

## 01) ADDITION AND MULTIPLICATION AND SUBTRACTION OF TWO 32-BIT NUMBERS

AREA MULTIPLY, CODE, READONLY

ENTRY

mov R0, 0x0002

mov R1, 0x0003

MUL R2, R0, R1

STOP B STOP

END

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AREA SUBTRACT, CODE, READONLY

ENTRY

mov R3, #0x0003

mov R4, #0x0001

SUB R5, R3, R4

STOP B STOP

END

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AREA ADDITION, CODE, READONLY

ENTRY

mov R6, #0x0004

mov R7, #0x0003

ADD R8, R6, R7

STOP B STOP

END

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## 02) ALP TO ADD 10 NUMBERS

AREA ADDITION,CODE,READONLY

START MOV r5,#10

mov r0,#0

mov r1,#1

loop ADD r0,r0,r1

add r1,r1,#1

subs r5,r5,#1

cmp r5,#0

bne loop

ldr r4,=result

str r0,[r4]

xss b xss

area data2,data,readwrite

result dcd 0x0

END

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### 03) ALP TO ADD ARRAY OF 16-BIT NUMBER FROM ARRAY AND STORE IN 32-BIT

AREA ADDITION, CODE, READONLY

start MOV R5,#3

MOV R0,#0

LDR R1,=VALUE1

LOOP LDR R2,[R1],#2

LDR R3, MASK

AND R2, R2,R3

ADD R0, R0,R2

SUBS R5, R5,#2

CMP R5,#0

BNE LOOP

LDR R4,=RESULT

STR R0,[R4]

XSS B XSS

mask dcd 0x0000ffff

value1 dcw 0x1111,0x2222,0x4444

area data2,data,readwrite

result dcd 0x0

END

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#### **Program 4:**

AREA FIBN, CODE, READONLY

START

    mov r0, #10;

    mov r1, #0;

    mov r2, #1;

    LDR r5, =result\_array

    STR r1, [r5], #4;

    STR r2, [r5], #4;

loop

    ADD r3, r1, r2;

    STR r3, [r5], #4;

    mov r1, r2;

    mov r2, r3;

    SUBS r0, r0, #1;

    CMP r0, #0

    BNE loop;

    DONE B DONE;

AREA DATA1, DATA, READWRITE

result\_array DCD 0x0000

END

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## Program 5:

AREA SQUARE, CODE, READONLY

START

LDR r0, =table 1

LDR r1, r1, |5| #0X2

Add r0, r0, r1; load address of element in look up table

LDR r3[r0]; get source of given on in r3

RSS BXSS

Table 1 DCD 0X00000000

DCD 0X00000001

DCD 0X00000004

DCD 0X00000009

DCD 0X00000010

DCD 0X00000019

DCD 0X00000024

DCD 0X00000031

DCD 0X00000040

DCD 0X00000051

DCD 0X00000661;

Area

Data1, data, readwrite

Result DCD 0X00000000

End

