

Assignment on Error Handling in Python

1. Coding Challenge

Write a Python program to take two numbers from the user and perform division. Use a try-except block to handle the following cases:

- Division by zero (`ZeroDivisionError`).
- Invalid input (`ValueError`).
- Any other exceptions.

2. Multiple Choice Questions

Question 1: What does the `finally` block do in a try-except structure?

- a) Executes only if no exception occurs.
- b) Executes only if an exception occurs.
- c) Executes regardless of whether an exception occurs or not.
- d) Executes when an exception is explicitly raised.

Question 2: What exception is raised when trying to open a non-existent file?

- a) `FileNotFoundError`
- b) `IOError`
- c) `PermissionError`
- d) `NameError`

Question 3: What is the correct way to raise a custom exception in Python?

- a) `throw Exception("Custom message")`
- b) `raise "Custom message"`
- c) `raise Exception("Custom message")`
- d) `throw new Exception("Custom message")`

3. Bonus Challenge

Write a program to accept a file name from the user, read its contents, and handle the following exceptions:

- `FileNotFoundError`
- `PermissionError`
- Any other unforeseen exceptions.