Complete Python Exception Handling Guide

A clean and interview-ready reference for Python exceptions

1. Base Exception Hierarchy

- BaseException
- Exception
- SystemExit
- KeyboardInterrupt
- GeneratorExit

2. Most Commonly Used Exceptions

- ValueError – Invalid value
- TypeError – Wrong data type
- IndexError – Index out of range
- KeyError – Dictionary key missing
- NameError – Variable not defined
- AttributeError – Attribute not found
- ZeroDivisionError – Division by zero
- FileNotFoundError – File missing
- ImportError – Import failure
- ModuleNotFoundError – Module not found

3. Arithmetic Exceptions

- ArithmeticError
- ZeroDivisionError
- OverflowError
- FloatingPointError

4. Lookup Exceptions

- LookupError
- IndexError
- KeyError

5. OS & File Handling Exceptions

- OSError
- PermissionError
- IsADirectoryError
- NotADirectoryError
- TimeoutError

6. Import Exceptions

- ImportError

- ModuleNotFoundError

7. Type & Value Exceptions

- TypeError

- ValueError

- UnicodeEncodeError

- UnicodeDecodeError

- UnicodeTranslateError

8. Syntax & Assertion Exceptions

- SyntaxError

- IndentationError

- TabError

- AssertionError

9. Memory & Recursion

- MemoryError

- RecursionError

10. Warning Exceptions

- DeprecationWarning

- FutureWarning

- RuntimeWarning

- SyntaxWarning

- UserWarning

Example: Exception Handling Code

try: a = int(input("Enter a number: ")) print(a) except ValueError as v: print("Invalid input") print(v) except Exception as e: print(e) finally: print("Thank You")