**Experiment list**

**Chapter-02 (AVR** Assembly Language Programming**)**

1. Write an Assembly program using. EQU directives (assign RAM Address to a variable)

**Chapter-03 ( AVR Assembly Programming: Arithmetic Instructions)**

1. Write an Assembly code for ADD,SUB,INC,DEC instruction
2. Write an Assembly code Add 1 to the content of RAM location 0X420
3. Write an Assembly code for Subtract 5 from 0X300 and store the result in0x320

**Chapter-04 ( AVR Assembly Programming: Addressing Modes)**

1. Write an AVR program to copy value of $56 into memory locations $140 through $144
2. Write an AVR program to copy a block of 16 bytes of data from data memory locations starting at $130 to RAM locations starting at $60
3. Write an AVR program to Data Transfer from ROM to RAM with Address 0X140 onwards.

**Chapter-05 ( AVR Assembly Programming: Branch, Call, and Loop)**

1. Write an AVR program to Using Branch Instruction Add Number 3 ten times (3+3+3+3+..)
2. Write an AVR program to load the PORTB register with the value 0x55 and add complement Port B 700 times
3. Write an AVR program to determine if RAM location 0x200 contains the value of 0. If so, put 0x55 into it

**Chapter-06 ( IO Port Programming of AVR Microcontroller)**

1. Write an AVR program to send 55 and AA continuously onto PORT A
2. Write an AVR program to read PORT A and copy the received content on RAM location 0X100
3. Write an bit manipulation program to turn a led connected on PB2 pin to on and off with some random delay without disturbing rest of the pins
4. Write an AVR program to create a delay of 66% duty cycle on bit 3 of PORTC
5. Door alarm switch is connected to PB3 when door is open PB3 receives 0. At this condition turn on the buzzer connected to PC5 by sending High to Low signal. Write an AVR program for above condition.

**Chapter -07: AVR C Programming**

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| --- | --- |
| No | Name of the Experiments |
| 1 | Write an AVR C program to send values 00-FFh to port B. |
| 2 | Write an AVR program to send hex values for ASCII characters of 0,1,2, A, B to port B |
| 3 | Write an AVR C program to toggle all the bits of port B 200 time |
| 4 | Write an AVR C program to send value -3 to +3 to port B |
| 5 | Write an AVR C program to toggle all the bits of PORT B continuously |
| 6 | Write an AVR C program to monitor bit PC1. If it is high, send 55h to port A; otherwise, send AA to PORT B |
| 7 | Write an AVR C program to get the status of PB5 and send it to bit 7 of port C continuously |
| 8 | Write an AVR C program to toggle all the bits of Port A continuously. Use the Ex-OR operator |
| 9 | Write an AVR program to read the PA0 and PA1 bits and issues an ASCII character to PORT B according to the following table |