NASA 2016 HW5 SA1
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1.

Reference: http://linux.die.net/man/8/apt-get

`apt-get update`

It only resync the index files of available packages, obtained from locations specified in `/etc/apt/sources.list`, from their sources. No installation of removal is performed.

`apt-get upgrade`

This command retrieves and then installs the latest versions of currently installed packages. No currently installed package will be removed. Usually this commands follows `apt-update`.

`apt-get dist-upgrade`

This command performs not only what `apt-get upgrade` does, but also changes dependencies with new versions of installed packages. Some currently installed packages may be removed due to its conflict resolution mechanism.

2.

Reference: http://linux.die.net/man/8/apt-get

`apt-get remove`

It removes user-specified packages, leaving their configuration files on the system.

`apt-get autoremove`

No specified package name needed, since it will remove those packages which were automatically installed as dependencies for others, but not needed anymore.

`apt-get purge`

Instead of removing the specified packages, configurtion files are also cleared.

3.

Reference: http://askubuntu.com/questions/17823/how-to-list-all-installed-packages

```
dpkg --get-selections *perl* | cut -f 1
```

4.

Reference: http://askubuntu.com/questions/481/how-do-i-find-the-package-that-provides-a-file

```
dpkg -S /usr/bin/ncat | cut -f 1 -d :
```

5.

Reference: https://www.debian.org/doc/manuals/apt-howto/ch-search.en.html

```
apt-cache show gcc | grep Depends
```

6.

7.

Reference: http://linux.die.net/man/1/gpg

```
gpg --gen-key
```
… (Entering something and then waiting for random byte generation to gain entropy.)
```
gpg --sign nasa-meta.deb
```

8.

Reference: https://wiki.debian.org/SecureApt

```
gpg -a --export $keyid | sudo apt-key add -
```

9.

References:

https://www.debian.org/doc/manuals/apt-howto/ch-basico.en.html#s-dpkg-scanpackages

http://unix.stackexchange.com/questions/87130/how-to-quickly-create-a-local-apt-repository-for-random-packages-using-a-debian

```
mkdir /srv/repo
cp nasa-meta.deb /srv/repo
dpkg-scanpackages /srv/repo | gzip > /srv/repo/Packages.gz
echo deb file:/srv ./repo >> /etc/apt/sources.list
apt-get update
```