EMBSYS100 - AU19

-Akshay Bagade

Ans 1.) Home security system is an example of a embedded system, these systems control several systems such as gas leak, Intruder alert, fire alert etc. each sensor has a microcontroller built into it such as a smoke, gas, ir sensor each chip is designed to be programmed to operate for a particular task. A couple of problems I see is there must be constant communication between the all the systems to the home base. If a system fails it must report to the base and the power supply must be constant.

Ans 2.) When doing addition/subtraction on binary numbers in other representations we need to apply different logics (circuits) to perform addition and subtraction. In 2s-complement representation, we represent a positive number as it is and negative number by its corresponding 2s-complement, so we can use the same circuit to perform addition and subtraction.

Ans 3.) The image shows the following result.