

Practica 1 - Subrutinas

27 de agosto de 2019

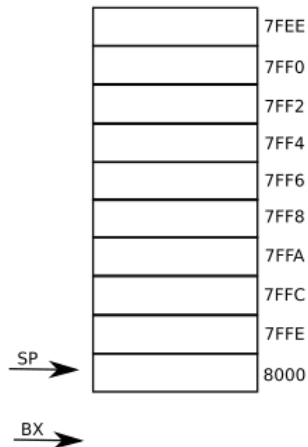
Subrutinas

```

ORG 3000H ; Subrutina MUL
MUL: PUSH BX
    MOV BX, SP
    PUSH CX
    PUSH AX
    PUSH DX
    ADD BX, 6
    MOV CX, [BX]
    ADD BX, 2
    MOV AX, [BX]
SUMA: ADD DX, AX
    DEC CX
    JNZ SUMA
    SUB BX, 4
    MOV AX, [BX]
    MOV BX, AX
    MOV [BX], DX
    POP DX
    POP AX
    POP CX
    POP BX
    RET

ORG 2000H ; Programa Principal
MOV AX, NUM1
PUSH AX
MOV AX, NUM2
PUSH AX
MOV AX, OFFSET RES
PUSH AX
MOV DX, 0
CALL MUL
POP AX
POP AX
POP AX
HLT
END

```



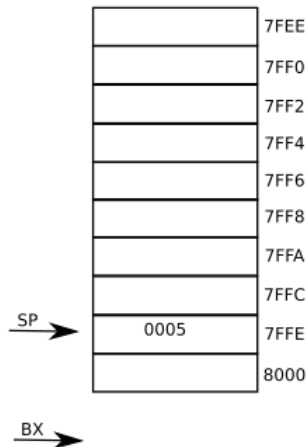
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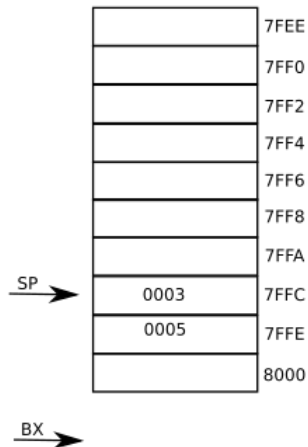
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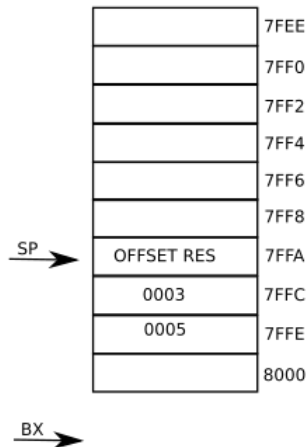


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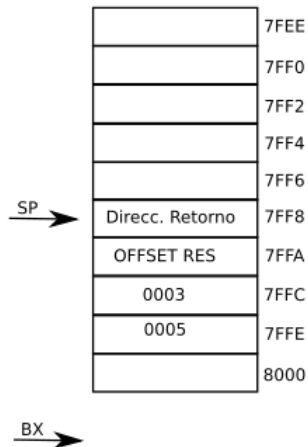
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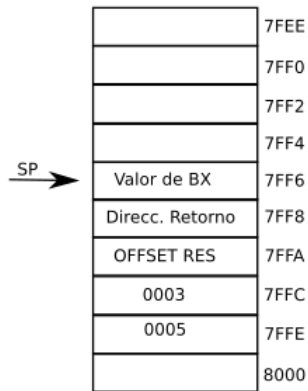
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BX →

Subrutinas

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      MOV [BX], DX
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      POP AX
      POP CX
      POP BX
      RET

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```



	7FEE
	7FF0
	7FF2
	7FF4
Valor de BX	7FF6
Direcc. Retorno	7FF8
OFFSET RES	7FFA
0003	7FFC
0005	7FFE
	8000

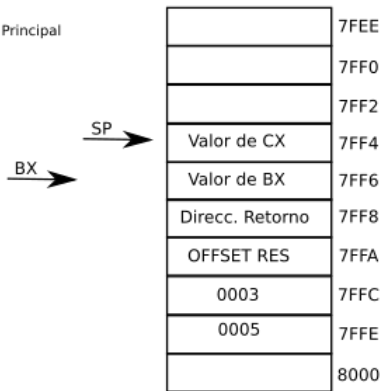
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Subrutinas

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```

BX →

SP →

	7FEE
	7FF0
Valor de AX	7FF2
Valor de CX	7FF4
Valor de BX	7FF6
Direcc. Retorno	7FF8
OFFSET RES	7FFA
0003	7FFC
0005	7FFE
	8000

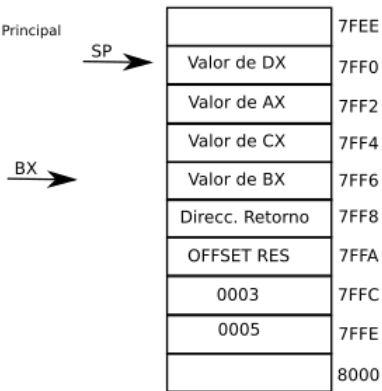
Subrutinas

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PUSH AX
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POP AX
POP AX
POP AX
HLT
END
```



SP →

$$\xrightarrow{BX}$$

	7FEE
Valor de DX	7FF0
Valor de AX	7FF2
Valor de CX	7FF4
Valor de BX	7FF6
Direcc. Retorno	7FF8
OFFSET RES	7FFA
0003	7FFC
0005	7FFE
	8000

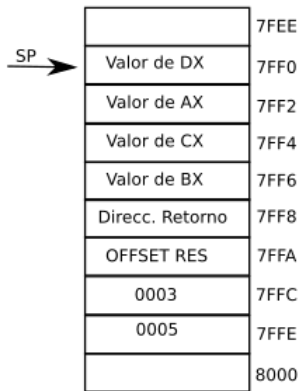
$$\xrightarrow{\text{BX}}$$


Subrutinas

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CALL MUL
POP AX
POP AX
POP AX
HLT
END
  
```

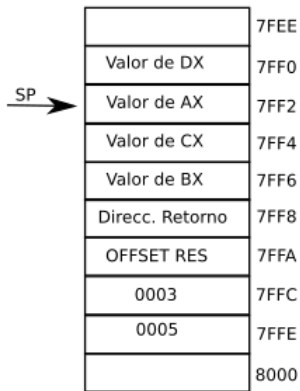


Subrutinas

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    SUB BX, 4
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    MOV [BX], DX
    POP DX
    POP AX
    POP CX
    POP BX
    RET

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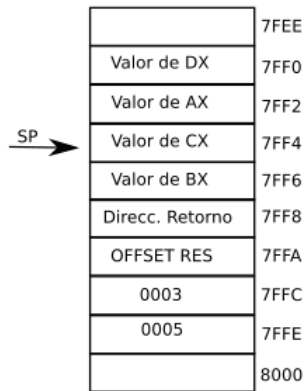


Subrutinas

```

ORG 3000H ; Subrutina MUL      ORG 2000H ; Programa Principal
MUL:  PUSH  BX                  MOV  AX, NUM1
      MOV  BX, SP               PUSH  AX
      PUSH CX                  MOV  AX, NUM2
      PUSH AX                  PUSH  AX
      PUSH DX                  MOV  AX, OFFSET RES
      ADD  BX, 6                PUSH  AX
      MOV  CX, [BX]             MOV  DX, 0
      ADD  BX, 2                CALL  MUL
      MOV  AX, [BX]             POP   AX
SUMA:  ADD  DX, AX              POP   AX
      DEC  CX                   POP   AX
      JNZ  SUMA                 HLT
      SUB  BX, 4                 END
      MOV  AX, [BX]
      MOV  BX, AX
      MOV  [BX], DX
      POP  DX
      POP  AX
      POP  CX
      POP  BX
      RET

```



\xrightarrow{BX}

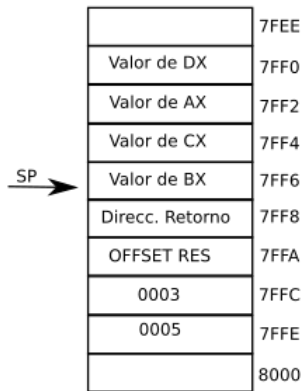
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    POP AX
    POP CX
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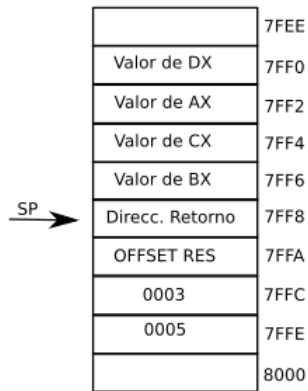


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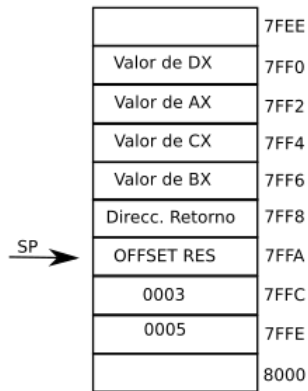
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    POP DX
    POP AX
    POP CX
    POP BX
    RET
  
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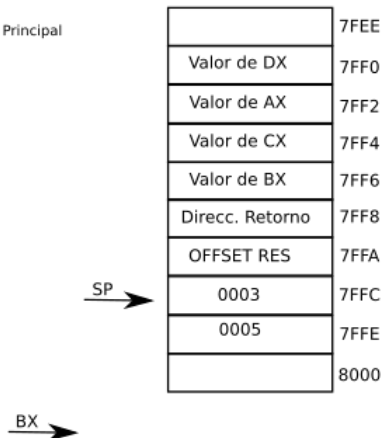
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BX →

Subrutinas

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MOV BX, SP	PUSH AX
PUSH CX	MOV AX, NUM2
PUSH AX	PUSH AX
PUSH DX	MOV AX, OFFSET RES
ADD BX, 6	PUSH AX
MOV CX, [BX]	MOV DX, 0
ADD BX, 2	CALL MUL
MOV AX, [BX]	POP AX
SUMA: ADD DX, AX	POP AX
DEC CX	POP AX
JNZ SUMA	HLT
SUB BX, 4	END
MOV AX, [BX]	
MOV BX, AX	
MOV [BX], DX	
POP DX	
POP AX	
POP CX	
POP BX	
RET	

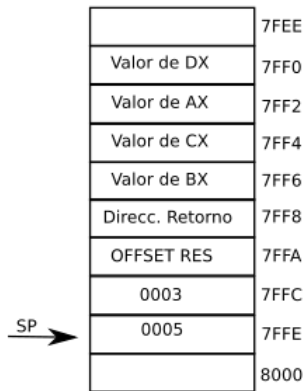


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