Unlimited Lifetime Mentorship
Linux, Networking and Device Drivers

(Datacom/Communications Network and Systems Software Developer)

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Course Overview

This course is intended for anyone (intermediate/beginner/student/working-professional) to gain good hands-on knowledge on a Linux Systems Software development platform which includes both user-space and kernel-space along with core Network Software Development. So that you comfortably work on domains such as:

- Datacom domain - core routing and switching (R&S)
- Network Protocols
- Networking Stack
- CGE Appliances (Career Grade Equipment)
- Network Appliances

Duration

- Unlimited - 1:1 Sessions (1+ hours a session) - Lectures and Practical via Google Hangouts or Skype. Each for a duration of 1+ hours.
- Frequency: 1 session a week

Prerequisites

- You may have good prior C programming skills (intermediate/expert level) and hands-on such as:
  - Algorithms and programming
  - Structured programming
  - Knowledge/hands-on Data-structures, APIs, etc.

Topics Covered

There is no limit or restriction on the topics/subjects. I.e we can discuss anything of your specific interest and prioritize the ones which you are looking for to support your specific career goals and systems.

So here are some of the topics which I am comfortable with.

Linux User-Space:
- Linux C programming advanced topics
- GCC compiler
- multi-threaded user-space apps
- Linux Daemons
- Process/Thread architecture and scalability
- Process/Thread synchronization
- Socket programming and Network software programming
- Memory Structure
- Research

Kernel-Space:
- Linux Kernel basics and internals
- Kernel architecture
- Kernel subsystems:
    - Platform, Networking, Memory management, Process, File-systems, etc.
- Kernel modules
- Kernel data-structures
- Kernel customization, compilation
- Kernel<>User-space interaction
- Kernel /proc file system
- Kernel programming
- Kernel ioctl() interface
- Device Drivers
- Memory Management and Allocation
- Character Devices
- Kernel Features
- Transferring Between User and Kernel Space
- Interrupts and Exceptions
- Timing Measurements
- Kernel Timers
- Research

Networking:
- Networking Fundamentals
- IPv4 Addressing, Linux Kernel IPv4 Network stack
- Protocol architecture

- L2 bridging(switching), L3 routing fundamentals, deeper concepts and research
- MPLS/VPLS L2 tunnels
- VPN L3 tunnels
- Routing protocols
- Networking Appliances architecture: Router, Firewall, etc
- CCNA course topics:
  - such as IPv4 subnetting, VLAN, NAT, broadcast/collision domains, etc.
- Building a small home networking lab
- Architecture of Carrier Grade Network Equipment (or appliance)
- Research

Course Delivery

Students living abroad:

We can have teaching sessions via Google hangouts/Skype, etc (audio/video/chat sessions).

You can pay your fee via Paypal and enroll for the classes/course.

Course Fee: * kindly refer the website Courses Tab.

Students living in India:

We can have teaching sessions via Google hangouts/Skype, etc (audio/video/chat sessions).

You can pay your fee directly to my bank account and enroll for the classes/course.

Course Fee: * kindly refer to the website Courses Tab.

For more details kindly contact me via email: kiran.kankipati@gmail.com

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