Function 1

Convert an integer to a string of any base-value.

(ex: n=3 and base=2 will convert 3 into a binary string: ‘11’)

A computer screen with text

Description automatically generated

Without a base case return statement, the function will infinitely keep calling itself and result in a stack-overflow error.



Calling this function should also notify the developer that it will output an error.

Function 2

Given any JSON string, convert it into a python dictionary and return it.

A screenshot of a computer

Description automatically generated

The input string needs to be validated to make sure it is exactly provided as a JSON string format or else calling the function with a non-JSON string will output an error.

Function 3

Open a file, read its content, and return it.

A computer screen with green text

Description automatically generated

When trying to read from a file, the statements must always be placed in a try-catch block. Without the try-catch block the program will abruptly halt when it tries to open a non-existing file and may crash the developer’s workstation.

Function 4

Given an index, return the value stored in the index of a local array.

A screenshot of a computer

Description automatically generated

Accessing an array element without validating the input to make sure that the input index is within the range of the array will throw an indexing error.