

The screenshot shows the 8086 emulator interface. The assembly code window on the left contains the following code:

```

01 ;NAME: PRAMATHESH KUMAR
02 ;REDG NO: 2341019043
03
04 MOV BX, 0014H
05 MOV AX, 001FH
06 MOV CX, AX
07 ADD AX, 0014H
08 MOV [5000H], AX
09 MOV AX, CX
10 SUB AX, 0014H
11 MOV [5002H], AX
12 MOV AX, CX
13 MUL BX
14 MOV [5004H], DX
15 MOV [5006H], AX
16 MOV AX, CX
17 MOV DX, 0000H
18 DIV BX
19 MOV [5008H], AX
20 MOV [500AH], DX
21 HLT
22
23
24

```

The registers window on the right shows the state of the 8086 registers:

Register	H	L
AX	00	00
BX	00	00
CX	00	00
DX	00	00
CS	0100	
IP	0000	
SS	0100	
SP	FFFE	
BP	0000	
SI	0000	
DI	0000	
DS	0100	
ES	0100	

The memory window on the right shows the contents of memory locations starting from 0100:0000:

```

0100:0000 BB 187 71 MOV BX, 00014h
0100:0001 14 020 71 MOV AX, 0001Fh
0100:0002 00 000 NULL MOV CX, AX
0100:0003 B8 184 71 ADD AX, 00014h
0100:0004 1F 031 71 MOV [05000h], AX
0100:0005 00 000 NULL MOV AX, CX
0100:0006 8B 139 71 SUB AX, 00014h
0100:0007 C8 200 71 MOV [05002h], AX
0100:0008 05 005 71 MOV AX, CX
0100:0009 14 020 71 MUL BX
0100:000A 00 000 NULL MOV [05004h], DX
0100:000B A3 163 71 MOV [05006h], AX
0100:000C 00 000 NULL MOV AX, CX
0100:000D 50 080 71 MOV DX, 00000h
0100:000E 8B 139 71 DIV BX
0100:000F C1 193 71 MOV [05008h], AX
0100:0010 2D 045 71 MOV [0500Ah], DX
0100:0011 14 020 71 HLT
0100:0012 00 000 NULL NOP
0100:0013 A3 163 71 NOP
0100:0014 02 002 71 NOP
0100:0015 50 080 71 NOP

```

The image shows a Windows desktop with two windows. The left window, titled 'original source co...', displays assembly code for a program named 'PRAMATHESH KUMAR' with 'REDG NO.: 2341019043'. The code includes instructions like MOV SI, 5000H, MOV AL, [SI], INC SI, MOV BL, [SI], MOV CL, AL, ROR AL, 04H, INC SI, MOV [SI], AL, MOV AL, CL, AND AL, BL, XOR CL, BL, OR AL, CL, INC SI, MOV [SI], AL, and HLT. The right window, titled 'emulator: noname.bin_', shows the same assembly code being executed. It includes a menu bar (file, math, debug, view, external, virtual devices, virtual drive, help), a toolbar with buttons for Load, reload, step back, single step, run, and a step delay slider. The registers window shows the state of various registers: AX (00 00), BX (00 00), CX (00 00), DX (00 00), CS (0100), IP (0000), SS (0100), SP (FFFE), BP (0000), SI (0000), DI (0000), DS (0100), and ES (0100). The memory window shows the execution of the assembly code, with the instruction 'MOV SI, 05000h' highlighted. The memory address 01027: 90 144 E is highlighted in yellow.

Random Access Memory

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