

Write a program to find Square of  
number (1 to 10) using look-up table

AREA SQUARE, CODE, READONLY  
ENTRY  
START

LDR R0, =TABLE1

LDR R2, = 0x40000000

LDR R1, [R2]

MOV R1, R1, LSL #0x2

ADD R0, R0, R1

LDR R3, [R0]

BACK B BACK

NOP

NOP

~~Table~~

TABLE 1	DCD 0x00000000	; 0 <sup>2</sup> = 0
	DCD 0x00000001	; 1 <sup>2</sup> = 1
	DCD 0x00000004	; 2 <sup>2</sup> = 4
	DCD 0x00000009	; 3 <sup>2</sup> = 9
	DCD 0x00000010	; 4 <sup>2</sup> = 16
	DCD 0x00000019	; 5 <sup>2</sup> = 25
	DCD 0x00000024	; 6 <sup>2</sup> = 36
	DCD 0x00000031	; 7 <sup>2</sup> = 49



DCD 0X 00 00 00 40 ;  $8^2 = 64$

DCD 0X 00 00 00 51 ;  $9^2 = 81$

DCD 0X 00 00 00 64 ;  $10^2 = 100$

END

## OUTPUT

Before

R0 = 0X 00 00 00 00

R2 = 0X 00 00 00 00

R15(PC) = 0X 00 00 00 00

R3 & = 0X 00 00 00 00

After

R0 = 0X 00 00 00 24

R2 = 0X 40 00 00 00

R15(PC) = 0X 00 00 00 01

R3 = 0X 00 00 00 04

Memory Location 0X 40 00 00 00 : 02 00 00

