

DATA SEGMENT

PORTA EQU 00H

PORTB EQU 02H

PORTC EQU 04H

PORT_CON EQU 06H

DATA ENDS

CODE SEGMENT

MOV AX,DATA

MOV DS, AX

ORG 0000H

START:

MOV DX, PORT_CON

MOV AL, 10000010B; port C (output), port A (output) in mode 0 and PORT B (INPUT) in mode 0

OUT DX, AL

MOV AL, 11000000B

MOV DX, PORTA

OUT DX,AL

JMP XX

XX:

MOV DX, PORTB

IN AL, DX

CMP AL, 11111110B

JZ S0

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IN AL, DX
CMP AL, 11111101B
JZ S1
IN AL, DX
CMP AL, 11111011B
JZ S2
IN AL, DX
CMP AL, 11110111B
JZ S3
IN AL, DX
CMP AL, 11101111B
JZ S4
IN AL, DX
CMP AL, 11011111B
JZ S5
IN AL, DX
CMP AL, 10111111B
JZ S6
IN AL, DX
CMP AL, 01111111B
JZ S7
JMP XX
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S0:

```
MOV AL, 11000000B
MOV DX, PORTA
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OUT DX,AL

JMP XX

S1:

MOV AL, 11111001B

MOV DX, PORTA

OUT DX,AL

JMP XX

S2:

MOV AL, 10100100B

MOV DX, PORTA

OUT DX,AL

JMP XX

S3:

MOV AL, 10110000B

MOV DX, PORTA

OUT DX,AL

JMP XX

S4:

MOV AL, 10011001B

MOV DX, PORTA

OUT DX,AL

JMP XX

S5:

MOV AL, 10010010B

MOV DX, PORTA

OUT DX,AL

JMP XX

S6:

MOV AL, 10000010B

MOV DX, PORTA

OUT DX,AL

JMP XX

S7:

MOV AL, 11111000B

MOV DX, PORTA

OUT DX,AL

JMP XX

JMP START

CODE ENDS

END