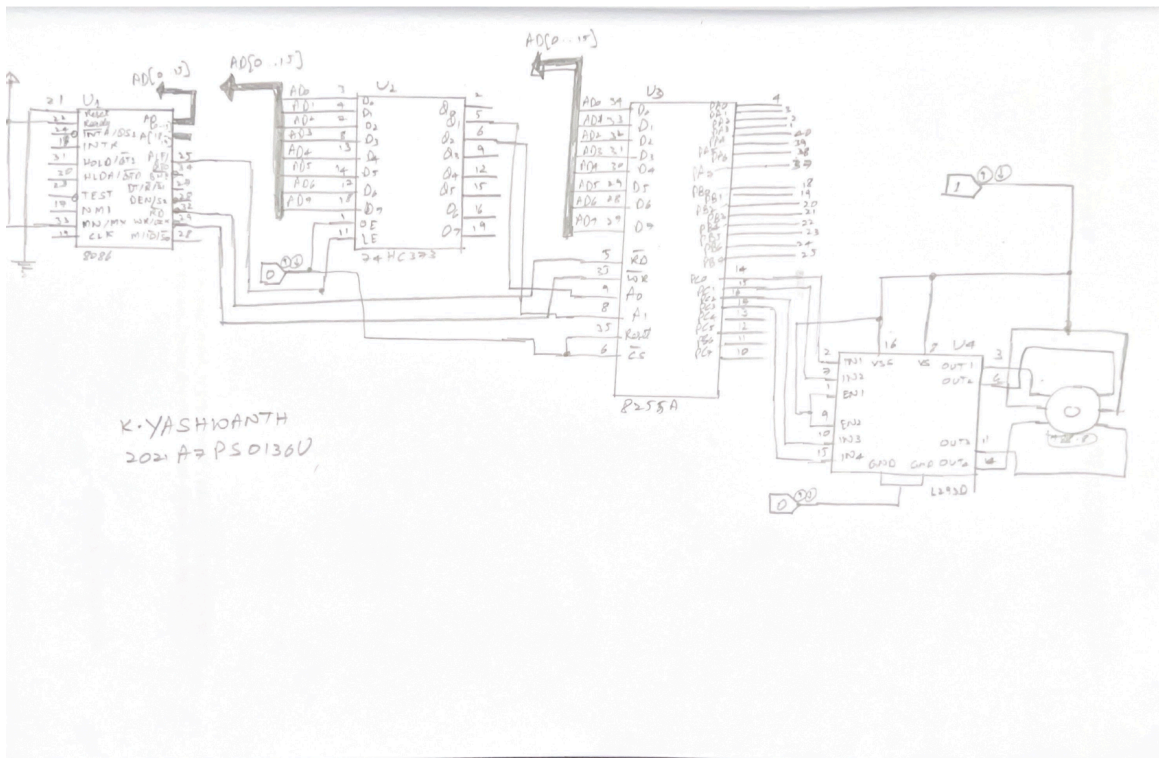# EXPERIMENT-8

HARDWARE DESIGN AND SIMULATION USING PROTEUS

STEPPER MOTOR INTERFACING

Aim: To Interface a Stepper Motor to 8086 Microprocessor through 8255 Programmable Peripheral Controller using Proteus

schematic diagram of the circuit:

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ASM code for interfacing:

```
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Program:
DATA SEGMENT
PORTA    EQU   00H
PORTB    EQU   02H
PORTC    EQU   04H
PORT_CON EQU   0CH
DATA ENDS

CODE SEGMENT
MOV AX, DATA
MOV DS, AX
ORG 0000H
START:
     MOV  DX, PORT_CON
     MOV  AL, 10000000B
     OUT  DX, AL
     MOV  SI, 0
     MOV  DI, 0
LL0: MOV  CX, 2FFFH
LL1: MOV  AL, S2[DI]
     MOV  DX, PORTC
     OUT  DX, AL
     LOOP LL1
     INC  DI
     CMP  DI, 4
     JL   LL0
     JMP  START
     ORG  1000H
S2   DB   1101B
     DB   1011B
     DB   0111B
     DB   1110B
CODE ENDS
END
```

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Video recording of circuit simulation:

[lab8-aim_op_2021A7PS0136U.mp4]

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Video recording of assignment circuit simulation:

1. [lab8-asgn1_op_2021A7PS0136U.mp4]

2. [lab8-asgn2_op_2021A7PS0136U.mp4]