1) Create a module consisting of class holding various data members and member functions.
(class can be on various file operations or mathematical operations or string operations)

2) Import the above module created and try to implement their member functions.

3) Also in the same file, create a user defined exception and implement it.

Ans:- Here's an example that demonstrates the steps you mentioned:-

Module with Data and Exception:-

1. **Creating a module with a class holding various data members and member functions for file operations, mathematical operations, and string operations.**
   Code:-

```
# FileOperations.py

class FileOperations:
    def __init__(self, filename):
        self.filename = filename

    def read_file(self):
        try:
            with open(self.filename, 'r') as file:
                content = file.read()
                return content
        except FileNotFoundError:
            return f"File '{self.filename}' not found."

    def write_file(self, data):
        try:
            with open(self.filename, 'w') as file:
                file.write(data)
                return f"Data written to '{self.filename}' successfully."
        except PermissionError:
            return f"Permission denied for file '{self.filename}'."

class MathematicalOperations:
    def square_root(self, num):
        import math
        return math.sqrt(num)

    def power(self, base, exponent):
        return base ** exponent

class StringOperations:
    def split_string(self, text, delimiter):
```

```
        return text.split(delimiter)
```

2. **Importing the module and implementing its member functions:-**

   Code:-

```
# main.py
from FileOperations import FileOperations, MathematicalOperations,
StringOperations

# File Operations
file_op = FileOperations("example.txt")
data = file_op.read_file()
print(data)

file_op.write_file("Hello, World!")

# Mathematical Operations
math_op = MathematicalOperations()
result = math_op.square_root(16)
print(result)

result = math_op.power(2, 3)
print(result)

# String Operations
string_op = StringOperations()
result = string_op.split_string("Hello, World!", " ")
print(result)
```

3. **Creating and implementing a user-defined exception in the same file:-**

   Code:-

```
# main.py
class CustomException(Exception):
   def __init__(self, message):
      self.message = message

try:
   raise CustomException("This is a custom exception.")
except CustomException as e:
   print(e.message)
```

   Explaintion:-

   When you run the **main.py** file, it will import the **FileOperations** module, create instances of the classes defined within it, and demonstrate the usage of their member functions. Additionally, it will create and handle a custom exception defined in the same file.