Anaconda Software

AN INTRODUCTION AND BASIC OVERVIEW OF THE FEATURES

Overview

- Introduction to Anaconda
- Advantages and limitations
- Key components of Anaconda
- Virtual environment in Anaconda

What is Anaconda?

- A free and open-source software distribution
- Designed for Python and R programming
- Simplifies package management and deployment
- Widely used in Data Science, Machine Learning, Scientific Computing

Advantages of Anaconda

- Easy to install and use
- All-in-one platform
- Free for educational use
- Strong community support
- Saves time for beginners

Limitations of Anaconda

- Large installation size
- May use more disk space
- Not always needed for very small projects

Key Components of Anaconda

- Python Interpreter
  - Conda – Package and environment manager
  - Anaconda Navigator – Graphical User Interface (GUI)
- Popular development tools:
  - Jupyter Notebook
  - Spyder IDE

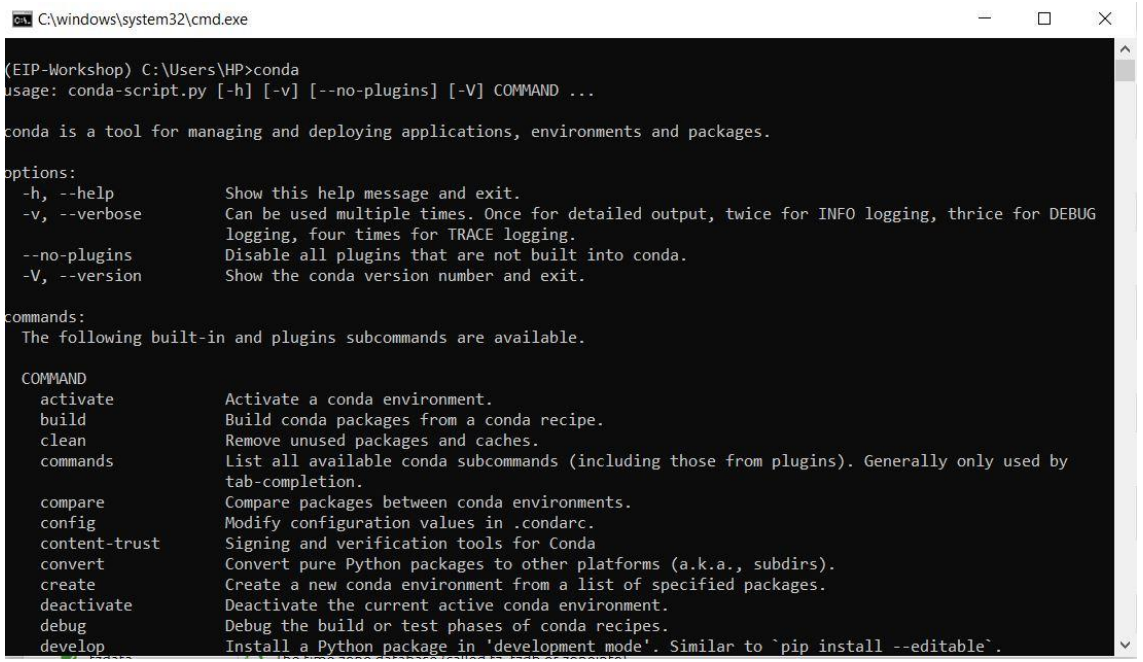

Fig: Conda Terminal

Anaconda Navigator

- GUI-based application launcher
- No command-line knowledge required
- Used to:
  - Launch Jupyter Notebook
  - Launch Spyder
  - Manage environments and packages
  - Beginner-friendly interface

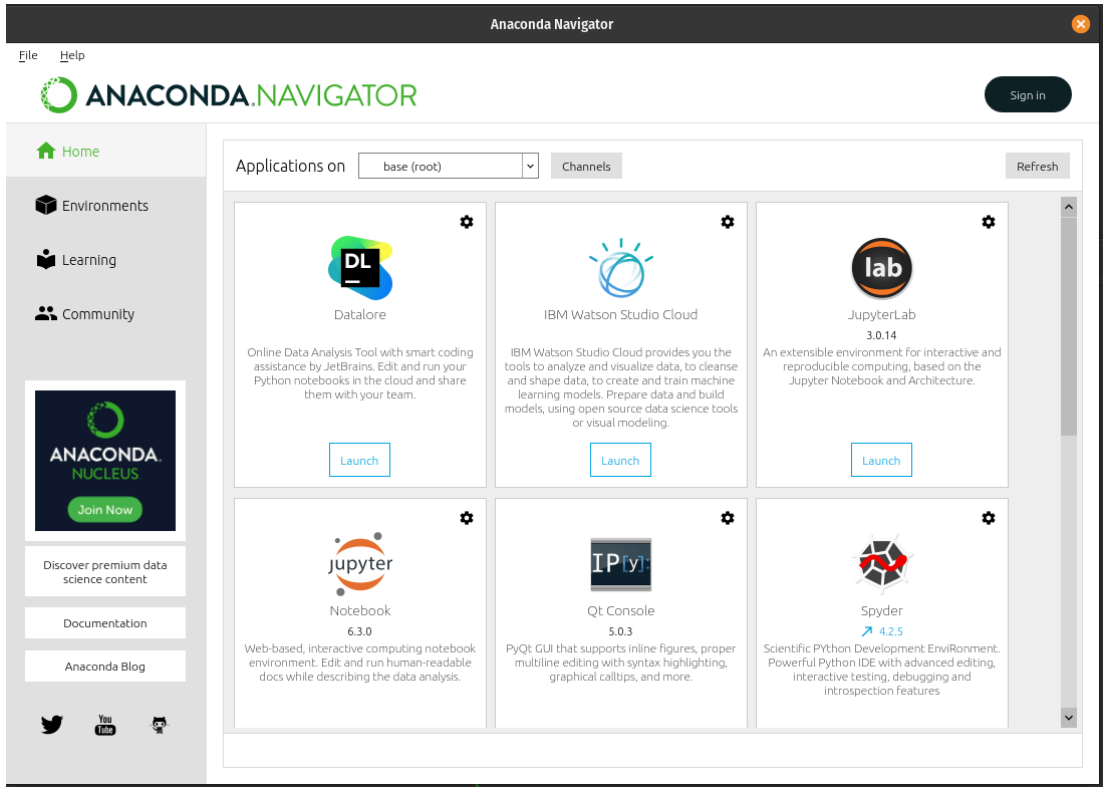

Fig: Anaconda Navigator

Conda Package Manager

- Manages:
  - Libraries (NumPy, Pandas, etc.)
  - Software dependencies
- Advantages:
  - Avoids version conflicts
  - Cross platform
  - Simple to install/update packages

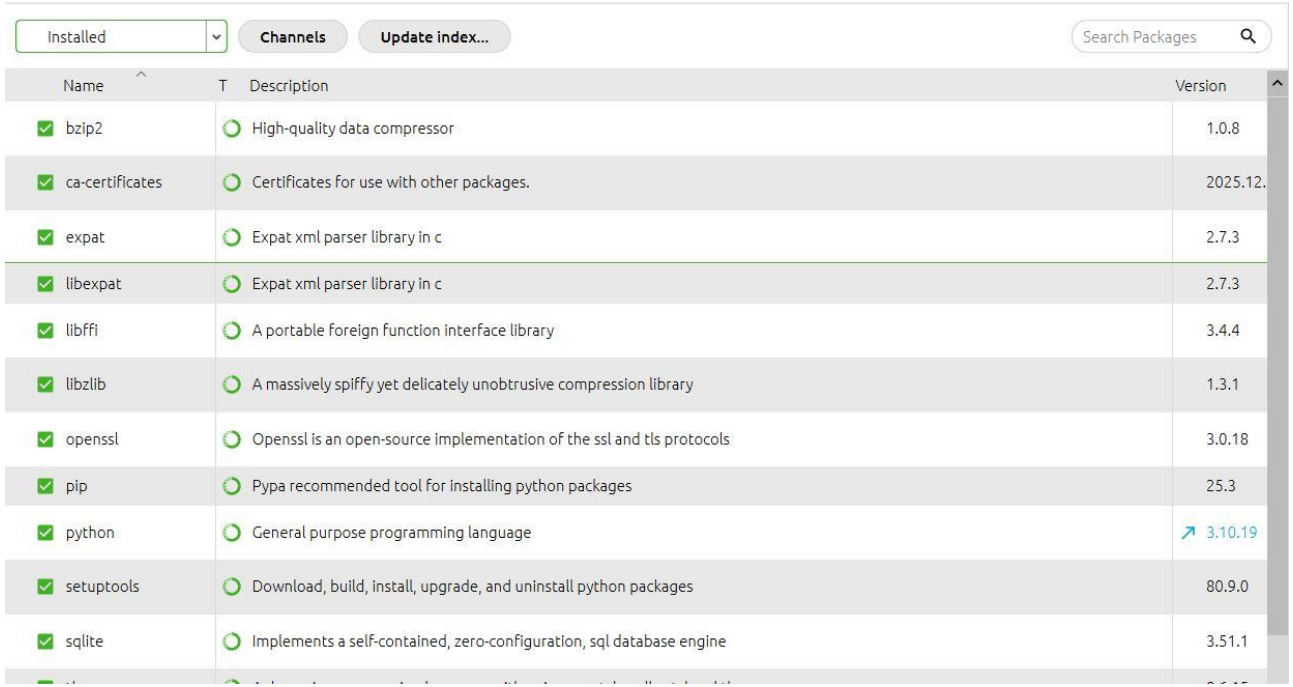

Fig: Package management

Virtual Environments in Anaconda

- Virtual environment = isolated workspace
- Allows:
  - Different Python versions
  - Different library versions
- Useful for:
  - Multiple projects
  - Team collaboration
- Prevents software conflicts

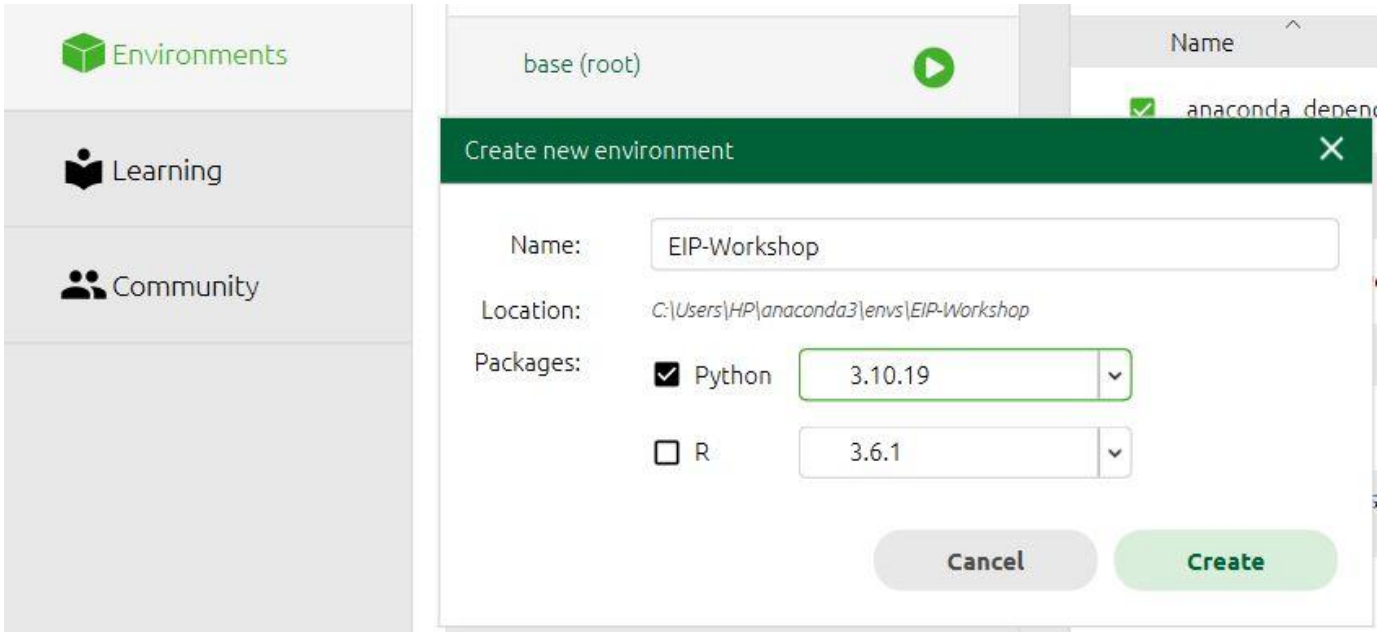

Fig: Virtual environment creation

Thank You

Any Questions?