:: ASSIGNMENT # 5 ::

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ASSIGNMENT: 5

ANSWERS:-

QUESTION: 1

ANS) Extended stack pointer

QUESTION: 2

ANS) It is called LIFO structure because it contains set of memory blocks in which data is retrieval in order i-e The last value pushed into the stack is the first value popped out from the stack.

QUESTION: 3

ANS) ESP is Decremented by 4

QUESTION: 4

ANS) Execution would continue beyond the End of the procedure, possibly into the beginning of another procedure.

Question: 5

Ans) A list of input parameters and their usage, labeled by a word such as Recievers, A description of any values returned by the procedure, labeled by a word such as Returns.

Question: 6

Ans) Random Range procedure.

Question: 7

Ans) Wait Msg procedure.

Question: 8

Ans) Code example mov eax, 700
call Delay.

Question: 9

Ans) Write Dec procedure.

QUESTION: 10

ANS) Gotoxy

QUESTION: 11

ANS) Imagine two possible ways of calling the DumpMem procedure:

REQUIRE INPUT PARAMETER

pushed

```
mov esi, OFFSET array
mov ecx, LENGTHOF array
mov ebx, TYPE array
call DumpMem
popad.
```

OR

```
push OFFSET array
push LENGTHOF array
push TYPE array
call DumpMem
```

QUESTION: 12

ANS) EDX contain the offset of an array of bytes, and ECX contain the maximum number of character to read.

QUESTION: 13

ANS) Random Range.

QUESTION: 14

ANS) It's value will be "5"

QUESTION: 15

ANS) This one I would believe it would equal 10 because of LIFO (last in first out). EAX would equal 10 because it was the last one in.

Question: 16

Ans) By looking at this I think that EAX would still equal 30 at the end of line 6 because eax was just pushed on the stack not a change in value.

Question: 17

Ans) C. EAX will be equal 30 on line 6.

Question: 18

Ans) A. EDX will be equal 40 on line 6.

Question: 19

Ans)

```
push ebx
push eax
pop ebx
Pop eax
```


Ans)

- strlen
- data
- Code

call
mov
mov

L1

Question: 21

Ans)

```
INCLUDE Irvine32.inc
strLen = 10
.data
arr BYTE strLen DUP(?)

.code
main PROC
call Clrscr
mov esi, offset arr
mov ecx, 20

L1:
    call GenerateRandomString
Loop L1
call WaitMsg
exit
main ENDP

GenerateRandomString PROC Uses ecx
mov ecx, lengthOf arr

L2:
mov eax, 26
call RandomRange
add eax, 26
mov [esi], eax
call WriteChar ; write character
```

```
Loop L2
call Crlf
ret
GenerateRandomString ENDP

END main
```

QUESTION: 22

ANS) INCLUDE Irvine32.inc

```
.data
rows WORD ?
cols WORD ?

.code
main PROC
 call Clrscr
mov ecx,100

L1:
 call GetMaxXY
 mov rows,ax
 mov cols,dx

 movzx eax, cols
 call RandomRange
 mov dl,al

call Gptoxy;locate cursor
```


ANS)

```
mov al, 'H'
call WriteChar

mov eax, 100
Call Delay

Loop L1

Call WaitMsg
exit

main ENDP
```

QUESTION: 23

Ans) INCLUDE Irvine32.inc

```
.data
count DWORD ?

.code
main PROC

mov eax, 0+(6.0*16)
mov ecx, 16

L1:
mov count, ecx
push eax
mov ecx, 16
```

```
L2:
    Call SetTextColor
    push eax
    mov al, 'H'
    Call WriteChar
    pop eax
    inc eax
Loop L2
    Call Crlf
    pop eax
    add eax, 16
    mov ecx, count

Loop L1

    Call Crlf
    Call WaitMsg
    exit
main ENDP

END main.
```

QUESTION: 24

Ans) INCLUDE Irvine32.inc

- data
  Count DWORD?

- Code

```
main PROC

mov eax, 0+(0*16)
mov ecx, 16

L1:
mov count, ecx
push eax
mov ecx, 16

L2:
Call SetTextColor
push eax
mov al, 'H'
Call WriteChar
POP eax
inc eax
Loop L2
call crlf
POP eax
add eax, 16
mov ecx, count
Loop L1
call Crlf

Call WriteString

mov edx, ecx, al
pop ecx, al
mov eax, ecx

Pus edx
```

```
    Loop L2
    exit

    main ENDP

END main.
```