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MEC322 : MECHANICAL ENGINEERING DESIGN

PROJECT:
MULTIPURPOSE BLENDER

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ABSTRACT

Our product multipurpose blender, as the name implies it provides multiple functions of blenders in one device. The simple appearances attract people in every level of ages, as it will be easy to handle, easy to understand on how to use it and easy to fit-in in the kitchen. The main objective of designing and building this product is to save time consumed when the users does not need to keep on re-washing the blender jug after use it as there is two more blender jug provided and can be used.

The blender works when the switch is plugged in and the batteries are connected so that the users can start to choose which blender they want to use. To control the rotation of the plate, we use a special component which is the Arduino UNO R3 which is connected to the rotary encoder and the easy driver, powered by batteries. This product is so easy to use and can be classified a user friendly product as the users just need to rotate the rotary encoder to choose the blender until it reach at the location of the blender motor at the centre, lock it in and the blender is ready to use.

Some safety precaution provided by this product is it can only operate when the blender base is lock properly to the blender clutch and the blender will only operate when the ON button is pushed continuously along the blending process. The purpose of this precaution is to avoid any injury or harm while the blender is working as the frequent vibration may cause the blender to be disconnected during the process, so that is why we provided locks.

Last but not least, the components that use a special material is the base of the product it is made up of fiberglass, replace the usual material used in the other product which is plastic as we found that it is easy to be fabricated, can handle vibration well and also has a good strength to handle the load from the canisters and the moving wooden plate.

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