**IS201 Fundamentals of Computing**

**HOS06 Working with Files**

03/22/2024 Developed by Scott Zhou

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 A white cat in a circle with a blue and black logo

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**Before You Start**

* The directory path shown in screenshots may be different from yours.
* Some steps are not explained in the tutorial**.** If you are not sure what to do:
  1. Consult the resources listed below.
  2. If you cannot solve the problem after a few tries, ask a TA for help.

**Learning Outcomes**

* Understand basic file operations with Python.
* Learn to iterate over the file’s content line by line.
* Learn how to perform file operations like renaming and deleting files.
* Learn how to handle exceptions that might occur during file operations.

**Resources**

* Python crash course: a hands-on, project-based introduction to programming: Matthes, E. (2019): [Available online link](https://cityu.alma.exlibrisgroup.com/discovery/openurl?institution=01CITYUNIV_INST&rfr_id=info:sid%2Fsummon&rft_dat=ie%3D5152833400004251,language%3DEN&svc_dat=CTO&u.ignore_date_coverage=true&vid=01CITYUNIV_INST:Services)

**Create a Project**

Follow HOS1 to set up the project in Codespaces, or use any other code editor you prefer, such as Visual Studio, Visual Studio Code, Sublime, Vim, etc…

We will create a Python project to cover all the learning outcomes.

1. Create a Python file named HOS06.py
2. Import the built-in module that will be used to check. If the file already exists later.



1. Create a function to read the files, and try except to create a new file if the file was not found.

A computer code with text

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1. Create a function to read files line by line.

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1. Create a function to rename the file and add an exception if the file does not exist or any other possible error.

A computer code with text

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1. Create a function to delete files, and apply the same exceptions to handle if the file doe not exist or any other possible error.

A computer code with text

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1. Add the main function to test all the functions we just created.

A screenshot of a computer program

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1. Executed the program, the program will create the example.txt file since it does not exist, and then follow the program logic to rename the file to renamed\_example.txt. The terminal will pause, waiting on user input; if it is y, the text file will be deleted; it, it will remain under the current directory.

A close up of a computer screen

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**Submit your Work to Brightspace**

Please upload your .py file to the HOS06 assignment on Brightspace.