

**INSTITUTE OF COMPUTER TECHNOLOGY**  
**B-TECH COMPUTER SCIENCE ENGINEERING 2025-26**  
**SUBJECT:-Algorithm Analysis and Design**

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BRANCH: CYBER SECURITY

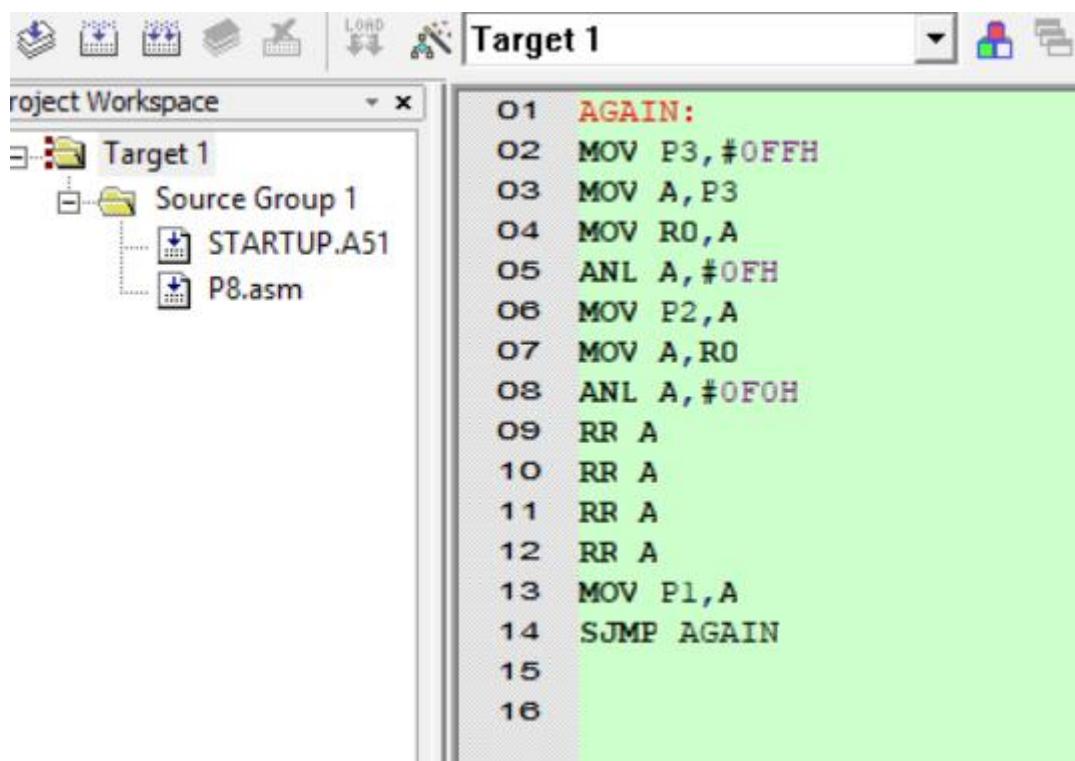
BATCH: 52

**PRACTICAL\_8**

**Aim:**

A) Write an assembly language program to convert a Packed BCD number (received from port 3) into unpacked BCD and display the separate digits on port 1 and port 2 using seven segment display. Desing the complete hardware in proteus and execute it.

**CODE:**



The screenshot shows the Proteus software interface. On the left is the 'Project Workspace' window, which displays a project named 'Target 1' containing a 'Source Group 1' folder with files 'STARTUP.A51' and 'P8.asm'. On the right is the 'Target 1' assembly code editor window. The code is as follows:

```
O1 AGAIN:  
O2 MOV P3,#0FFH  
O3 MOV A,P3  
O4 MOV R0,A  
O5 ANL A,#0FH  
O6 MOV P2,A  
O7 MOV A,R0  
O8 ANL A,#0FOH  
O9 RR A  
10 RR A  
11 RR A  
12 RR A  
13 MOV P1,A  
14 SJMP AGAIN  
15  
16
```

## OUTPUT:

