

In [2]: *#exception events detected during execution that interrupt the flow of a program*

```
num = int(input('enter a num to divide:'))
num1 = int(input('enter a num to divide by:'))
result = num/num1
print(result)
```

```
enter a num to divide:5
enter a num to divide by:0
```

```
-----
ZeroDivisionError                                Traceback (most recent call last)
<ipython-input-2-5c603a0e4bef> in <module>
      2 num = int(input('enter a num to divide:'))
      3 num1 = int(input('enter a num to divide by:'))
----> 4 result = num/num1
      5 print(result)

ZeroDivisionError: division by zero
```

In [4]: **try:**

```
    num = int(input('enter a num to divide:'))
    num1 = int(input('enter a num to divide by:'))
    result = num/num1
    print(result)
except Exception:
    print('something went wrong')
```

```
enter a num to divide:5
enter a num to divide by:0
something went wrong
```

In [6]: **try:**

```
    num = int(input('enter a num to divide:'))
    num1 = int(input('enter a num to divide by:'))
    result = num/num1
    print(result)
except ZeroDivisionError:
    print('you can not divide by zero')
except Exception:
    print('something went wrong')
```

```
enter a num to divide:5
enter a num to divide by:0
you can not divide by zero
```

In [7]: **try:**

```
    num = int(input('enter a num to divide:'))
    num1 = int(input('enter a num to divide by:'))
    result = num/num1
    print(result)
except ZeroDivisionError:
    print('you can not divide by zero')
```

```
enter a num to divide:5
enter a num to divide by:A
```

```
-----
ValueError                                Traceback (most recent call last)
<ipython-input-7-746ae8e21041> in <module>
      1 try:
      2     num = int(input('enter a num to divide:'))
----> 3     num1 = int(input('enter a num to divide by:'))
      4     result = num/num1
      5     print(result)

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

In [8]: **try:**

```
    num = int(input('enter a num to divide:'))
    num1 = int(input('enter a num to divide by:'))
    result = num/num1
    print(result)
except ZeroDivisionError:
    print('you can not divide by zero')
except ValueError:
    print('invalid input')
```

```
enter a num to divide:5
enter a num to divide by:A
invalid input
```

In [12]: **try:**

```
    num = int(input('enter a num to divide:'))
    num1 = int(input('enter a num to divide by:'))
    result = num/num1
```

```
    print(result)
except ZeroDivisionError as e:
    print(e)
except ValueError as e:
    print(e)
```

```
enter a num to divide:5
enter a num to divide by:0
division by zero
```

```
In [13]: try:
        num = int(input('enter a num to divide:'))
        num1 = int(input('enter a num to divide by:'))
        result = num/num1
        print(result)
except ZeroDivisionError as e:
    print(e)
except ValueError as e:
    print(e)
```

```
enter a num to divide:5
enter a num to divide by:A
invalid literal for int() with base 10: 'A'
```

```
In [15]: try:
        num = int(input('enter a num to divide:'))
        num1 = int(input('enter a num to divide by:'))
        result = num/num1
except ZeroDivisionError as e:
    print(e)
except ValueError as e:
    print(e)
else:
    print(result)
```

```
enter a num to divide:6
enter a num to divide by:2
3.0
```

```
In [18]: try:
        num = int(input('enter a num to divide:'))
        num1 = int(input('enter a num to divide by:'))
        result = num/num1
except ZeroDivisionError as e:
    print(e)
except ValueError as e:
    print(e)
else:
    print(result)
finally:
    print('program done')
```

```
enter a num to divide:5
enter a num to divide by:2
2.5
program done
```