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Subject : Assembly

Assignment No = 3

(i) Using The value -35 write
integer literal in decimal he
octal and binary form That
which Mask symbol.

Ans, -35 d DD h 335 o

1101110110

(ii) write The read number -62 x
number literal using MASK 54

Ans, -62 E + 04

(iii) which statment harts The assembly

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14) What is a calling convention
how is used in assembly language
declaration?

Ans, A calling convention defines
how parameters are passed
Subroutines and how The
Stack is restored after The
Subroutine call.

15) Why would you use a symbolic constant
rather than the integer literal in
your code?

Ans An integer literal such as
has no semantic meaning to someone
reading the program's source code just
a symbolic constant such as
STUDENT COUNT can be assigned an
integer value and it's safe
documentation.

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(6) How is a Source File different from a Listing File?

Ans:

A Source File is given as input to the assembler. A Listing file has adding text that will not assemble. It is a file that is created by the assembler and it is optionally generated.

// // //

(7) How are data label and label different?

Ans: DATA labels exist in the data segment as variable offsets. Code labels are in the code segment and are offset for transfer of control instructions. A code label is following by a colon but a data label does not will a colon.

// // //

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code, variables, address, files
Code and/or data.

//
//
Q) Which operating system
reads and executes programs

Ans)

A monolithic kernel
The operating system
in the kernel space
Some address
Space - A microcontroller
processors in user space
This control component of
system is responsible for
executing program or the
//

Q) which declare an unsigned
integer variable

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(12) Write a statement that can be used to include the number of the following array, and assign the value of the symbolic constant number array size to my array. `DWORD 20 DUP (?)`

Ans Array Size (`$-my array`)

//

//

(13) Show how to calculate the number of elements in the following array, and assign the value of a symbolic constant, named array size, to my array. `DWORD 30 DUP (?)`

Ans

Array Size = (`$-my array`)
DWORD

114) Create a definition for
That stored in memory in
format

1. Ans Little Endian,
The least significant
(The little end) of 7
is placed at the byte
lowest address. The rest of
bytes is placed in order in
memory.

In these definition the
patterns in ordered as
word integer. The most significant
The one for the least
two 2^2 ... 2^{24} The small
The two 2^2 ... 2^0

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Q.7 Show the order of indexed memory lowest to highest for double word

Variable : val1 DWORD
87654321h

True or false : The following valid data definition
var1 BYTE 0Ah 055

Write an assembly program that following expression

$$A1 = B1 + val1$$

val1 is an 8-bit variable

17) Name the four basic part
assembly language instructions

Ans. [label;] mnemonic
[; comment]
" " " "

18) Show an example of a
comment?

Ans Comment ;
First line comment
Second line comment
" " " "

19) Why it is not good idea
to numeric address when writing
that access variables?

Ans. We do not use numeric

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121) What type of argument must be passed to the Exit process?

An integer, preferably

22) Create a single integer expression that uses all the operators. The value of the expression is

Ans $(5+1) \times (-2+3) \times 2 \text{ mod } 5$

123) What type of argument must be passed to the Exit process?

Ans model small

app

stock 100h

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main
main

mov ax, @data

; Just for Test ; Print
value

mov ah, 02h

mov dl, days

add dl, 30h

int 21h

mov ah, 4ch

int 21h

end main

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Q6) Find out you can declare a variable of type DWORD and assign it a negative value.

Ans. V9U DWORD 12345678h ; unsigned
V9I2 DWORD 20 DUP(2) ; unsigned
" " " "

Q7) Discuss the following MASK directives.

Ans: stack directives

The stack directive tells how many bytes of memory to reserve for the runtime stack. It has to correspond to the size of a memory page in the processor system for managing memory.

Model

This tells the assembler which memory model to use in 32bit processor.

The 386 directive identifies
 a 32bit processor and uses
 flat memory mode conversion
 used.

CODE

code
 main PROC
 it is the beginning of
 area of the program (main
 after want is usually the
 procedure.

DATA

The DATA directive
 a memory data segment
 This DATA segment contains the
 used data for your program
 • Data segment can occupy.

PPOC ::

Procedure block
 Most start and end

The statement in the block
 called with the call instruction
 INVOKE directives.

Syntax

Label PROC [distance] [language]
 [[PUBLIC | PRIVATE | EXPORT?]
 [[< prototype >]]

[[USES reglist [parameter list]
 [[FRAME [[: ehandler - address]]]
 Statement
 label End.

END

directive for END file command. That's file here as you are "main" you have to end

- Simply know that the END directive to end the END can be written with just end the file with E

Now ENDP denotes END here procedure id "main" so ending the file End procedure you have to end procedure.

! (20) Give example of three diff

15

Zero operands

stc ; set carry

(29) Write a program that defines symbolic names for several characters between quotes. Use each in a variable definition.

Ans

• 386

• model flat .stdcall

• stack 4096

• Exit Process PRato.

dword EXIT code: Dword

str1 EQU <"Hadiq">

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(3a) Write a program that contains
instructions (i) add the no 5 to
EAX register and (ii) add 5 to the
EAX register. Generate a listing file and
machine code generated by
the assembler. What are the differences
between the two instructions?

Ans (i)

- add the number 5
to EAX register

- add 5 to the EAX

Submit the following:

- last name e. kin
- whatever the name - 1st

31) Write a Program That calculate following expression using register

$$A (A+B) - (C+D)$$

Assign Integer value to ECX and EDX register.

Ans:

• 386

• model 4096

Exit Process PROC, dw EAX

:DWORD

• Code

main PROC

mov ecx, 3h