

Personal Project Proposal: Intelligent Oven

For my project, I would like to implement an oven controller that has four important modes: defrost, cook, warm, and self-clean. This device is geared towards the typical person with a busy lifestyle: college student, parent, etc. With this oven controller, a college student can put food in the oven and leave for class confident that the food will be ready and waiting when he or she returns.

Inside the oven, there will be a food thermometer that gives the oven controller the current temperature of the food. This food thermometer will be used by the defrost, cook, and warm modes.

After placing the food in the oven, if the user presses the defrost mode button, the oven controller will know not to start the cooking process until the food item is defrosted. The controller will determine this via the food thermometer.

The user will then be prompted for two settings, the first being the cooking temperature and the second being the duration. For the cooking temperature, a maximum temperature limit will be enforced for safety reasons.

After, the user also has the option of using the warm mode. With the warm option, the oven controller will note the temperature of the food as soon as it is done cooking. If the temperature of the food drops ten degrees or more, the oven will reheat the food until it reaches its original temperature. This cycle will continue until the food is taken out of the oven, thereby insuring that the food is warm when the user is ready to eat.

Finally, when the user finishes choosing those appropriate settings, the user will be able to implement those settings with the push of a start button.

An added bonus is the self-clean feature. The user can specify to the oven controller that the oven periodically self-cleans. For example, the user can tell the oven controller to self-clean after every 5 cooking sessions. With that in mind, the oven controller will know not to clean while food is still in the oven.

There should be some type of cooking time that the user can set the oven for and then have it drop back to the warm mode.

