Milling something big

Final project - Modern Manufacturing Processes

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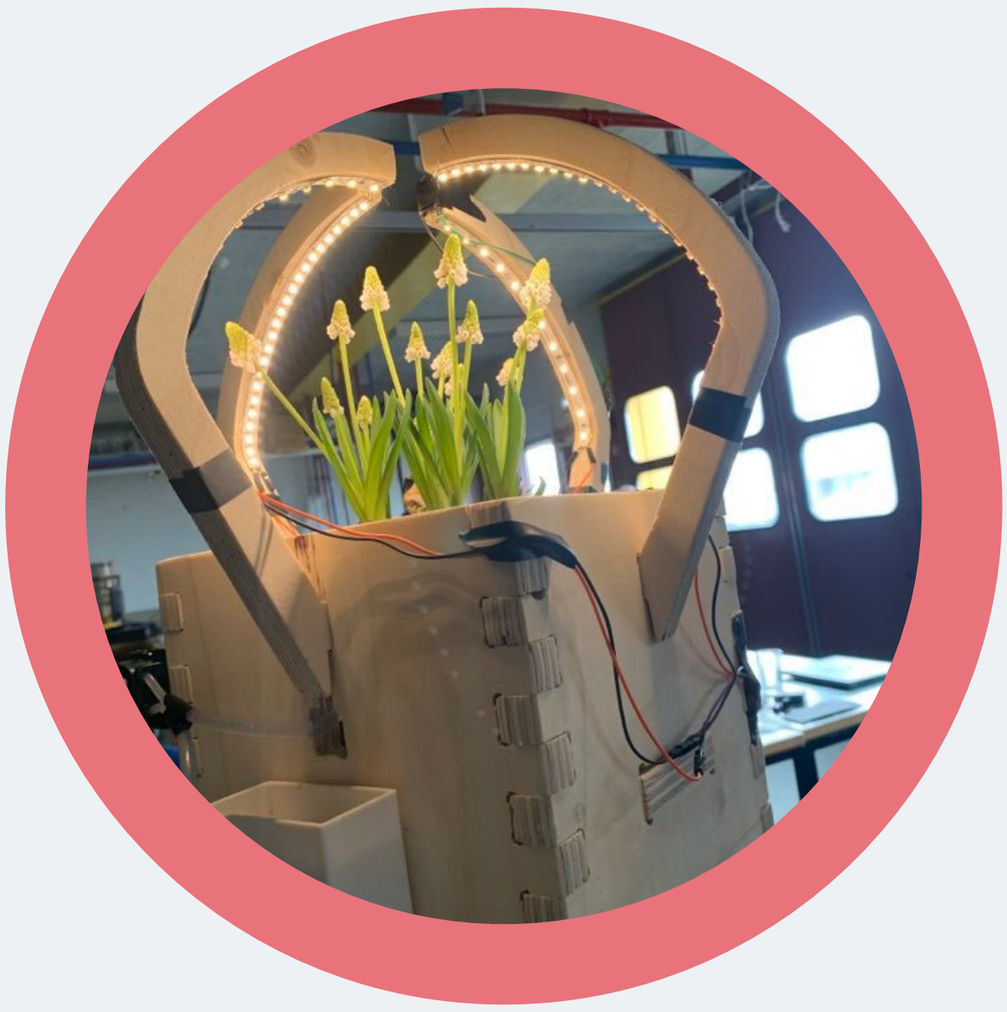

ABOUT THE ASSIGNMENT

Objective
For the final project in the course Modern Manufacturing Processes, students were offered a choice between “milling something big” or milling a wax cast. This group opted for the former. The object the group decided to mill was a flower pot. The pot was drawn up in the Fusion 360 program and exported to a vector format to prepare for milling. The assignment was completed in FabLab Reykjavik, and the milling was performed by a ShopBot, which is a large milling machine.

The Flower pot
While designing the pot the group decided to keep it sleek, while not losing effectiveness. The stand on which the pot stands is designed to resemble a tree trunk. The pot itself contains two “levels”. The lower one contains a water supply for the purpose of easy watering and the upper one houses the plant. Finally four “arms” are placed on top to provide the light the plant requires. The pot is 67 cm high and 35 cm on both sides where it is at it's widest.

Material
The pot is cut from 18mm thick plywood, and the group decided to mill as much of the components as possible. The plywood was then polished with P80, 120 & 240 sandpaper to provide as smooth a finish as possible. A decision was made not to varnish the pot, purely from an aesthetic point of view. The pot was furthermore “wrapped” with 3mm acrylic to make sure the plywood would not draw moisture from the soil. Finally a bracket was drawn and 3D printed which serves the purpose of making the refill of the water tank as easy as possible.
-A.H.A