Important Utilities

Tools that can augment your productivity

Utilities

- `find` – locating files and processing them

- `tar`, `gzip` etc – packaging collections of files

- `make` – conditional actions

find

find [pathnames] [conditions]

`-name`	*pattern* to match filenames
`-type`	File type code eg., c for character file, d for directory, l for symbolic link etc.,
`-atime`	Files accessed +n (more than n), -n (less than n) days ago
`-ctime`	File changed +n (more than n), -n (less than n) days ago
`-regex`	Regular expression for *pattern* of filenames Combine with `-regextype` posix-basic, posix-egrep etc.,
`-exec`	Command to run using { } as place holder for filename
`-print`	Print the full path name of matching files

file packaging

- Deep file hierarchies

- Large number of tiny files

- `tar` : collect a file hierarchy into a single file

- `gzip` : compress a file

- Applications: backup, file sharing, reduce disc utilization

Possibilites

- `tar`, `zip`
- `compress (ncompress)`, `gzip (ncompress)`, `bzip2 (bzip2)`, `xz (xz-utils)`, `7z (p7zip-full)`
- Tarballs like `bundle.tgz` for package + compress
- Time & memory required to shrink / expand versus size ratio
- Portability
- Unique names using timestamp, process ID etc., for backup tarballs

make

```
make -f make.file
```

```makefile
# comments

TMP_FILES = *.o *.aux

.PHONY : clean

target : prerequisites
    recipe $(OPTION_NAME)

clean:
    rm -f $(TMP_FILES)
```