|  |  |  |
| --- | --- | --- |
| BLG351E  Experiment 5 “7-Segment Display and Interrupt Subroutine”  REPORT | CRN |  |
| Group |  |
| Name #1 |  |
| Name #2 |  |
| Name #3 |  |
| Name #4 |  |
| Q1) (60 pts.) Draw the flowchart of your counter program in part 1. | | |
|  | | |
| Q2) (40 pts.) Briefly explain the advantages/disadvantages of using *busy-waiting* and *interrupt mechanism* in order to detect an event in a computer system in your **own** words **at most** 150 words. | | |
| Busy-waiting is a method that checks continuously whether an event occurred, until that event occurs. Interrupt mechanism follows a different approach in which an interface triggers CPU that an event that needs to be processed occurred.  Busy-waiting’s advantage is, if a system is driven only by external events (such as an event-listener state machine model), then there would not be overhead for getting event triggers. It would be so unsuitable for a system that is not completely event-driven, because CPU would block the parts that have nothing to do with events, in turn it would increase the processing time.  In opposite, interrupt mechanism is so suitable for systems that have parts that are not driven by events, since CPU will not block waiting for events to occur. Its disadvantage is, an interface that detects the events and triggers CPU needs to be implemented, and increases the complexity of the system. | | |