25/12/2025

Work done :

- Exception handling

Description :

Exception handling :

➔ Exception means unexpected error that may occur during program execution and interrupt program flow .
➔ Exception handling is mechanism to handle runtime error so that they does not crash program and can continue execution safety .
➔ It is used to avoid program termination.
➔ It used to smoothen program flow.
➔ Help in error debugging.

Types of error

1. **Compile time error**
   Detect during compilation
   Example: syntax error

2. **Run time error**
   Occurs during execution
   Example: divide by zero

3. **Logical error**
   Program runs but gives wrong output
   Example: wrong formula

Error

➔ Serious problem
➔ Cannot be handle
➔ Ex., outOfMemory

Try-except block

```
try :
        a = 10 / 0
except ZeroDivisionError  :
        print(“you can not divide by 0”)
```

```
#  you can not divide by 0
```

Handling multiple exception

```
try:
        a = int(“str”)
        print(a + 10)
except ValueError :
        print(“Invalid value”)
except TypeError:
        print(“type error occurred ”)
```

Handling multiple exception in one block

```
try :
        a = int(“str”)
except (TypeError , ValueError):
        print(“error occured”)
```

Generic exception handling

```
try :
        A = 10 / 0
except Exception as e :
        print(“Error ” , e)
```

Else block

```
try :
        A = 10 / 0
except ZeroDivisionError :
        print(“you cannot divide with 0”)
else :
        print(“divided successfully”)
```

Finally block

```
try:
        F = open(“data.txt”)
except FileNotFound :
        print(“file not found”)
finally :
        print(“execution completed”)
```

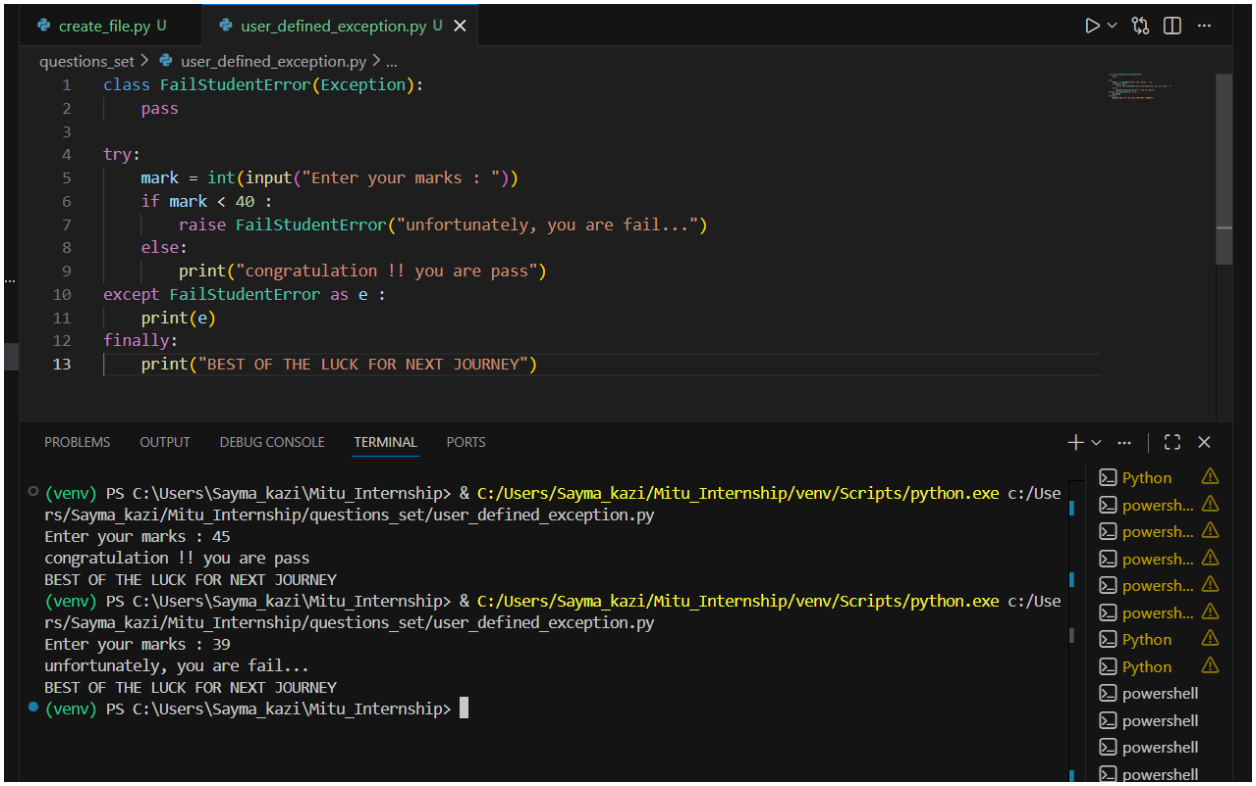
User defined exception

```
class myerror(Exception):
        Pass
```

Example:

- ```
  class PasswordError(Exception):
          pass
  try:
          pw = input("Entre your password: ")
          if len(pw) < 8 :
                  raise PasswordError("password is too short ")
  except PasswordError as e:
          print(e)
  finally:
          print("pasword is checked successfully")
  ```

- ```
  class AgeNotEligible(Exception):
          pass
  try:
          age = int(input("Entre your age: "))
          if age < 18 :
                  raise AgeNotEligible("you are not eligible voting")
          else:
                  print("you are eligible for voting")
  except  AgeNotEligible as e:
          print(e)
  finally:
          print("thanks ")
  ```


create_file.py U
user_defined_exception.py U
questions_set > user_defined_exception.py > ...
class FailStudentError(Exception):
pass
try:
mark = int(input("Enter your marks : "))
if mark < 40 :
raise FailStudentError("unfortunately, you are fail...")
else:
print("congratulation !! you are pass")
except FailStudentError as e :
print(e)
finally:
print("BEST OF THE LUCK FOR NEXT JOURNEY")
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
(venv) PS C:\Users\Sayma_kazi\Mitu_Internship> & C:/Users/Sayma_kazi/Mitu_Internship/venv/Scripts/python.exe c:/Users/Sayma_kazi/Mitu_Internship/questions_set/user_defined_exception.py
Enter your marks : 45
congratulation !! you are pass
BEST OF THE LUCK FOR NEXT JOURNEY
(venv) PS C:\Users\Sayma_kazi\Mitu_Internship> & C:/Users/Sayma_kazi/Mitu_Internship/venv/Scripts/python.exe c:/Users/Sayma_kazi/Mitu_Internship/questions_set/user_defined_exception.py
Enter your marks : 39
unfortunately, you are fail...
BEST OF THE LUCK FOR NEXT JOURNEY
(venv) PS C:\Users\Sayma_kazi\Mitu_Internship>
Python
powersh...
powersh...
powersh...
powersh...
powersh...
Python
Python
powershell
powershell
powershell
powershell