http://en.wikipedia.org/wiki/Unix, http://en.wikipedia.org/wiki/Tux

What is UNIX?

- Unix is an operating system
- It was originally developed at Bell labs in the late 60s for programmers
- Easily coordinates the use and sharing of a computer's (or a system's) resources and allows multi-user capacity, among other features

Why UNIX?

- Unix is **stable**, **efficient** and **powerful**
- It is very widely used
- Can easily handle complex tasks on large datasets
- Repetitive tasks can be very fast and very easy

Bioinformatics:

- A large proportion of NGS-analysis tools are created for Unix
- Computational resources (e.g. clusters) that can handle large datasets require a working knowledge of Unix

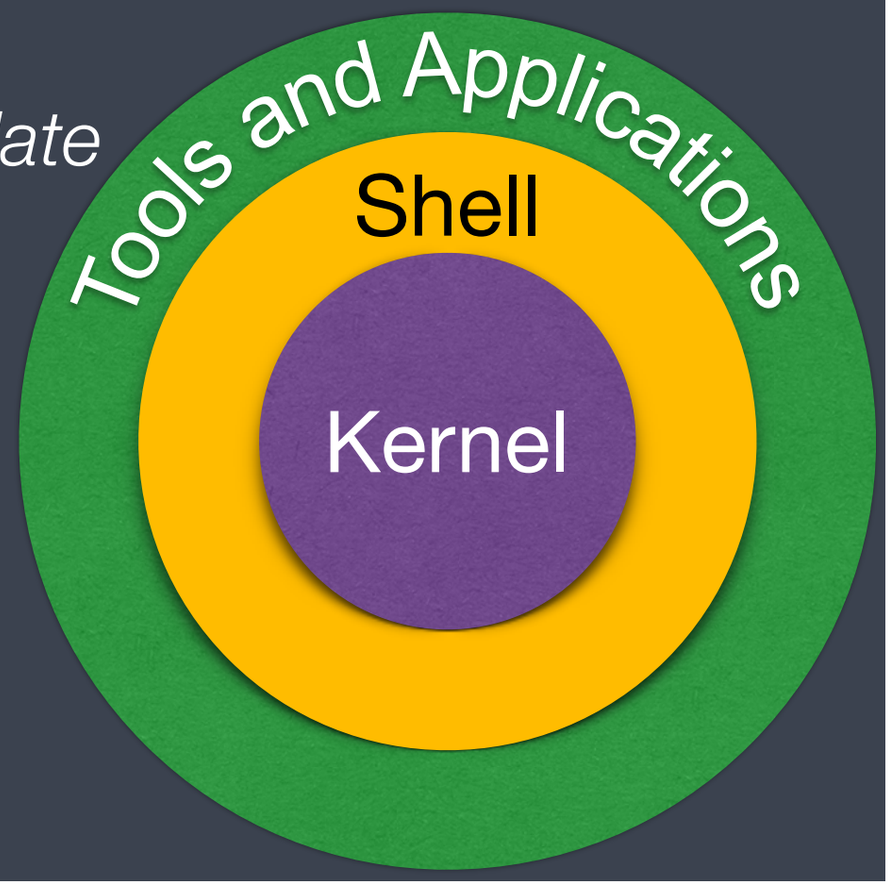
Components

The Unix system is functionally organized at three levels:

✦ The kernel, which schedules tasks and manages storage: the brain of the system

✦ The shell, *an interpreter that helps translate our input into computer language*

✦ Utilities, tools and applications



The “shell”

- The shell (interpreter) is independent of the operating system, but essential
- Dozens of shells have been developed throughout UNIX history
- “Bourne shell,” named for its inventor, Steven Bourne, was the first major shell
- The most commonly used shell is **bash**; bash stands for “**b**ourne **a**gain **sh**ell”

Linux

- Linux is a free, open-source operating system based on Unix
- It has the same components as the original, but the open source community is involved in active development of various distinct distributions of Linux