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EECS 113

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Assignment 2: Screenshots

N1=23, N2=58, OUTPUT: 40H=05H , 41H=36H (23*58=1334 that is 0536H in hex system)

Code Memory:

The screenshot displays the 8051 simulator interface with the following components:

- System Clock (MHz):** 12.0
- SBUF:** R/O (0x00), W/O (0x00), RXD (1), TXD (1), SCON (0x00)
- TH0, TL0:** 0x00, 0x00
- TH1, TL1:** 0x00, 0x00
- PC:** 0x00D5
- Registers:** R7 (0x00), R6 (0x00), R5 (0x00), R4 (0x00), R3 (0x3A), R2 (0x00), R1 (0x17), R0 (0x32), B (0x05), ACC (0x36), PSW (0x04), IP (0x00), IE (0x00), PCON (0x00), DPH (0x00), DPL (0x44), SP (0x07)
- pins bits:** P3 (0xFF), P2 (0xFF), P1 (0xFF), P0 (0xFF)
- PSW:** 0 0 0 0 0 1 0 0
- Code Memory:** A table showing memory addresses from 00 to 70 and their corresponding values.
- Modify Code:** addr (0x0000), value (0x80)
- Remove All Breakpoints:** Button

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 80 | 48 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 20 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 30 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 40 | 32 | 33 | 00 | 35 | 38 | 00 | A3 | E4 | 93 | 22 | 90 | 00 | 40 | 93 | 94 | 30 |
| 50 | 75 | F0 | 0A | A4 | F8 | 11 | 46 | 94 | 30 | 28 | F9 | 11 | 46 | B4 | 00 | 1C |
| 60 | 90 | 00 | 43 | 93 | 94 | 30 | 75 | F0 | 0A | A4 | F8 | 11 | 46 | 94 | 30 | 28 |
| 70 | FB | 8B | F0 | E9 | A4 | 85 | F0 | 40 | F5 | 41 | 80 | 31 | FA | E9 | 75 | F0 |

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Data Memory:

System Clock (MHz)

12.0

1

▼

Update Freq.

SBUF

R/O

W/O

TH0

TL0

R7

0x00

B

0x05

0x00

0x00

0x00

0x00

0x00

R6

0x00

ACC

0x36

RXD

TXD

1

1

TMOD

0x00

R5

0x00

PSW

0x04

1

1

TCON

0x00

R4

0x00

IP

0x00

SCON

0x00

TCON

0x00

R3

0x3A

IE

0x00

R2

0x00

PCON

0x00

pins

bits

TH1

TL1

R1

0x17

DPH

0x00

0xFF

0xFF

P3

0x00

0x00

R0

0x32

DPL

0x44

0xFF

0xFF

P2

0x00

0x00

SP

0x07

0xFF

0xFF

P1

0x00

0x00

0xFF

0xFF

P0

0x00

0x00

8051

PC

0x00D5

i

PSW

0

0

0

0

0

0

1

0

0

Modify RAM

Data Memory

addr

0x00

0x00

value

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 32 | 17 | 00 | 3A | 00 | 00 | 00 | 00 | 6D | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 20 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 30 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 40 | 05 | 36 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 50 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 60 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 70 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |

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Remove All Breakpoints

N1=143, N2=234, OUTPUT: 40H=82H , 41H=B6H (143*234=33462 that is 82B6H in hex system)

Code Memory:

System Clock (MHz)

12.0

1

▼

Update Freq.

SBUF

R/O

W/O

TH0

TL0

R7

0x00

B

0x82

0x00

0x00

0x00

0x00

R6

0x00

ACC

0xB6

RXD

TXD

TMOD

0x00

R5

0x00

PSW

0x05

1

1

TCON

0x00

R4

0x00

IP

0x00

SCON

0x00

R3

0x00

IE

0x00

pins

bits

TH1

TL1

R2

0x33

PCON

0x00

0xFF

0xFF

P3

0x00

0x00

R1

0xEA

DPH

0x00

0xFF

0xFF

P2

0x00

0x00

R0

0x8F

DPL

0x46

0xFF

0xFF

P1

0x00

0x00

PC

0x00BF

PSW

0

0

0

0

0

1

0

1

0xFF

0xFF

P0

0x00

0x00

8051

SP

0x07

Code Memory

Modify Code

addr

0x0000

0x80

value

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 80 | 4A | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 20 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 30 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 40 | 31 | 34 | 33 | 00 | 32 | 33 | 34 | 00 | A3 | E4 | 93 | 22 | 90 | 00 | 40 | 93 |
| 50 | 94 | 30 | 75 | F0 | 0A | A4 | F8 | 11 | 48 | 94 | 30 | 28 | F9 | 11 | 48 | B4 |
| 60 | 00 | 1C | 90 | 00 | 44 | 93 | 94 | 30 | 75 | F0 | 0A | A4 | F8 | 11 | 48 | 94 |
| 70 | 30 | 28 | FB | 8B | F0 | E9 | A4 | 85 | F0 | 40 | F5 | 41 | 80 | 31 | FA | E9 |

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Remove All Breakpoints

Data Memory:

System Clock (MHz)

12.0

1

▼

Update Freq.

SBUF

R/O

W/O

TH0

TL0

R7

0x00

B

0x82

0x00

0x00

0x00

0x00

R6

0x00

ACC

0xB6

RXD

TXD

1

1

TMOD

0x00

R5

0x00

PSW

0x05

SCON

0x00

TCON

0x00

R4

0x00

IP

0x00

pins

bits

TH1

TL1

R3

0x00

IE

0x00

0xFF

0xFF

P3

0x00

0x00

R2

0x33

PCON

0x00

0xFF

0xFF

P2

PC

8051

R1

0xEA

DPH

0x00

0xFF

0xFF

P1

0x00BF

i

PSW

0

0

0

0

0

1

0

1

0xFF

0xFF

P0

0x00BF

SP

0x07

Modify RAM

Data Memory

addr

0x00

0x00

value

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00 | 8F | EA | 33 | 00 | 00 | 00 | 00 | 00 | A2 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 20 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 30 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 40 | 82 | B6 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 50 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 60 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 70 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |

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Remove All Breakpoints