

INSTITUTE OF COMPUTER TECHNOLOGY
B-TECH COMPUTER SCIENCE ENGINEERING 2025-26
SUBJECT:-Microcontroller & Applications

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BRANCH: CYBER SECURITY

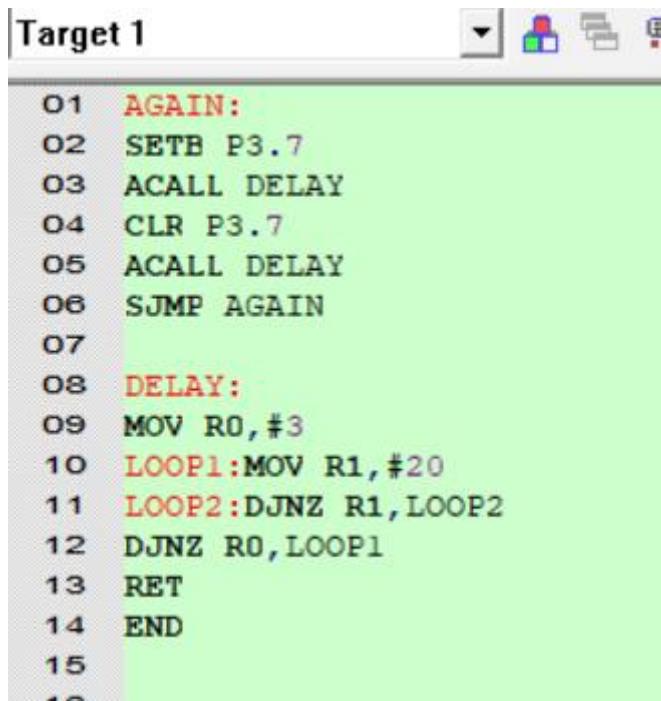
BATCH: 52

PRACTICAL_9

Aim: Learning advanced programming using Jumps and CALLs.

Write a program to Generate a square wave of 4 KHz frequency on pin P3.7. Assume the crystal frequency to be 11.0592 MHz. Implement the program on Proteus module and verify the frequency output. Also implement the same on 8051 hardware kit to verify the same.

CODE:



The screenshot shows a window titled "Target 1" containing assembly language code for an 8051 microcontroller. The code is color-coded to highlight different instructions and labels. The assembly code is as follows:

```
01 AGAIN:  
02 SETB P3.7  
03 ACALL DELAY  
04 CLR P3.7  
05 ACALL DELAY  
06 SJMP AGAIN  
07  
08 DELAY:  
09 MOV R0, #3  
10 LOOP1: MOV R1, #20  
11 LOOP2: DJNZ R1, LOOP2  
12 DJNZ R0, LOOP1  
13 RET  
14 END  
15  
16
```

OUTPUT:

