

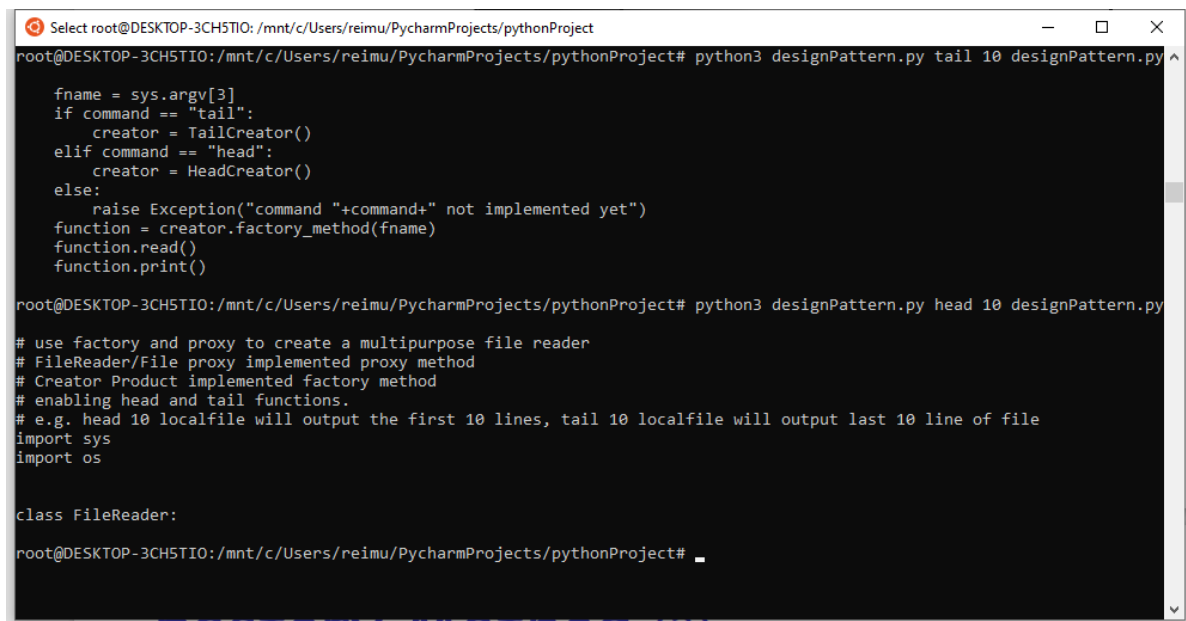
This python 3.9 code used factory method and proxy to create a simple file reader

FileReader/File proxy implemented proxy method

Creator/Product implemented factory method

Use

- `head {lines} {localfile}`
 - to output first {lines} lines of {localfile}
- `tail {lines} {localfile}`
 - to output last {lines} lines of {localfile}



```
Select root@DESKTOP-3CH5TIO: /mnt/c/Users/reimu/PycharmProjects/pythonProject
root@DESKTOP-3CH5TIO:/mnt/c/Users/reimu/PycharmProjects/pythonProject# python3 designPattern.py tail 10 designPattern.py
  fname = sys.argv[3]
  if command == "tail":
      creator = TailCreator()
  elif command == "head":
      creator = HeadCreator()
  else:
      raise Exception("command "+command+" not implemented yet")
  function = creator.factory_method(fname)
  function.read()
  function.print()

root@DESKTOP-3CH5TIO:/mnt/c/Users/reimu/PycharmProjects/pythonProject# python3 designPattern.py head 10 designPattern.py

# use factory and proxy to create a multipurpose file reader
# FileReader/File proxy implemented proxy method
# Creator Product implemented factory method
# enabling head and tail functions.
# e.g. head 10 localfile will output the first 10 lines, tail 10 localfile will output last 10 line of file
import sys
import os

class FileReader:

root@DESKTOP-3CH5TIO:/mnt/c/Users/reimu/PycharmProjects/pythonProject#
```