

Lab05. Error handling

Script Languages (INZ004455)

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1 Learning goals

After this lab you should be able to:

1. Use exceptions.
2. Store and retrieve data in JSON file.

2 Exercises

In this lab you will develop two applications: first to create a configuration file for your second application.

Read about types of HTTP request methods: https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol

1. Write the application that asks a user for configuration parameters and store them in the JSON file. Parameters to be stored:
 - name of the webserver log,
 - name of one of the HTTP request methods (to be used as a filter for displaying, find all HTTP request names on the Internet, accept only existing names),
 - logging level used by the application,
 - number of log lines to be displayed at once,
 - your own parameter (devise a clever setting for your app).

Set the encoding storing and retrieving the config file.

2. Modify your lab 4 application to read configuration setting from the file created in task 1. Use exceptions to handle these situations:

- configuration file does not exist,
- configuration file is not a correct JSON file,
- configuration file does not contain values your program needs,
- logfile with the given name does not exist.

3. Set logging level according to configuration.

4. Write a function to print all requests containing `index.html`

- valid HTTP request header should start with the line containing: `METHOD RESOURCE PROTOCOL` eg. `GET /index.html HTML1.1`.
- split request header into a list
- refer to elements of the list using indexes, e.g. `METHOD=0`, `request[METHOD]`
- print only request method and resource requested
- handle malformed requests

5. Write a function to print all requests with the method defined in the configuration. Stop every number of lines defined in configuration and wait for a user to press a key.

What would you do if the number was less or equal to zero?

6. Write your own function processing web server log controlled by your parameter.

7. Where would you use assertions in your application?