,
        flavoura=green!50!brown,
        flavourb=white,
        flavourc=red]
\end{tikzpicture}
```



### Chef duck<sup>10</sup>

```
\begin{tikzpicture}
  \duck[chef=white!95!yellow,
        rollingpin=brown!80!black]
\end{tikzpicture}
```



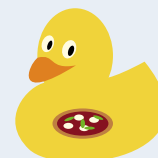
### Cake duck

```
\begin{tikzpicture}
  \duck[cake=red!50!violet!80!black]
\end{tikzpicture}
```



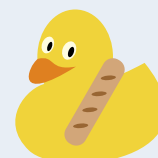
### Pizza duck

```
\begin{tikzpicture}
  \duck[pizza]
\end{tikzpicture}
```



### Baguette duck

```
\begin{tikzpicture}
  \duck[baguette=brown]
\end{tikzpicture}
```



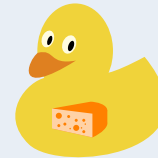
<sup>10</sup>The chef duck is based on an idea by Carla Maggi, please see the following link for a more sophisticated version of the toque and the rolling pin: <https://tex.stackexchange.com/a/387126/36296>





### Cheese duck

```
\begin{tikzpicture}
  \duck[cheese=orange]
\end{tikzpicture}
```



### Milkshake duck

```
\begin{tikzpicture}
  \duck[milkshake=red!20!white]
\end{tikzpicture}
```



### Wine duck<sup>11</sup>

```
\begin{tikzpicture}
  \duck[wine=red!70!black]
\end{tikzpicture}
```



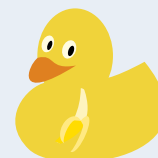
### Cocktail duck

```
\begin{tikzpicture}
  \duck[cocktail]
\end{tikzpicture}
```



### Banana duck<sup>12</sup>

```
\begin{tikzpicture}
  \duck[banana=yellow!80!orange]
\end{tikzpicture}
```



### Stick duck<sup>12</sup>

```
\begin{tikzpicture}
  \duck[stick=red!60!green,leaf=green!70!red]
\end{tikzpicture}
```



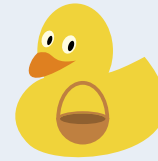
<sup>11</sup>According to the resident Italian wine expert of the [TeX.SE chatroom](#), the duck is drinking a fine Brunello di Montalcino

<sup>12</sup>The banana and the stick were kindly contributed by @NuzzleTOO



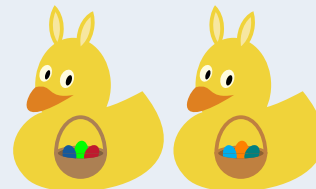
### Basket duck<sup>13</sup>

```
\begin{tikzpicture}  
  \duck[basket=brown]  
\end{tikzpicture}
```



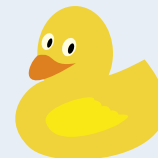
### Easter duck<sup>13</sup>

```
\begin{tikzpicture}  
  \duck[bunny,easter]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[bunny,easter=brown,egga=cyan,  
        eggb=orange,eggc=teal]  
\end{tikzpicture}
```



### Wing duck

```
\begin{tikzpicture}  
  \duck[wing=yellow!90!brown]  
\end{tikzpicture}
```



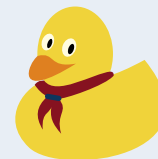
### Ducktor

```
\begin{tikzpicture}  
  \duck[stethoscope=gray!80!black]  
\end{tikzpicture}
```



### Neckerchief duck

```
\begin{tikzpicture}  
  \duck[neckerchief=red!70!black,  
        woggle=blue!60!black]  
\end{tikzpicture}
```



### Winter duck

```
\begin{tikzpicture}  
  \duck[bobblehat=red!70!black,  
        scarf=red!70!black]  
\end{tikzpicture}
```



<sup>13</sup>The basket and Easter basket was kindly contributed by Benito van der Zander

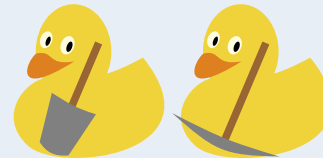
## Snow Duck<sup>14</sup>

```
\begin{tikzpicture}  
  \duck[snowduck=white]  
\end{tikzpicture}
```



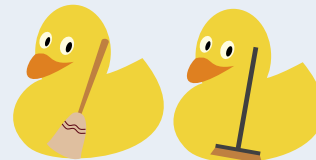
## Shovelling Duck

```
\begin{tikzpicture}  
  \duck[shovel=gray]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[pickaxe=gray]  
\end{tikzpicture}
```



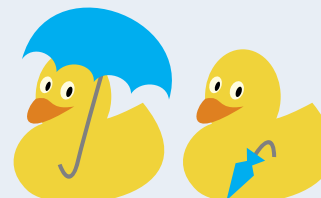
## Sweeping Duck

```
\begin{tikzpicture}  
  \duck[strawbroom=brown!50!white,  
        strawbroomstick=brown,  
        strawbroomribbon=red!50!black]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[broom=brown, broomstick=gray!50!black]  
\end{tikzpicture}
```



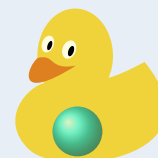
## Umbrella Duck

```
\begin{tikzpicture}  
  \duck[umbrella=cyan]  
\end{tikzpicture}  
\begin{tikzpicture}  
  \duck[umbrellaclosed=cyan]  
\end{tikzpicture}
```



## Fortune Quacker<sup>15</sup>

```
\begin{tikzpicture}  
  \duck[crystalball=cyan]  
\end{tikzpicture}
```



## Handbag Duck

```
\begin{tikzpicture}  
  \duck[handbag=red!70!black]  
\end{tikzpicture}
```

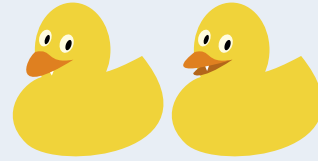


<sup>14</sup>The snowduck is dedicated to all Japanese T<sub>E</sub>X users

<sup>15</sup>The crystal ball is kindly contributed by @marmot

### Vampire Duck

```
\begin{tikzpicture}
  \duck[vampire=white]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[laughing, vampire=white]
\end{tikzpicture}
```



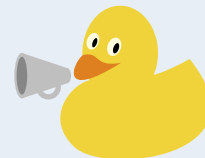
### Overleaf Duck<sup>16</sup>

```
\begin{tikzpicture}
  \duck[overleaf]
\end{tikzpicture}
```



### Megaphone Duck

```
\begin{tikzpicture}
  \duck[megaphone=lightgray]
\end{tikzpicture}
```

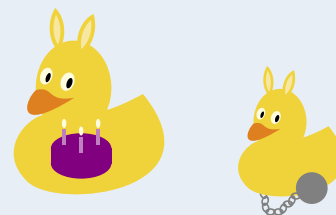


## 3 Random ducks

With all these available accessories it might be hard to decide which one to choose, but don't worry the TikZducks provide a solution for this dilemma, the random duck, or short `\randuck`, which automatically creates a duck with a randomly chosen accessories and something on top of the head (hair, a hat, ears, alien antenna ...)

### Random duck

```
\begin{tikzpicture}
  \randuck
  \randuck[xshift=3cm, scale=0.7]
\end{tikzpicture}
```



In case the duck should not be completely random, but only some of the random elements are desired, these can be accessed independently by using `\randomhead` and `\randomaccessories` for a random headpiece and a random accessories, respectively. Small caveat: Before using

<sup>16</sup>added to celebrate that TikZducks are now also available on overleaf, see <https://www.overleaf.com/blog/tex-live-upgrade-september-2019>

`\randomhead` or `\randomaccessories`, `\shuffleducks` has to be used to provide the random items (for `\randuck` this is done automatically).

#### Random head gear and accessories

```
\begin{tikzpicture}
  \shuffleducks
  \duck[\randomhead, \randomaccessories]
\end{tikzpicture}
```

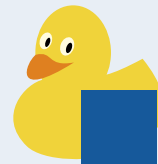


## 4 Further customisation

This package will never be able to do everything every potential user might want to do, as this number quickly approaches  $\infty$  – but as the ducks are simply things inside tikzpictures, all the heavy weapons of the TikZ package are available for further customisation.

#### Adding things to the duck

```
\begin{tikzpicture}
  \duck
  \fill[blue] (2,0) rectangle (1,1);
\end{tikzpicture}
```



#### Monochrome duck

```
\begin{tikzpicture}
  \selectcolormodel{gray}
  \duck
\end{tikzpicture}
```



For convenience the more complex paths of this package are stored in macros, which can easily be reused:

#### Redraw parts

```
\begin{tikzpicture}
  \duck
  \path[preaction={fill, red!50!black},
    pattern={Stars[distance=1.7mm,
      radius=0.5mm,angle=32]}],
    pattern color=yellow]
    \duckpathlonghair;
\end{tikzpicture}
```



In detail, the following paths are available:

`\duckpathbody`, `\duckpathgrumpybill`, `\duckpathbill`, `\duckpathtshirt`,  
`\duckpathjacket`, `\duckpathcape`, `\duckpathshorthair`, `\duckpathlonghair`,  
`\duckpathcrazyhair`, `\duckpathrecedinghair`, `\duckpathcrown`,  
`\duckpathmohican`, `\duckpathmullet`, `\duckpathqueencrown`,  
`\duckpathkingcrown`, `\duckpathdarthvader`, `\duckpathhorsetail`

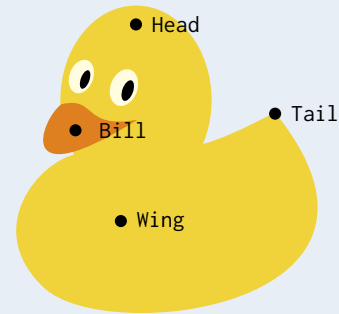


In case one of the other shapes is needed, please have a look at the package source code, which can be found in `tikzducks.sty`.

To ease the placement of further accessories, some particular spots of the duck are marked with TikZ coordinates, namely the wing, head, bill and tail.

### Coordinates

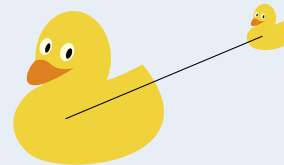
```
\begin{tikzpicture}[scale=2]
  \duck
  \fill[black] (wing) circle (0.04);
  \fill[black] (head) circle (0.04);
  \fill[black] (bill) circle (0.04);
  \fill[black] (tail) circle (0.04);
  \node[xshift=15] at (wing) {Wing};
  \node[xshift=15] at (head) {Head};
  \node[xshift=18] at (bill) {Bill};
  \node[xshift=15] at (tail) {Tail};
\end{tikzpicture}
```



To distinguish coordinates from multiple ducks in the same `tikzpicture`, one can name the ducks using the option `name`. If this option is used, the coordinates are prefixed with the respective name and a dash: `<name>-<coordinate>`.

### Named coordinates

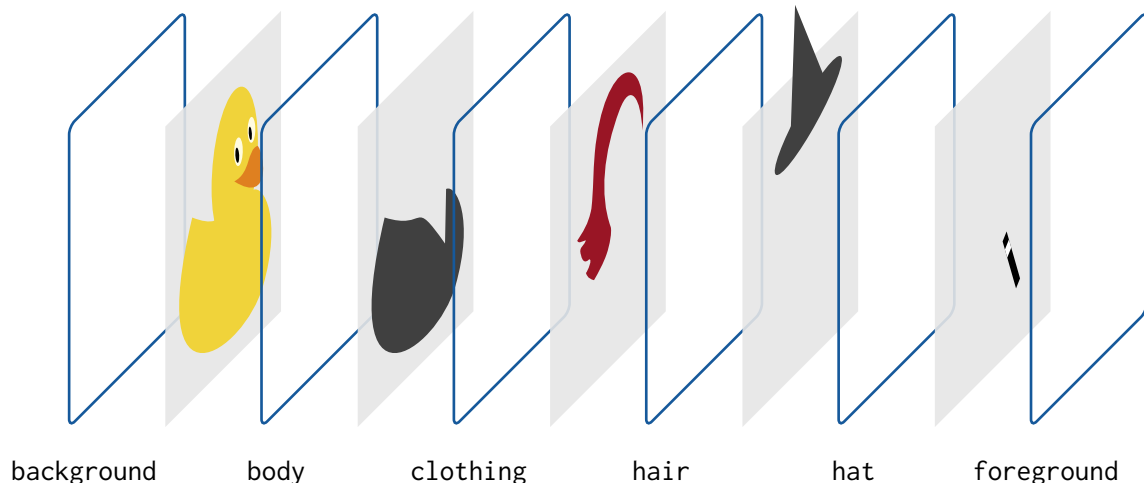
```
\begin{tikzpicture}
  \duck[name=foo]
  \duck[name=bar,xshift=90pt,
        scale=.3,yshift=150pt]
  \draw (foo-wing) -- (bar-wing);
\end{tikzpicture}
```



Sometimes it might be desirable to add things at a specific z-position, for example re-draw a t-shirt with some pattern that should be below the duck's hair and accessories. To facilitate this the TikZducks provide a couple of hooks:

`\duckhookbackground`, `\duckhookbody`, `\duckhookclothing`, `\duckhookhair`,  
`\duckhookhat`, `\duckhookforeground`

`\duckhook...`



These hooks can be defined by the user as needed:

### Hooks

```
\begin{tikzpicture}
  \begingroup
    \newcommand{\duckhookclothing}{
      \path[pattern={Stars[distance=1.7mm,
        radius=0.5mm,angle=32]},
        pattern color=yellow]
        \duckpathjacket;
    }
    \duck[witch=black!50!gray,
      longhair=red!80!black,
      jacket=black!50!gray,
      magicwand]
  \endgroup
\end{tikzpicture}
```



## 5 Football ducks – contributed by Carla Maggi

TikZducks are huge sports fans! They do a lot of different sports themselves (see all the piece of sports equipment amongst the accessories), but to cheer their favourite teams, they need suitable fan clothing. In [The Duck Pond](#) Carla Maggi was so kind to contribute the necessary code to dress the ducks in their team's colours.

A (non-representative) survey<sup>17</sup> showed that most sports jerseys can be emulated by drawing stripes of various colours, sizes and orientations – and this is exactly what the `stripes` macro does, drawing stripes across the shape of the duck's jacket. In order to preserve the whole flexibility of this powerful macro, it was integrated as an independent command into the TikZducks package, this means it can simply be used on top of a drawn duck:

### stripes macro

```
\begin{tikzpicture}
  \duck
  \stripes
\end{tikzpicture}
```



This may be impractical as the stripes are drawn on top of any accessories or hair the duck may have. Therefore the option `stripes` let's you inject any code you would normally use to draw the stripes at the correct layer above the duck's clothing but beneath the hair and accessories:

### Using stripes for tikzducks

```
\begin{tikzpicture}
  \duck[longhair,stripes={\stripes}]
\end{tikzpicture}
```



<sup>17</sup>see the selection of jerseys in <https://tex.stackexchange.com/a/387126/36296>



Not all teams wear vertically stripped jerseys, therefore many parameters can be adjusted to best emulate your favourite teams jerseys. The available options are:

color      colour of the stripes, default: black  
distance    periodicity length of the stripes, default: 0.3  
width       stripe width, default: 0.15  
height      length of the stripes, default: 2.7  
initialx    x coordinate of staring point, default: 0.1  
initialy    y coordinate of staring point, default: -0.3  
rotate      rotation angle in degree, default: -10  
emblem     possibility to add logos etc., default: empty

Please note that the colour of the stripes only affects the stripes themselves, to influence the colour of the empty space between the stripes, clothe the duck with a tshirt or jacket of the desired colour underneath the stripes.

### stripes options

```
\begin{tikzpicture}
  \duck[stripes]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[stripes={\stripes[color=blue]}]
\end{tikzpicture}

\begin{tikzpicture}
  \duck[stripes={\stripes[distance=0.6]}]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[stripes={\stripes[width=0.03]}]
\end{tikzpicture}

\begin{tikzpicture}
\duck[stripes={\stripes[emblem={
\includegraphics[width=.3cm]{example-image-a}
}}]}]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[stripes={\stripes[height=1.0]}]
\end{tikzpicture}

\begin{tikzpicture}
  \duck[stripes={\stripes[initialx=1]}]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[stripes={\stripes[initialy=0.8]}]
\end{tikzpicture}

\begin{tikzpicture}
  \duck[stripes={\stripes[rotate=45]}]
\end{tikzpicture}
\begin{tikzpicture}
  \duck[stripes={\stripes[rotate=-45]}]
\end{tikzpicture}
```





For more complex or multicoloured designs the stripes can easily be stacked on top of each other:

### multicoloured stripes

```
\begin{tikzpicture}
  \duck[tshirt=red, stripes={
    \stripes[color=yellow, width=0.1]
    \stripes[color=orange, width=0.1,
      initialx=0.0]]]
\end{tikzpicture}
```



A few examples to see stripes in action:

### Inter duck

```
\definecolor{blueinter}{RGB}{0,102,170}%
\begin{tikzpicture}
  \duck[tshirt=black,
    stripes={\stripes[color=blueinter]},
    football]
\end{tikzpicture}
```



### Juve duck

```
\begin{tikzpicture}
  \duck[tshirt=black,
    stripes={\stripes[color=white]},
    football]
\end{tikzpicture}
```



### Milan duck

```
\begin{tikzpicture}
  \duck[tshirt=black,
    stripes={\stripes[color=red]},
    football]
\end{tikzpicture}
```



### Mönchengladbach duck

```
\definecolor{mggreen}{RGB}{37,166,89}%
\begin{tikzpicture}
  \duck[tshirt=mggreen,
    stripes={\stripes}, football]
\end{tikzpicture}
```



### Palmeiras duck

```
\definecolor{verdep}{RGB}{0,100,55}%
\begin{tikzpicture}
  \duck[tshirt=green, jacket=verdep, football]
\end{tikzpicture}
```



### Cagliari duck

```
\definecolor{rossocagliari}{RGB}{149,20,38}%
\definecolor{blucagliari}{RGB}{23,52,84}%
\begin{tikzpicture}
  \duck[tshirt=white,
        jacket=blucagliari,
        stripes={
          \stripes[color=rossocagliari,
                    width=0.46, distance=3]},
        football]
\end{tikzpicture}
```



### Sampdoria duck

```
\begin{tikzpicture}
  \duck[tshirt=blue, jacket=blue, stripes={
    \stripes[color=white, rotate=-90,
              width=0.6, distance=1]
    \stripes[color=red, rotate=-90,
              width=0.2, distance=1.2]
    \stripes[color=black, rotate=-90,
              width=0.1, distance=1.3]
  }, football]
\end{tikzpicture}
```



### Brescia duck

```
\begin{tikzpicture}
  \duck[tshirt=blue, jacket=blue, stripes={
    \stripes[color=white, rotate=-70,
              width=0.22, distance=1.1,
              initialy=0.01]
    \stripes[color=white, rotate=40,
              width=0.2, distance=1.8,
              initialy=1.0, initialx=0.285]
  }, football]
\end{tikzpicture}
```



## 6 Examples

To see more examples of what can be done with the TikZducks, you are invited to visit <https://github.com/samcarter/tikzducks>.

If you have created a duck you would like to share with the community, I would be happy to add it to this collection, just make a pull request or open an issue in the bug tracking system.

