* Question about Big Endian: how to put 12 34 56 78 in address 0xff000000

- 0xff0000 78 56 34 12

-0xff0000 12 34 56 78

\* #define Max-Num 100 used to:

-precompile ......

-Preprocessor .....

\* i=4 , j=7

X=j || i++ && 1;

What are the values of I,x? i=4 , x= ?

* i=5 , x=1
* 5 7
* 4 1
* 4 7

\*Typical CAN speed? //// fee e5teyarat Tanya bas dol 2a2rab 7agten wana metla5bata benhom

- 50K – 500K b/s

- 500K – 5M b/s

* X=2\*3+4\*5 ,, x= ?
  + 26
  + 50
  + 125
* EEPRM Interface (ana dawart 3la el net w la2et el egaba de : [SPI](http://en.wikipedia.org/wiki/Serial_Peripheral_Interface_Bus), [I²C](http://en.wikipedia.org/wiki/I%C2%B2C)) w dol mawgoden f el e5teyarat
* Static variables are saved in :
  + Data segments ??
  + Stack
  + Heap
* local variables are saved in :
  + Data segments
  + Stack
  + Heap
* ***We want to save 0x65A in the physical address 0xAAF we will use : ( ana msh mota2akeda mn el codes kanet maktoba keda belzabt , bas heya shabaha :D)***
  + ***\*(u8\* const) 0x65A=0xAAF;***
  + ***\*(u8\* const) 0xAAF=0x65A;***
  + ***u8\* p=(u8\*) 0x65A; p=0xAAF;***
  + ***u8\* p=(u8\*) 0xAAF; p=0x65A;***
* **we use .......... for variable definition to reach an optimized C code for access variables:**
  + **Extern**
  + **Volatile**
  + **Static**
  + **Register**
  + **E5teyar rabe3 , ta2reebn auto**
* When we use ..... for variable declaration , the compiler dos;nt make any optimization
  + Extern
  + Volatile
  + Static
  + Register
  + E5teyar rabe3 , ta2reebn auto
* CAN and LIN Differneces (Multi master aw single , multi slaves aw la2a)

CAN: multi masters

LIN: single master and multi slaves, half duplex

* What is the duty Cycle of waveform?
  + Period that the signal is active
  + Period of the waveform
  + Retio ben 7agten ma5adtesh bali menhom :D(Time of the on signal /total time)
* **What is PWM parameters: (da te5tary menno kaza e5teyar)**
  + **Amplitude and frequency**
  + **Frecuency and Duty cycle**
  + **Duty Cycle and Amplitude**
  + **On time and off time**
  + **E5teyar rabe3 msh fakrah**
* ***What dose affect stack consuming for function? (momken te5tary kaza 7aga)***
  + ***Number of static variables in this func***
  + ***Number of local variables in this func***
  + ***The length of function code***
  + ***Function argumenmts***
  + ***Number of calling function***
* **Embedded development constraints: (choose more that one)**
  + **Limited prower consumption**
  + **Limited CPU pace**
  + **Limited development budget**
  + **Limited Memory resources**
  + **Limited 7aga Tanya msh fakraha bas kan feeha kelmet Power :D**
* Difference between Union and Structure (el e5telaf fe meen beya5od memory aktar w a3taqed en hwa el Union :D bas et2akedy ) union
* Haygeblek code beta3 functin maktob b taree2et el Macro w el function 7asallaha calling 5 marrat ,, el memory size beta3et el code da (elli hwa el 7al ya3ny :D) = 505 ??
* Haygeblek nafs el function maktoba bas mn 3’er macro , b el tare2a el 3adeya ya3ny w bardo 7asallaha calling 5 marat bardo w el size f el 7ala de =125 , hashra7lek leh on phone
* #Pragma used for? (msh fakra el e5teyarat :D) allows various instructions defined by the compiler’s creator to be given to the compiler…(#pragma name)>>if this name is unrecognized by the compiler, then the #pragma is ignored and no error results.
* ............ define variable without reserve memory for it: (ana gawebt be Register)
  + Extern
  + Volatile
  + Static
  + Register
  + E5teyar rabe3 , ta2reebn auto
* #if and #endif are using for:
  + Define Macros (de egabty) ??
  + 7aga msh fakraha
  + 7aga msh fakraha bardo :D
* Difference between Flash memory w EEPROM
  + Page of Flash is larger than page of EEPROM (de el egaba elli 2aletly 3aleha salma)
  + Ba2y el e5teyarat msh fakraha
* Making the variable static affects:
  + Its scope
  + Its lifetime
  + Its scope and lifetime
  + It depends
* ***Can we pass structure to Function by value? y/n (w e3rafy leh yes aw no 3shan momken yegeblek kaza yes w kaza no )***
* **Can we pass Array to function by value?**
  + **No,Arrayes are Pointers**
  + **Yes**
  + **No,Arrayes cant passed argument (fe kalam wa2e3 f el gomla msh fakrah :D)**
* #define Max\_Num 100 used to:
  + Pre complie ...... (kelma wa23a meni :D)
  + PreProcessor ...... (nafs el kelma el wa23a meni :D)
  + Ba2y el e5teyarat msh fakraha :D bas makansh feeha 7aga ma3rofa leya :D
* Real Time systems requires deadline and:
  + 7aga msh fakraha
  + 7aga msh fakraha
  + Guarantee finishing tasks at the deadline
  + Guarantee finishing tasks before its deadline
* What is the meaning of nested interrupt?
  + Ability to server more than one interrupt
  + Inability to server more than one interrupt
  + Serving a new interrupt while another interrupt with lower priority was serving
* Tools that is used in connecting between functions (e5tary kaza 7aga )
  + Semaphores
  + Tasks
  + Mutexes
  + Critical systems
  + Kan fe kaza e5teyar tanyeen msh fakrahom bsra7a :D
* The most suitable definition for interrupt controller is:
  + A small microcontroller that handle the interrupts
  + Small circuit that handle interrupts and define its priority
  + Small circuit that enables and disables the interrupt
  + B & C
* Differences between SPI and UART (which is synchronour and which is asynchronous, which is multi Masters which is single master, which is multi slaves and which is single slaves)

SPI : Synchronous, single master, multi slaves, full duplex

UART: Asynchronous, single master, multi slaves, full duplex ??

* UART
  + Synchronous
  + Asynchronous
  + Asynchronous/Synchronous
* USART
  + Synchronous
  + Asynchronous
  + Asynchronous/Synchronous
* **The use of Watchdog timer in UART (msh fakra el e5teyarat bas shofy hwa 2eh lazmeto)**
* ***UART Simulator can determine the time of small functions? (T/F)***
* Reentrant function
* x=x ^ (1<<2) ,, //// ^ means XOR

LSB(Least Significant bit)= 0,

This line :

* + Set Bit 5 of x
  + Clear Bit 3 of x
  + Toggle bit 3 of x
  + Toggle bit 2 of x
* Which of the next variable can be defined as volatile (el so2al da 7assa enno kaza wa7da feehom yenfa3o sa7, bas hwa yasma7 be egaba wa7da bas :D)
  + Memory ................... Status register (el no2at de kalam wa2e3 menni :D)
  + Global .......................
  + Global variable that is used in multithreaded applications
* 5alli balek mn el pointers elli gaya de ,, gat f el emte7an raqam (f) 🡪 **int (\*a)[10];**

a) **int a;** // An integer

b) **int \*a;** // A pointer to an integer

c) **int \*\*a;** // A pointer to a pointer to an integer

d) **int a[10];** // An array of 10 integers

e) **int \*a[10];** // An array of 10 pointers to integers

f) **int (\*a)[10];** // A pointer to an array of 10 integers

g) **int (\*a)(int);** // A pointer to a function a that takes an integer argument and returns an integer

h) **int (\*a[10])(int);** // An array of 10 pointers to functions that take an integer argument and return an integer

* If these numbers are pushed into stack in order 1,2,3 and 5,, the first one wil pop is?
  + 5
  + 3
  + 2
  + 1
* i=5

if (i-- >= 4)

write “Hello”;

Write”end”;

* + Hello
  + End
  + Hello then end
* *Write the "standard" MIN macro-that is, a macro that takes two arguments and returns the smaller of the two arguments.*

**#define MIN(A,B) ((A) < = (B) ? (A) : (B))** lw galy “<=” w “<” a5tar anhy ?

**El so2al da gali b el 7arf keda bas kan choice tab3n**

* *Using the #define statement, how would you declare a manifest constant that returns the number of seconds in a year? Disregard leap years in your answer.* 
  + **#define SECONDS\_PER\_YEAR (60 \* 60 \* 24 \* 365)**
  + **#define SECONDS\_PER\_YEAR (60 \* 60 \* 24 \* 365UL)**
  + **#define SECONDS\_PER\_YEAR (60 \* 60 \* 24 \* 365);**
  + **#define SECONDS\_PER\_YEAR 60 \* 60 \* 24 \* 365**

El 7al elli f el folder beta3 embedded C interview da msh mawgod few ala e5teyar feehom :D, fa el egaba ya ema el 2ola ya ema el Tanya :D es2ali 7ad mn el 3eyal eli henak ba2a

* i=1.5

Switch (i)

{Case 1 : cout<< “1”;

Case 2 : cout<< “2”;

Case 3 : cout<< “3”;

Default: Cout<< “0”;

}the results will be

* + 1230
  + 0
  + Compile Error
* **Input capture**
  + **Capture I/O ports status**
  + **Capture analoge signals**
  + **Parameter based on timer, measure signals and speed**