

Use Case – Microwave Oven Control Panel

The primary part of the control panel will be the keypad, with keys for numbers ranging from 0 to 9, a start button, and a reset button. 0-9 on the PIC will represent their own number, CHS will be reset, “.” will be start. There will also be a door open button, which will cause the door to both open and the microwave to stop. Enter will be the door open button, which will stop the countdown.

The control panel will have a digital display to show the time input or the time remaining with enough room for 4 digits. The display will be dark after the reset button is pressed, or on first use. The PIC digital display will be used. The display will start lighting up after number keys are pressed. The first key pressed will light up the right most number. The next key pressed will cause the right most number to move left one space, and then the new number will take its place in the right most position. This will continue until all four spaces are filled, or the start button is pressed (at which time no new numbers can be entered until reset is pressed). No new input can be entered after the four digits are filled (additional input will simply be ignored).

Pressing the start button will begin a count down from whatever number is entered. An LED will light to simulate the microwave running, and go dark when the microwave is off. Pressing start without any number entered will do nothing. Pressing reset after starting the countdown will stop the microwave and clear the time. The two left most digits will be minutes, and the two right most digits will be seconds. If for some reason a user entered something like 199, meaning one minute and ninety nine seconds, the microwave will count down from 199 to 198 and 197 and so on until it reached 100,

shouldn't time only be able to be entered in 0-59?

and then it will using standard time again and go to 59 seconds remaining. It will count down this way so that there will not be an error if 9999 is entered.

When the timer reaches 0, the microwave will turn itself off, the display will go dark, and the microwave will beep. The beeper will repeat itself three times. To simulate a beeper, and at the same time be less annoying, a LED will flash instead.

Alex,

This is NOT a use case. The descriptions you have given are fine, but you should incorporate them into a Use Case diagram and submit a report-on-model similar to the lab.

Please resubmit.

