

Practica 1 - Subrutinas

20 de septiembre de 2020

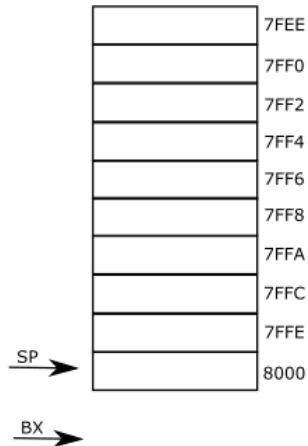
Ejercicio 7 - Pasaje de parámetros por pila

```

ORG 3000H ; Subrutina
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
HLT
END

```



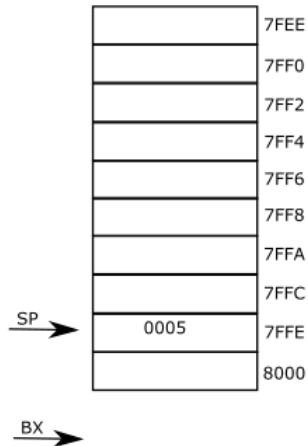
Ejercicio 7 - Pasaje de parámetros por pila

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MUL: PUSH BX
      MOV BX, SP
      PUSH CX
      PUSH AX
      PUSH DX
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      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

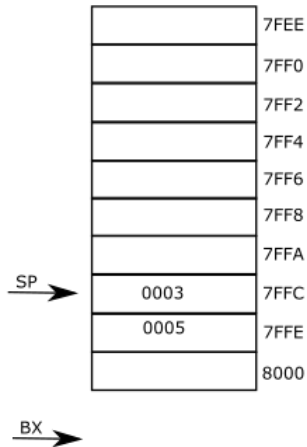
ORG 2000H ; Programa Principal
MOV AX, NUM1
PUSH AX
MOV AX, NUM2
PUSH AX
MOV AX, OFFSET RES
PUSH AX
MOV DX, 0
CALL MUL
POP AX
POP AX
POP AX
HLT
END

```



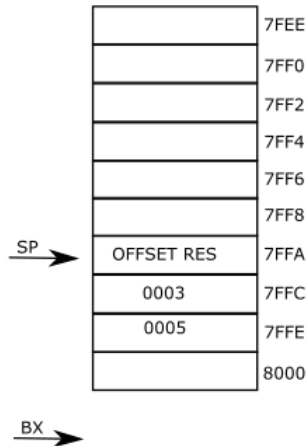
Ejercicio 7 - Pasaje de parámetros por pila

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	<u>PUSH</u>	<u>AX</u>	
	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				



Ejercicio 7 - Pasaje de parámetros por pila

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		<u>PUSH</u>	<u>AX</u>
	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				



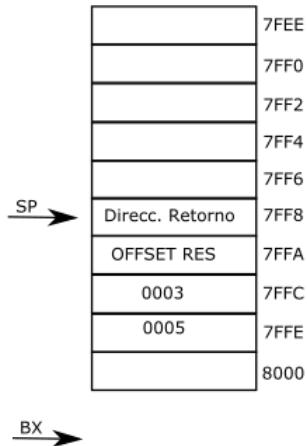
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      DEC CX
      JNZ SUMA
      SUB BX, 4
      MOV AX, [BX]
      MOV BX, AX
      MOV [BX], DX
      POP DX
      POP AX
      POP CX
      POP BX
      RET

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

```



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

BX →

Ejercicio 7 - Pasaje de parámetros por pila

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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
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MOV  AX, OFFSET RES
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MOV  DX, 0
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END

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

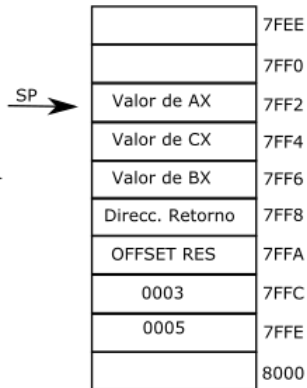
BX $\xrightarrow{\quad}$ $\xrightarrow{\quad}$ SP $\xrightarrow{\quad}$

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

Ejercicio 7 - Pasaje de parámetros por pila

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	





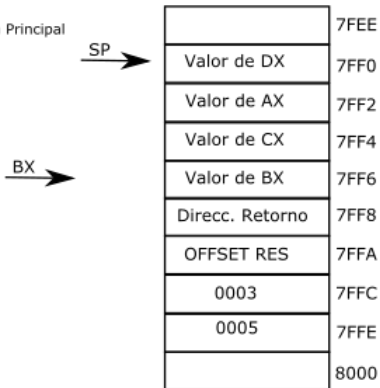
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SUMA: ADD DX, AX
    DEC CX
    JNZ SUMA
    SUB BX, 4
    MOV AX, [BX]
    MOV BX, AX
    MOV [BX], DX
    POP DX
    POP AX
    POP CX
    POP BX
    RET

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

```



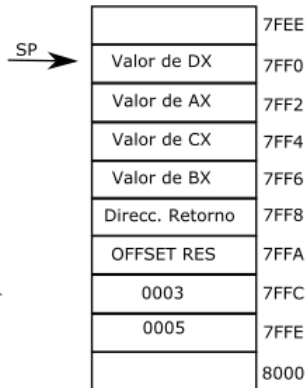
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    DEC CX
    JNZ SUMA
    SUB BX, 4
    MOV AX, [BX]
    MOV BX, AX
    MOV [BX], DX
    POP DX
    POP AX
    POP CX
    POP BX
    RET

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

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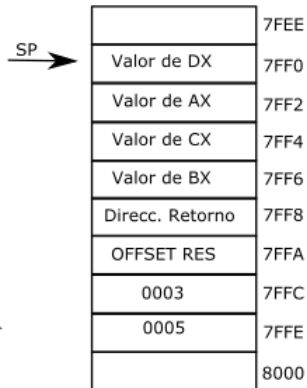
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      JNZ  SUMA
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      MOV  BX, AX
      MOV  [BX], DX
      POP  DX
      POP  AX
      POP  CX
      POP  BX
      RET

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PUSH  AX
MOV  AX, OFFSET RES
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POP  AX
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HLT
END

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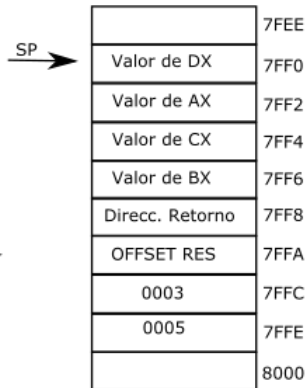
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      POP DX
      POP AX
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      POP BX
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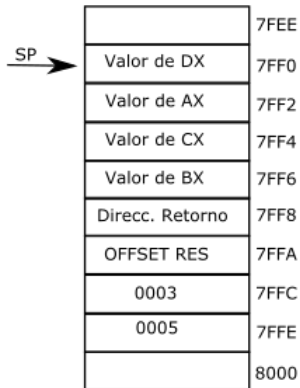
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BX →

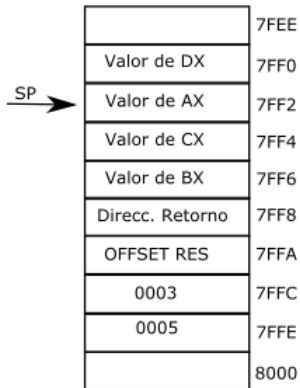
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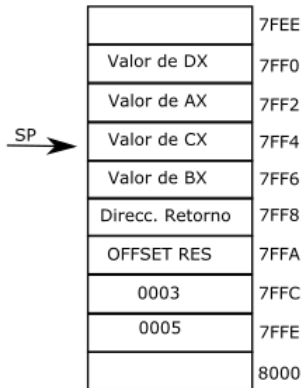
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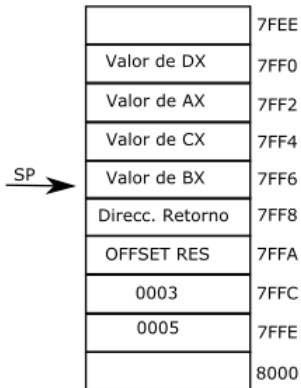
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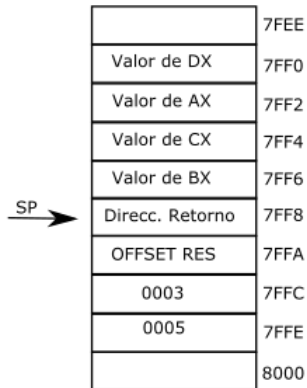
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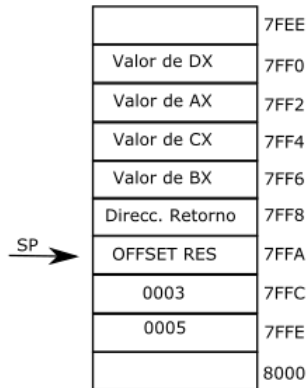
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BX →

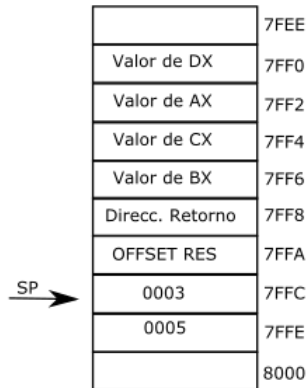
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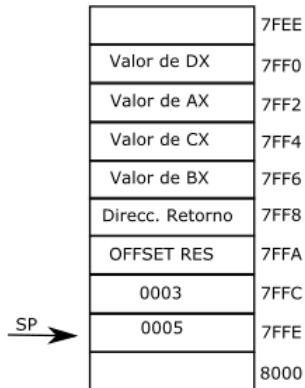
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```



POP	AX
-----	----



POP	AX
-----	----

