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Qualcomm Interview Experience | Off-Campus 2021

- Difficulty Level :\nHard
- Last Updated :\n14 Sep, 2021

Qualcomm Hyderabad Off-Campus Hiring for Driver Developer

Round 1: Basic round

Time: 1 hr

- What are structure and union, why is union preferred over structure in embedded systems.
- Structure padding concept

```
size of below structure\nstruct st\n{\n  short int   s;\n  char        c;\n  int         i;\n} st_var;
```

- https://www.geeksforgeeks.org/structure-member-alignment-padding-and-data-packing/
- Storage class
- Memory layout
- Compiler phase
- How to check overflow in addition program of two numbers
- https://www.geeksforgeeks.org/check-for-integer-overflow/
- Write a program to rotated Linked list by K
- https://practice.geeksforgeeks.org/problems/rotate-a-linked-list/1
- Rotation in a circular linked list program
- Resume based questions
- What are OS and kernel
- Write a program for array rotation
- https://practice.geeksforgeeks.org/problems/rotate-array-by-n-elements/0

Round 2: Most of the questions related to OS only

Time: 1 hr

- What is the CPU scheduling algorithm, types
- PCB and process table, attribute of the process, process vs thread
- Dispatcher vs Scheduler.
- Which scheduling algorithm implemented in Linux
- Question-related GIT, Linux
- How booting happens in Linux, what is the init process in Linux?
- IPC, Mutex vs binary semaphore and which you will use
- Device driver, character driver
- Question-related to deadlock
- Virtual memory, segmentation, page table
- Input and output control in Linux

Round 3: Third round: 1.5 hrs

- Program to check overflow condition while adding two number
- Difference between 32bit and 64-bit processor
- Program to check 32bit or 64-bit processor
- https://www.quora.com/What-C-code-can-check-whether-the-OS-is-32-bit-or-64-bit
- Program array rotation by k
- Little endian vs big endian https://www.geeksforgeeks.org/little-and-big-endian-mystery/
- How to check little-endian and big-endian https://www.geeksforgeeks.org/little-and-big-endian-mystery/
- Resume based questions
- What is interrupt, types, interrupt life cycle, how it\xe2\x80\x99s working in line https://linux-kernel-labs.github.io/refs/heads/master/lectures/interrupts.html
- What is CPU, the hierarchy of memory
- write one assembly language code and explain, How CPU executed any instructions with help of register, ALU, control signal,
- Behavior questions

Round 4: Time 1.5 hrs

- Note: first 30 min relates to the kernel and architecture of the system and two Hackerrank problems need to solve within the time limit.
- What kernel, how its works
- Process and threads, adv of threads
- Threads sharing the same address space
- User mode vs kernel mode
- Virtual memory
- If secondary memory is not available then virtual memory is required or not
- Device driver, character driver
- What API and its significance
- How users interacted with the kernel and vice versa step by step.

- How I/O call happened
- What is a system call
- What happened when the user requests any system call with respect to kernel
- Use of driver
- Role of CPU
- What happened when any process required memory access
- DMA concept
- Interprocess communication
- How to communicate to the driver
- More questions related to kernel, driver
- Memory leak, how to identified memory leak in system https://www.geeksforgeeks.org/what-is-memory-leak-how-can-we-avoid/
- Two Hackerrank programs First one is https://www.geeksforgeeks.org/delete-nodes-list-greater-x/ and the second one is https://practice.geeksforgeeks.org/problems/decimal-equivalent-of-binary-linked-list/1
- Behavioral questions, culture fit questions

Verdict: Selected

Best of luck !!

My Personal Notes\n*arrow_drop_up*

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