Program to simulate traffic signals for the traffic light controller using 8255 PPI

Label	Mnemonics	operands	Memory Address	Opcodes	Comments
	MOV	AL,80H	8000	B0,80	Write the control word for initializing
	MOV	DX,0FFE6H	8002	BA,E6,FF	All the 3 ports as output ports in
	OUT	DX,AL	8005	EE	Control word register
REPEATAGAIN:	MOV	SI, 8038	8006	BE,38,80	Initialize SI register with the offset address where the traffic states are stored
NEXTSTATE:	MOV	AL,[SI]	8009	8A,04	Write the first byte of state 1 into Port A
	MOV	DX, 0FFE0H	800B	BA, E0,FF	Whose address is 0FFE0H
	OUT	DX,AL	800E	EE	
	INC	SI	800F	46	Increment the SI register by 1 to get the address of the second byte of each state
	MOV	DX, 0FFE2H	8010	BA,E2,FF	Write the second byte of each state into Port B
	MOV	AL,[SI]	8013	8A,04	Whose address is 0FFE2H
	OUT	DX,AL	8014	EE	
	INC	SI	8015	46	Increment the SI register by 1 to get the address of the third byte of each state
	MOV	DX, 0FFE4H	8016	BA,E4,FF	Write the third byte of each state into Port C
	MOV	AL,[SI]	8019	8A,04	Whose address is 0FFE4H
	OUT	DX,AL	801B	EE	
	INC	SI	801C	46	Increment the SI register by 1 to get the address of the first byte of each state

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	CALL	**DELAY**	**801D**	**E8,09,00**	**Call a delay routine to maintain this traffic state for some duration.**
	CMP	**SI, 8055**	**8020**	**81,FE,55,80**	**Check whether has reached the last state.**
	JNZ	**NEXTSTATE**	**8024**	**75,E2**	**If the last state is not reached, then go to output the next state on Port A, Port B and Port C.**
	JMP	**REPEATAGAIN**	**8026**	**E9, DC,FF**	**If the last state is reached, then go to output from the first state on Port A, Port B and Port C.**
DELAY:	**MOV**	**CX,00FFH**	**8029**	**B9,FF,00**	**This delay is called to to maintain**
TOP1:	**PUSH**	**CX**	**802C**	**51**	**Each state for some duration**
	MOV	**CX,03FFH**	**802D**	**B9,FF,03**	**Based on the value of inner**
TOP2:	**NOP**		**8030**	**90**	**Counter and outer counter**
	LOOP	**TOP2**	**8031**	**E2,FD**	**Values. Once the two counters**
	POP	**CX**	**8033**	**59**	**Are expired, the program**
	LOOP	**TOP1**	**8034**	**E2,F6**	**Execution will go the main**
	RET		**8036**	**C3**	**Program again.**
	DB	**10H,81H,7AH**	**8037**	**10H,81H,7AH**	**STATE 1**
	DB	**44H,44H,F0H**	**803A**	**44H,44H,F0H**	**ALL AMBERS ON**
	DB	**08H,11H,E5H**	**803D**	**08H,11H,E5H**	**STATE 2**
	DB	**44H,44H,F0H**	**8040**	**44H,44H,F0H**	**ALL AMBERS ON**
	DB	**81H,10H,0DH**	**8043**	**81H,10H,0DH**	**STATE 3**
	DB	**44H,44H,F0H**	**8046**	**44H,44H,F0H**	**ALL AMBERS ON**
	DB	**11H,08H,B5H**	**8049**	**11H,08H,B5H**	**STATE 4**
	DB	**44H,44H,F0H**	**804C**	**44H,44H,F0H**	**ALL AMBERS ON**

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	DB	**88H,88H,00H**	**804F**	**88H,88H,00H**	**STATE 5**
	DB	**44H,44H,F0H**	**8052**	**44H,44H,F0H**	**ALL AMBERS ON**
	DB	**00**	**8055**	**00**	**END OF THE LAST STATE**