

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

INDUSTRY EXPERT TALK EVEN SEM (2024)

Subject: Industry Expert Talk on “Diving into Linux device driver programming”

Expert name: Mr. S. Dinakaran

Audience: 4th Semester Students

Date: 16-07-2024(12:00PM-1:00 PM)

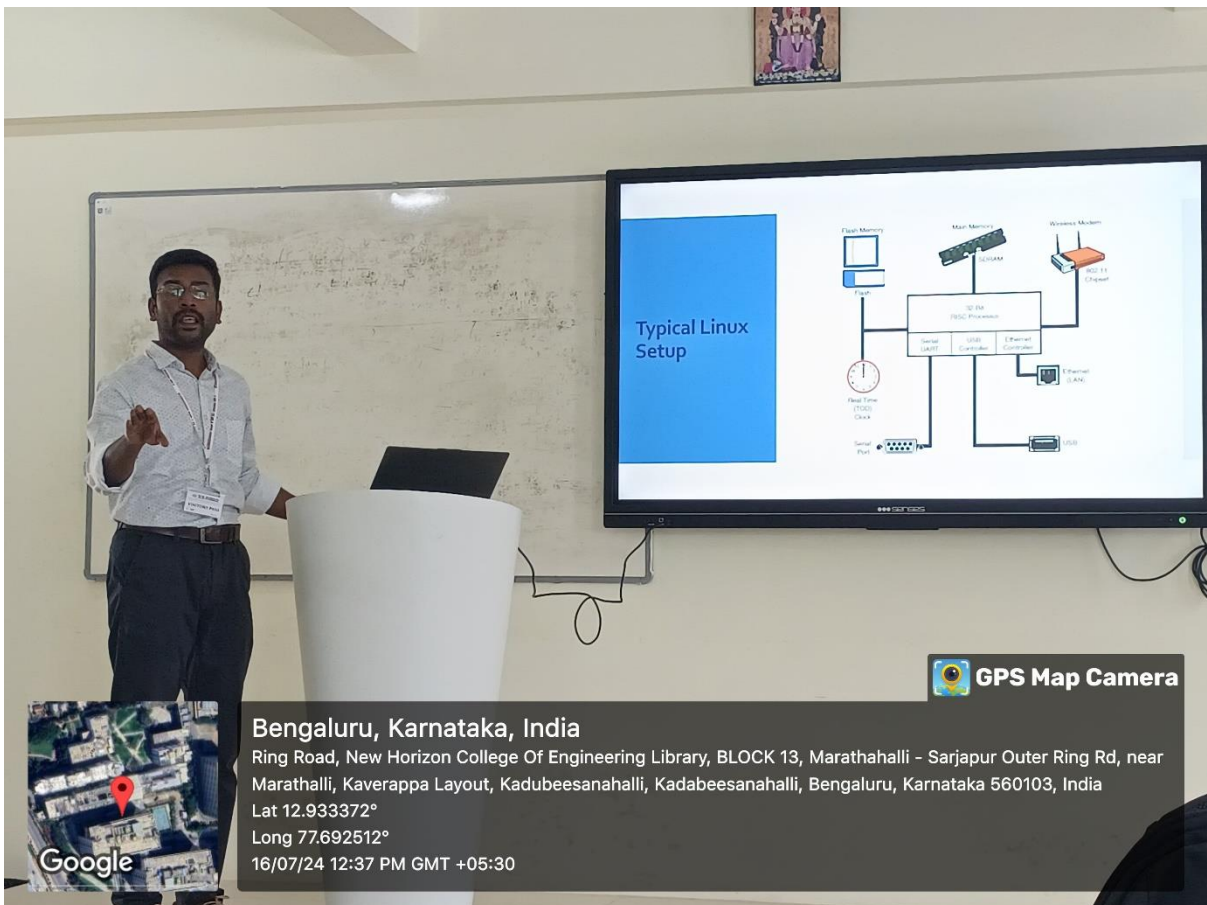
The Department of Information Science and Engineering (ISE) had organized an Industry expert talk on " **Diving into Linux device driver programming**" On 16th July 2024 for the 4th semester students.

The event aimed to explore writing a software for the product using Linux device driver programming. On July 16, 2024, the department hosted Mr. S. Dinakaran a distinguished senior software engineer from Miraфра, as the keynote speaker. Dr. Vandana C.P. Associate Professor, Head of the ISE department, inaugurated the event and welcomed Mr. S. Dinakaran. She emphasized the importance of Linux device driver programming in corporate world. The event was coordinated by Prof. Mrs.K. Thamarai Selvi Assistant Professor in the ISE department, who introduced Mr. S. Dinakaran to an enthusiastic audience comprising fourth-semester students.

Mr. S. Dinakaran Jain delivered an insightful presentation on the Diving into Linux device driver programming. He discussed Real Life Use of Linux Device Driver in various sectors such as Gaming, Routers, Switches, Driverless Car, super computer. He discussed about current job opportunities for Linux device driver programming in corporate world.

The event concluded with Dr. Vandana C.P., presenting a memento to Mr. S. Dinakaran in appreciation of his valuable contributions to the field. This event encapsulates the essence of the Department of ISE's initiative in fostering knowledge exchange and innovation within the academic community.

VARIOUS SESSIONS THROUGHOUT PROGRAM:



Typical Linux Setup

GPS Map Camera

Bengaluru, Karnataka, India
Ring Road, New Horizon College Of Engineering Library, BLOCK 13, Marathahalli - Sarjapur Outer Ring Rd, near Marathalli, Kaverappa Layout, Kadubeesanahalli, Kadubeesanahalli, Bengaluru, Karnataka 560103, India
Lat 12.933372°
Long 77.692512°
16/07/24 12:37 PM GMT +05:30

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Linux Boot Sequence

```
graph TD; A[Bootloader  
Leads the DTB and kernel to RAM, starts the kernel] --> B[Kernel  
Initialize hardware device and kernel subsystems  
Mounts the root filesystem indicated by root=;  
Starts the init application /sbin/init by default]; B --> C["/sbin/init  
Starts other user space services and applications"]; C --> D[Shell]; C --> E[Other applications]; D --- F[Root filesystem]; E --- F;
```

GPS Map Camera

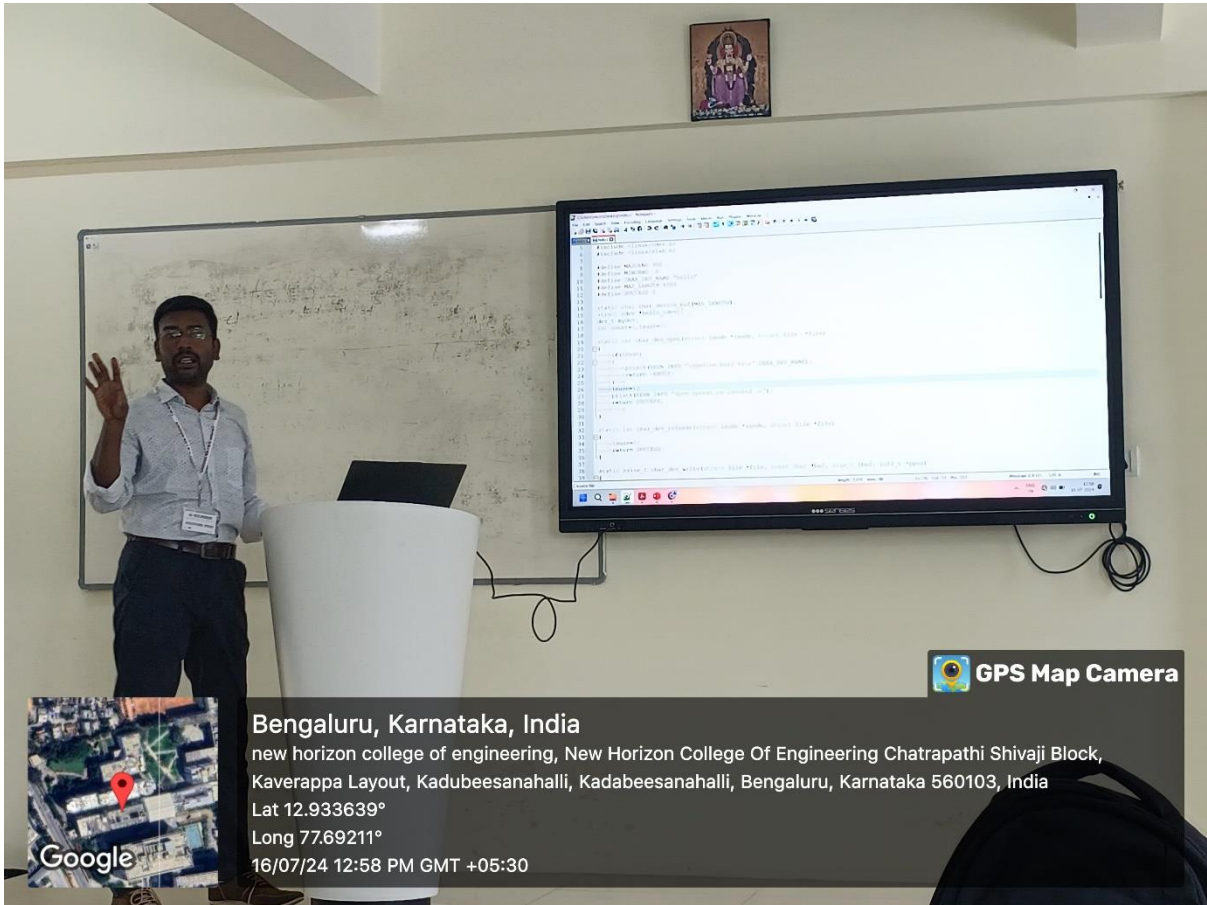
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WILDCRAFT



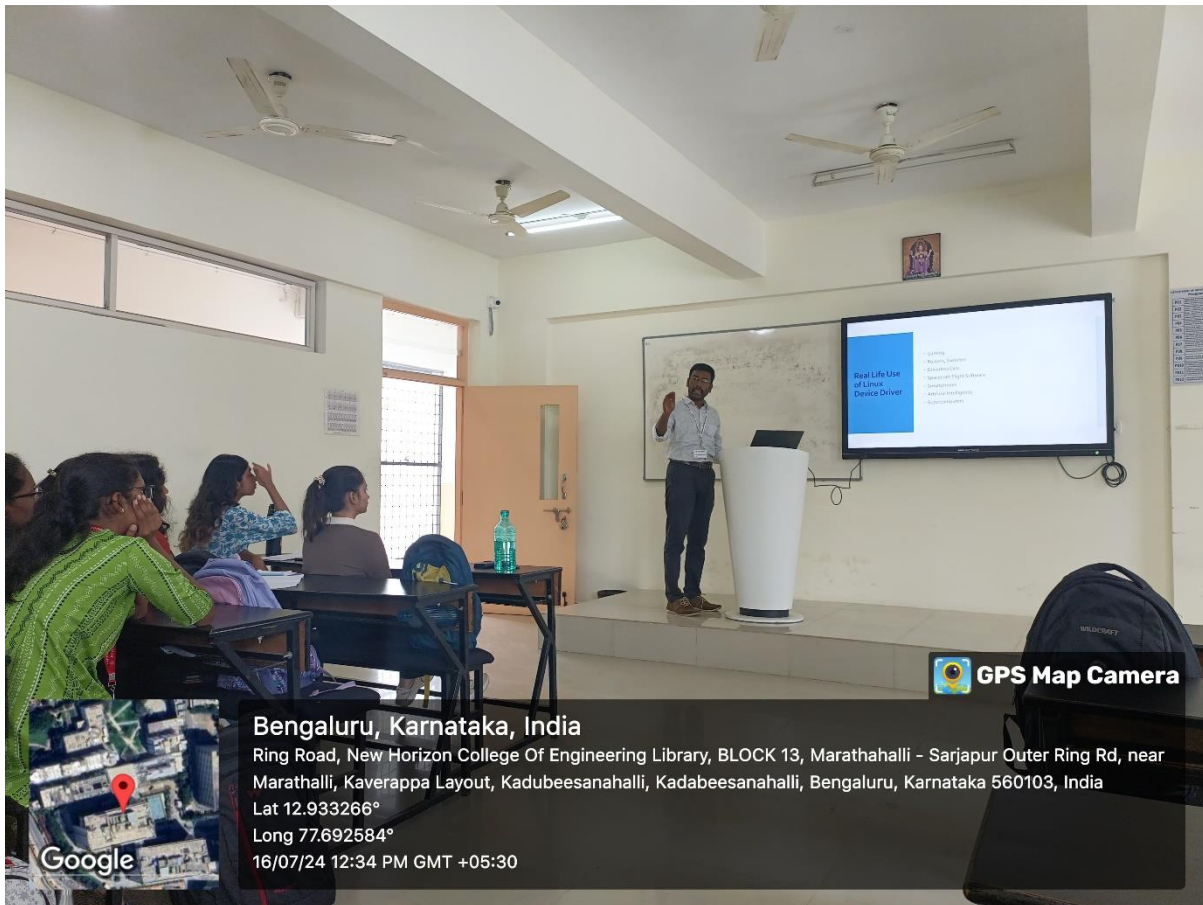
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Bengaluru, Karnataka, India

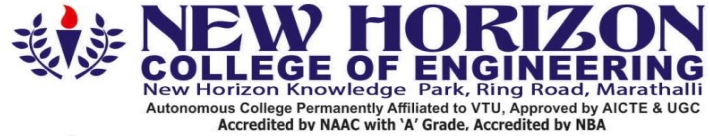
new horizon college of engineering, New Horizon College Of Engineering Chatrapathi Shivaji Block,
Kaverappa Layout, Kadubeesanahalli, Kadabeesanahalli, Bengaluru, Karnataka 560103, India
Lat 12.933639°
Long 77.69211°
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TOPICS COVERED:

- Real Life Use of Linux Device Driver
- Current job opportunities
- Typical Linux Setup and Linux Boot Sequence
- Relationship between applications, the kernel, and hardware
- Role of a Linux device driver
- Device Driver Types
- Loadable Kernel Module
- Beagle Bone Black
- AM335x SoC
- Network Device Driver Concepts
- Skills needed to learn Linux device driver programming



Guest Talk Coordinator: K. Thamarai Selvi

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