INFORMATION TECHNOLOGY UNIVERSITY

Elevator Controller (using AVR)

Semester Project

For

Micro-Controllers & Interfacing

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Description Part:

1- **Which interrupts will you be using and for what purpose?**

For the selection of floor number (the floor person wants to go) we will be using PORTC Pin-Change interrupts. Also, for the elevator to stop on Highest Floor and lowest floor we will be using External interrupts INT0 & INT1.Moreover, for emergency stop we will prefer use RST.

2- **How will you implement the Current Floor display?**

As the current floor display should be keeps changing as floor moves up and down, so, we will be using conditional statements to handle that in software part and will display that using BCD-7 seg on hardware.

3- **How will you implement the functionality of Specification 9?**

As it seems like conditional work, so we will carefully handle this part using if-else statements. One approach would be to keep off buttons of floors when lift will be in downward direction.

4- **How will you implement the functionality of Specification 14?**

As it is required to use duty cycle for motor that is being used to move lift up & down, it can be done using the avr PWM. We can use avr to create certain type of duty cycle waves and also sent that to motor and that will run on that duty cycle.