Bash Examples

Bio724D: Spring 2025

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Three types of Bash scripts

- Executable documentation – "here's how I did this thing"

- Template – "here's how to do this thing with different inputs"

- Program – "here's how to do this thing in a general sense; can be integrated into other scripts or programs"

Bash example: Executable documentation

```
wget -q \
https://ftp.ncbi.nlm.nih.gov/genomes/refseq/fungi/Saccharomyces_cerevisiae\
/reference/GCF_000146045.2_R64/GCF_000146045.2_R64_genomic.gff.gz

gunzip GCF_000146045.2_R64_genomic.gff.gz

awk -F"\t" -v OFS="," \
    'NF == 9 {cts[$3] += 1}
    END {for (ftr in cts)
            print ftr, cts[ftr] }' \
    GCF_000146045.2_R64_genomic.gff |
sort -t, -k 2 -nr
```

Bash example: Templating

Let's turn our "executable documentation" style script into a template script…

- See class notes

Let's turn our "template" into a program

- See class notes

Coming full circle: Executable documentation again

Let's write a script that executes our program for multiple inputs

- See class notes