Introduction to Python I (Exercises 07) Exceptions

1) Write a script that prompts for an integer. During the input you will convert the entered string into an integer (int function). Trap any exceptions and print a message letting the user know there was an error. Try entering letters instead of an integer, what happens? Are you able to trap the exception?

```
try:
    myinteger = int(input("Please enter an integer: "))
except:
    print("Invalid integer value ... !")
else:
    print(myinteger)
```

2) Try the same type of code but inside a function (call the function inputint()). The function will receive a string parameter containing the prompt to be displayed. When you call the function, the function will return an integer. The function never exits until you enter an integer and it is successfully returned. (note: this can be achieved in many different ways)

```
def inputint(prompt):

    while True:
        try:
            myinteger = int(input(prompt))

        except:
            pass # Do nothing but catch the exception

        else:
            return myinteger


getinteger = inputint("Please enter an integer: ")

print(getinteger)
```

3) Write a simple script that divides a number (integer) by zero. Can you trap the exception and print a suitable message?

```
myinteger = 10

try:
    result = myinteger / 0 # This will cause an exception
except:
    print("Division by zero is not allowed!")
```

4) Prompt the user for a filename that does not exists. Try opening the file. Catch the exception and give a suitable error. Prompt for the file again or 'q' to exit.

```
filename = input("Enter file to be opened: ")

while filename != 'q':

    try:
        filehandle = open(filename, 'r')
    except:
        print("File {} does not exist!".format(filename))
    else:
        break

    filename = input("Enter file to be opened: ")
```