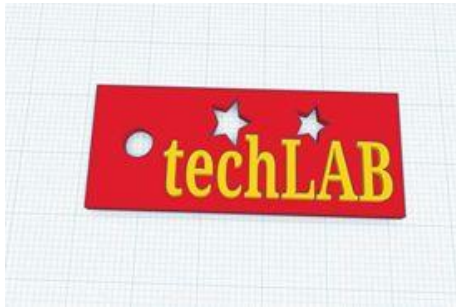
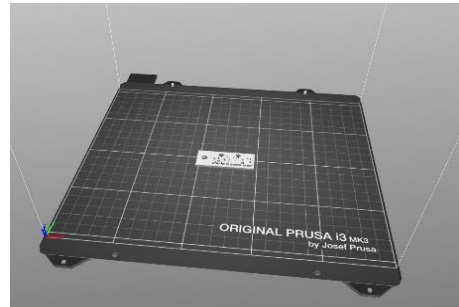


These instructions will guide you on your way to 3D-print your personalised key tag!

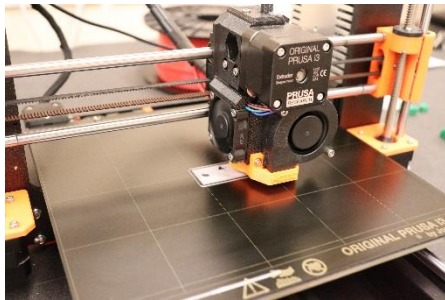
Overview



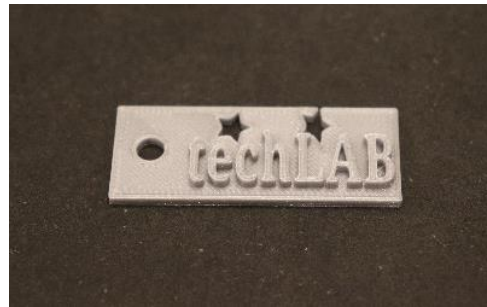
The first step is to design your 3D-model in the easy-to-use CAD-program Tinkercad.



The process "slicing" then translates the 3D-model into the language of the 3D-printer, the G-code.


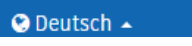
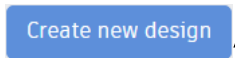




The G-code is sent to the 3D-printer, which creates your object by melting and depositing layers of plastic filament.

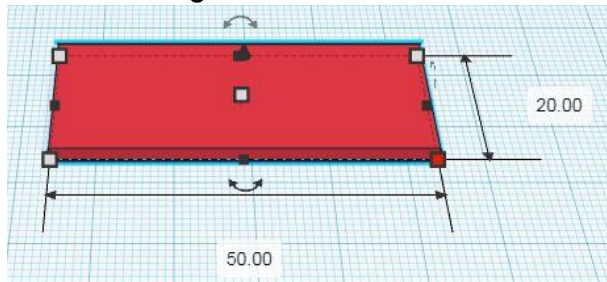


Finally, you will hold your first 3D-print in your own hands. The print will be yours to take home!

Let's go!

- 1) Open Tinkercad by clicking on the -icon on the desktop. If you are asked to log in, please call an explainer!
- 2) If the website is not in English scroll to the bottom of the page, click on the language next to the small world logo  and select **English**.
- 3) Click on  An empty workspace will be opened.
- 4) Give your design a name. Next to the -logo you will find a weird name. Click on it and enter "Keytag_NAME" (*without the quotation marks*).
- 5) On the right side you will find objects of various shapes. Select the red "Box" by clicking once on it. 
- 6) Move the Box into the middle of the workspace and drop it there by left-clicking.
- 7) Click on the small white square in the middle of the Box to adapt its height. Change the value of the **height** to **2 mm**.

- 8) Click on one of the small white squares  at the corners of the Box. Change the width to 50 mm and the length to 20 mm.








- 9) A key tag needs a hole! Get a **striped cylinder** and drop it onto the workspace.
- 10) Click on one of the white boxes of the **cylinder** and set **both values to 5 mm**.
- 11) Position the cylinder close to the left edge of the box. Moving can be done by using the arrow keys of the keyboard or by mouse.




- 12) It can be useful to change the view of your workspace. At the top left corner of the screen there is a white cube. Click on "TOP" of the cube to change the view to the top view.



Pro-Tip: Try holding the right mouse button while moving the mouse.

- 13) Hold down the combination  +  on the keyboard to select all elements, followed by  +  to group them. Wait a little and the hole will be cut out!
- 14) Look for the  -object on the right side and drag it onto your box.
- 15) To fill in your name, click on the textbox that reads "TEXT" on the right side of the screen (it should be next to the striped box). **Replace the "TEXT" with your name.**
- 16) **Change the height of your name to 3 mm** (see Step 7). The name only sticks out by 1 mm, because the bottom of the name is flush with the bottom of the box.
- 17) Adjust the width and the length of your name so that it fits onto the red box.

YOU ARE DONE! Ask an explainer for the next steps

- You can also work further on your design! Adding or cutting out shapes, rounding corners, the possibilities are endless! Just keep in mind to keep your design small: an object of doubled size takes 8 times as long to print!
- Any shape can be a hole! Click on the object and then select the striped circle on the right to turn the object into a hole.
- You might want to change the z-position (level) of an object. To achieve this, hold down  and press the  or  -key on the keyboard. Changing the view to a side view is a good idea to make the z-positioning of objects easier.

