**Virtual Initio Programming: Handling Exceptions**

**AIM:** After completing this worksheet you should be able to explain how to catch exceptions in Python programs to prevent them from crashing the program.

**You Need:** To complete this worksheet you need understand Python control structures (WS7-1), data-types (WS12-14), lists (WS19) and file IO (WS25).

**For this worksheet you do not need the Initio Simulator. Just open an IDLE window.**

Sometimes something goes wrong during program execution causing the program to crash.

Type the following at the command line.

>>> f = open('no\_file', 'r')

**Question 1:** What happens?

.

If this line was included in a program, then the program would crash.

**Exercise 1:** Write a program that is supposed to read in a file and then print its contents to the screen but give the name of a file that doesn’t exist.

Run the program. What happens?

We can prevent this kind of thing happening by using **try … except.**

Consider the following program:

try:

 f = open('no\_file', 'r')

 for line in f:

 print(line)

except:

 print("error")

In this program if the code within the try: block fails with an error then the code in the except: block is executed. This is particularly useful when handling user input and input from files:

**Exercise 2:** Write a program that asks the user to input a number and then prints out that number times 10. If the user enters something that is not a number then the program should note the fact and ask them to try again.



 University of Liverpool, 2019

This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/)