

In [ ]: 1.what is an exception in python ? write the difference between exceptions and synt  
 ->when a python script encounter a situation that it cannot cope with , it raises a  
 a python object that represents an error  
 syntax error: a error occurs when the structure of a program does not conform to th  
 exception : is an abnormal event that occurs during the execution of a program .suc  
 exception prevent the program from running if they are nt handled properly

In [ ]: 2.what happens when an exception is not handled properly ?explain with an example  
 ->if they are not handled properly it prevents program from running

In [1]: with open("pwskills.txt","r") as f:  
 f.read()

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FileNotFoundError                                Traceback (most recent call last)
Cell In[1], line 1
----> 1 with open("pwskills.txt","r") as f:
      2     f.read()

File /opt/conda/lib/python3.10/site-packages/IPython/core/interactiveshell.py:282,
in _modified_open(file, *args, **kwargs)
    275 if file in {0, 1, 2}:
    276     raise ValueError(
    277         f"IPython won't let you open fd={file} by default "
    278         "as it is likely to crash IPython. If you know what you are doing,
    "
    279         "you can use builtins' open."
    280     )
--> 282 return io_open(file, *args, **kwargs)

FileNotFoundError: [Errno 2] No such file or directory: 'pwskills.txt'
```

In [ ]: syntax of above code is correct but the file is not present hence it generate error  
 method

In [ ]: 3.which python statement are used to catch and handled exception ?explain with an e  
 ->the try and except block is used

In [3]: try:  
 with open('pwskills.txt','r') as f:  
 f.read()  
 except:  
 print('this file not present')

this file not present

In [ ]: 4.explain with an example

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In [8]: try:
        with open ('test.txt','r') as f:
            f.read()
        except:
            print('this file is not present')
        else:
            print('i have read test.txt')
```

i have read test.txt

```
In [9]: try:
        with open ('pwwskills','r') as f:
            f.read()
        finally:
            print('this program is completly run')
```

this program is completly run

```
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FileNotFoundError                                Traceback (most recent call last)
Cell In[9], line 2
      1 try:
----> 2     with open ('pwwskills','r') as f:
      3         f.read()
      4 finally:

File /opt/conda/lib/python3.10/site-packages/IPython/core/interactiveshell.py:282,
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    280     )
--> 282 return io_open(file, *args, **kwargs)

FileNotFoundError: [Errno 2] No such file or directory: 'pwwskills'
```

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In [16]: a=int(input('enter your no: '))
        b=int(input('enter your no: '))
        if b==0:
            raise Exception (' sorry zero is not allowed')
        else:
            print(a/b)
```

0.5

```
In [ ]: 5.what are custom exception in python ?why do we need custom exceptions ?explain wi
->custom exception are classes
        custom exception will add information about project related problems that way you
        and traceback ,if an exception is raised in a way that combines python code with
```

```
In [8]: class invalidageexception(Exception):
        pass

        num=18

        try:
            age=int(input('enetr your age : '))
            if age<num:
                raise invalidageexception
            else:
                print('eligible to vote')

        except invalidageexception:
            print('exception occured:invalid age')
```

exception occured:invalid age