Practical Learning #5 - 1
Python Exception Handling

What are exceptions in Python?

Python has many built-in exceptions which forces your program to output an error when something in it goes wrong.

When these exceptions occur, it causes the current process to stop and passes it to the calling process until it is handled. If not handled, our program will crash.

1. Create a new python file name as PL5-1_LastnameFirstname.
2. Type and try:
   print(x) #This statement will raise an error, because x is not defined.

Catching Exceptions in Python

In Python, exceptions can be handled using a **try** statement.

A critical operation which can raise exception is placed inside the try clause and the code that handles exception is written in except clause.

3. Modify your code, as shown below.

```
# The try block will generate an exception, because x is not defined
try:
  print(x)
except:
  print("An exception occurred")
```

OUTPUT:

```
An exception occurred
```

Catching Specific Exceptions in Python

You can define as many exception blocks as you want, e.g. if you want to execute a special block of code for a special kind of error

4. Modify your code, as shown below.

```
try:
  print(x)
except NameError:
  print("Variable x is not defined")
except:
  print("Something else went wrong")
```

OUTPUT:

```
Variable x is not defined
```

Else

You can use the **else** keyword to define a block of code to be executed if no errors were raised:

5. Comment your previous code, type the following:

```
try:
  print("Hello")
except:
  print("Something went wrong")
else:
  print("Nothing went wrong")
```

OUTPUT:

```
Hello
Nothing went wrong
```

Finally

The **finally** block, if specified, will be executed regardless if the try block raises an error or not.

```
try:
  print("Hello")
except:
  print("Something went wrong")
else:
  print("Nothing went wrong")
finally:
  print("The 'try except' is finished")
```

OUTPUT:

```
Hello
Nothing went wrong
The 'try except' is finished
```

Notice that the finally block is executed regardless if the try block raises an error or not

6. Modify your code, as shown below:

7. Use print(x) instead of print("Hello")

OUTPUT:

```
Something went wrong
The 'try except' is finished
```

8. Save and upload your work.