Project#1. 2D-Pocket Milling Operation Tool Path

Due: Saturday, Sep. 28th , Instructor: Ahmad Mohammadpanah

In this project, you create the tool path for **a 2D-Pocket Milling** on a block of $\mathbf{100 \times 75 \times 20}\boldsymbol{mm}$. The depth of pocket must be **3 mm**. The pocket is "**Your Name**" with Font "**Arial**"; or any other font you think is **machinable** (but you must add fillet for sharp corners, depends on the radius of milling tool you choose). If your name has more than 7 letters, then use a short version of your name. You can decide for the Font size whatever fits on the block (for example I used Font 25 for my name, Figure below).

Assume the material is Aluminium; and the CNC machine is small and low power (Max Rotation Speed 3000RPM, and Max Feed 200 mm/min). Assume that the block is ready for the Pocket Milling and does not need any other operation (i.e. Face Milling).

You need to submit (**upload on Canvas**) just the **G-Code** (file.nc) and an **image** like this one (below). I will randomly pick some files to check the G-Code and I will pick randomly 3 files and will send it to a CNC Machine to see how they will turn out.

Tutorial:

1- On Monday (Sep 23rd), I will teach you (briefly) how to make this by **Fusion 360**; but if you know other software, and want to use other software, feel free to do so. If you install Fusion 360, you can bring your Laptop, or just listen and learn during the lecture; and try it later.

2- Here is the link to download Fusion 360 (Free for 3 Years for Students, You must use your UBC Email for signing up).

3- Here is a video for beginner for 3D Modeling.

4- Here is a video for CAM.

5- After you create your account, and install the software, you have access to some "Short and Useful" video Tutorials.