SSN College of Engineering
Department of Computer Science and Engineering
III year - UCS1512 – Microprocessors Lab

Academic Year: 2020 -2021   Batch: 2018-2022

Semester: V

Experiment No. 12: 8-bit arithmetic operations using 8051

12a) Addition

```
        MOV R0, #00
        MOV A, r1    ;input1
        ADD A, r2     ;input2
        JNC LABEL
        INC R0
LABEL:  MOV r4, a
        MOV 03, R0   ;(mov r3, r0 is invalid)
HERE:   SJMP HERE
```

12b) Subtraction

Hints:

Use SUBB instruction; clear carry flag before using it

No SUB instruction in 8051.

Take 2's complement if carry is generated.

12c) Multiplication

Hints:

MUL AB   (BA= A x B)

12d) Division

Hints:

DIV AB   (A / B; Quotient in A, Remainder in B)