In [26]:
```
#types of errors
#SyntaxError:
#indexerror:error caused when trying to access an item at invalid index
#ModuleNotFoundError:caused when module is not defined
#KeyError:caused when key is not found
#ImportError:caused when operation or function is applied to object of appropriate type
#TypeError:caused when operation or function is applied to an object of an appropriate type
#ValeError:caused when a function argument is of appropriate type
#NameError:caused when object is not found
#ZeroDivisionError:caused when second operator in division is zero
#example program for checking all errors
print"hello"
```

```
  File "<ipython-input-26-61a9ba15195f>", line 11
    print"hello"
          ^
SyntaxError: invalid syntax
```

In [29]:
```
#index error
list1=[1,2,3,4]
list1[4]
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
<ipython-input-29-42aed30969a4> in <module>
      1 #index error
      2 list1=[1,2,3,4]
----> 3 list1[4]

IndexError: list index out of range
```

In [14]:
```
import mymodule#modulenotfound error
```

In [14]:
```
import mymodule#modulenotfound error
```

```
---------------------------------------------------------------------------
ModuleNotFoundError                       Traceback (most recent call last)
<ipython-input-14-789c0ce43099> in <module>
----> 1 import mymodule

ModuleNotFoundError: No module named 'mymodule'
```

In [25]:
```
dict1={"1":"one","2":"two"}#key error
dict1[3]
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
<ipython-input-25-92c0be064384> in <module>
      1 dict1={"1":"one","2":"two"}#key error
----> 2 dict1[3]

KeyError: 3
```

In [16]:
```
from math import square#import error
```

```
---------------------------------------------------------------------------
ImportError                               Traceback (most recent call last)
<ipython-input-16-3b4ec2b19b64> in <module>
----> 1 from math import square

ImportError: cannot import name 'square' from 'math' (unknown location)
```

In [18]:
```
"22"+2#type error
```

In [18]:
```
"22"+2#type error
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-18-e05a707b7502> in <module>
----> 1 "22"+2

TypeError: can only concatenate str (not "int") to str
```

In [21]:
```
int("34.0") #value error
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-21-2ae7b7a303eb> in <module>
----> 1 int("34.0")

ValueError: invalid literal for int() with base 10: '34.0'
```

In [22]:
```
month #name error
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-22-886615e1e492> in <module>
----> 1 month

NameError: name 'month' is not defined
```

In [23]:
```
div1=34/0 #zerodivision error
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-23-df325a1821d5> in <module>
----> 1 div1=34/0
```

In [23]:
```
div1=34/0 #zerodivision error
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-23-df325a1821d5> in <module>
----> 1 div1=34/0

ZeroDivisionError: division by zero
```

In [5]:
```
#design simple calculator by using try and except
try:
    num1=float(input("enter first number:"))
    num2=float(input("enter second number"))

    c=int(input("enter the users choice:"))
    if c==1:
        print("addition of two numbers is:",num1+num2)
    elif c==2:
        print("subtraction of two numbers is:",num1-num2)
    elif c==3:
        print("multiplication of two numbers is:",num1*num2)
    elif c==4:
        print("division of two numbers is:",num1/num2)
    elif c==5:
        print("invalid choice")
    else:
        print("enter valid integer")
except NameError:
    print("error occured1")
except TypeError:
    print("error occured2")
except ValueError:
    print("error occured3")
except AttributeError:
    print(" error occured4")
```

```
enter first number:90
enter second numberki
error occured3
```

In [35]:
```
#to print message if try block raises a NameError and another for other error
try:
    q=input("enter name:")
    print(p)
except NameError:
    print("NameError has occured")
else:
    print("nothing went wrong")
```

```
enter name:king
NameError has occured
```

In [36]:
```
# try-except is needed to handle exceptions,try lets you to test block of code whereas except block lets you to handle the
#errors,other than this try-except is not required
```

In [39]:
```
#get an input inside try catch block
try:
    n1=int(input("enter  the first number you choose:"))
    n2= int(input("enter the second number you chhose:"))
    ans=print("by adding two numbers:",n1+n2)

except ValueError:
          print("error occured")
```

```
enter  the first number you choose:10
enter the second number you chhose:30
by adding two numbers: 40
```