Chapter 6- Package Management

* Linux Package Management
  + Two major Linux packaging systems
    - Red Hat Package Manager (RPM)
    - Debian GNU/Linus Package Manager
  + Benefits
    - Users- query the package database to find out what packages are installed on the system and their versions
    - System Admin- has tools to install and manage the packages on your system
    - Developer- how to build a package for distribution
  + What Package Managers are capable of:
    - Provide tools for installing, updating, removing, and managing the software on your system
    - Allow you to install new or upgraded software directly across a network
    - Tell you what software package a file belongs to or what files a package contains
    - Maintain database of packages on the system and their status, so it can be determined what packages or versions are installed on your system
    - Provide dependency checking, so that you don’t mess up your system with incompatible software
    - Provide GPG, PGP, MD5, or other signature verification tools
    - Provide tools for building packages
  + Signature verification- helps maintain security of system
  + Advanced Package Tool (APT)- package management tool that consists of several commands
* The Red Hat Package Manager
  + Three primary components
    - Header- contains all of the information about the package, such as its name and version, a description, a list of included files, the copyright terms, and where the source file can be found
    - Signature- contains information used to verify the integrity and authenticity of the package\
    - Archive- contains the actual files that make up the package
  + Macros- sequences of commands stored together and executed by invoking the macro name
  + Scripts- controls the build process
  + Trigger scriptlets- extensions of the normal install and uninstall scripts
* Yum: Yellowdog Updater Modified
  + System for managing RPM packages, including installing, updating, removing, and maintaining packages
  + Automatically handles dependencies between packages
  + yum command
    - automated system for updating rpm-based packages
* The Debian Package Manager
  + Provides several package management tools, primarily intended to facilitate the building, installation, and management of binary packages