The idea is good. But have you considered non-electronic alternatives?
There are special mugs that can keep the content hot or cold for an extended period of time.

For your proposed product, you will need an additional power socket. or Will it be running on a battery?

PROJECT PROPOSAL

PELTIER MUG

GROUP PHOENIX

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Problem

In today's technologically advanced world, we have the ability to solve a multitude of problems. However, as we rely more on technology to make our lives easier, even minor issues can feel like major obstacles. One common problem that many people encounter in their daily lives is the difficulty of enjoying a hot cup of coffee or a cold beverage while working. This is particularly true for professionals who work in demanding environments such as programmers, stock traders, animators, and architects. The problem stems from the fact that work demands our full attention, causing us to forget about our drinks and allowing them to become either too hot or too cold. The goal of our proposed product is to improve the working environment by offering a solution to this issue.

Solution

Our innovative solution addresses the common problem of drinks losing their optimal temperature during work, which can hinder productivity and enjoyment. We propose designing a mug that can either maintain the drink's temperature or adjust it to the ideal temperature for the specific beverage. To complement the mug, we will develop a specialized mug holder equipped with an automatic lid to prevent any contamination of the drink and ensure optimal hygiene. By eliminating the need to frequently check and adjust drink temperatures, individuals can stay refreshed and focused on their work without compromising their drinking experience. With our solution, the issue of drinks losing their optimal temperature can be greatly minimized, enhancing the overall work experience.

Methodology and scope

Our product comprises of two components: a regular ceramic mug with a non-corrosive metallic bottom, and a specialized mug holder. The mug can be used as a regular mug, with no electronic components inside. The mug holder is the core of our solution, equipped with a Peltier module that maintains the temperature difference when a voltage is applied. When the mug is placed on the holder, the lid automatically closes, and the temperature sensor reads the temperature to activate the Peltier module accordingly, maintaining the necessary temperature in automatic mode. In manual mode, the Peltier module keeps the temperature set by the user. The automatic lid opens when the mug needs to be taken out of the holder.