EXP-5: MULTIPLICATION USING REPEATED ADDITION

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        LDR R0,VALUE1
        LDR R1,VALUE2
        LDR R5,VALUE3
        LDR R3,[R0]
        LDR R4,[R1]
LOOP
        ADD R6,R6,R3
        SUBS R4,R4,#01
        BNE LOOP
        STR R6,[R5]
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001000
VALUE2 DCD& 00001008
VALUE3 DCD& 00001016
        END
```

EXP-6: DIVISION USING REPEATED SUBS

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        LDR R0,VALUE1
        LDR R1,VALUE2
        LDR R7,VALUE3
        LDR R4,[R0]
        LDR R5,[R1]
        MOV R3,#00
LOOP
        SUBS R4,R4,R5
        ADD R3,R3,#01
        CMP R4,R5
        BGE LOOP
        STR R3,[R7]
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001000
VALUE2 DCD& 00001004
VALUE3 DCD& 00001008
        END
```

EXP-7: ADD TEN 32-BIT NUMBER (WITH LOOP)

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        LDR R0,VALUE1
        MOV R5,#0X09
        LDR R1,[R0],#4
LOOP
        LDR R2,[R0],#04
        ADD R1,R2,R1
        SUBS R5,R5,#01
        BNE LOOP
        STR R1,[R0,#04]
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001000
        END
```

EXP-8: LARGEST NUMBER IN THE SERIES

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        LDR R0,VALUE1
        LDR R1,VALUE2
        LDR R5,[R1]
        MOV R4,#00
LOOP
        LDR R3,[R0],#04
        CMP R3,R4
        MOVGT R4,R3
        SUBS R5,R5,#1
        BGE LOOP
        STR R4,[R0]
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001004
VALUE2 DCD& 00001000
        END
```

EXP-9A: ASCENDING ORDER

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        MOV R0,#05
LOOP1
        LDR R5,VALUE1
        LDR R6,R5,#1
        MOV R3,#4
LOOP2
        LDRB R1,[R5]
        LDRB R2,[R6]
        CMP R1 ,R2
        BLO LOOP3
        MOV R4,R2
        MOV R2,R1
        MOV R1,R4
LOOP3
        STRB R1,[R5]
        STRB R2,[R6]
        ADD R5,R5,#1
        ADD R6,R6,#1
        SUBS R3,R3,#1
        BNE LOOP1
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001000
        END
```

EXP-9B: DESCENDING ORDER

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        MOV R0,#05
LOOP1
        LDR R5,VALUE1
        LDR R6,R5,#1
        MOV R3,#4
LOOP2
        LDRB R1,[R5]
        LDRB R2,[R6]
        CMP R1 ,R2
        BHI LOOP3
        MOV R4,R2
        MOV R2,R1
        MOV R1,R4
LOOP3
        STRB R1,[R5]
        STRB R2,[R6]
```

```
        ADD R5,R5,#1
        ADD R6,R6,#1
        SUBS R3,R3,#1
        BNE LOOP1
        AREA PROGRAM, DATA, READONLY
VALUE1 DCD& 00001000
        END
```

EXP-10:FIND LENGTH OF A GIVEN STRING.

```
        AREA PROGRAM, CODE, READONLY
        ENTRY
MAIN
        LDR R3,VALUE1
        MOV R2,#09
        MOV R1,#'E'
        MOV R5,#0
LOOP
        LDRB R4,[R3],#1
        CMP R4,R1
        ADDEQ R5,R5,#1
        SUBS R2,R2,#1
        BNE LOOP
        AREA PROGRAM,DATA,READONLY
VALUE1 DCD STRING
STRING DCB "ABC"
        END
```