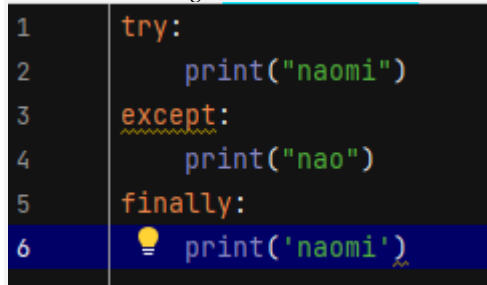


**Part 1**

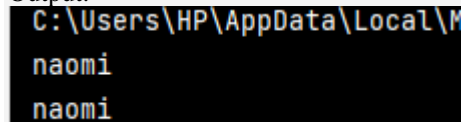
1. How many except statements can a try-except block have?
  - a) zero
  - b) one
  - c) one or more**
  - d) none of the above
2. When will the else part of try-except-else be executed?
  - a) always
  - b) when an exception occurs
  - c) when no exception occurs**
  - d) when an exception occurs in to except block
3. Is the following Python code valid?

```
try:
    # Do something
except:
    # Do something
finally:
    # Do something
```



```
1 try:
2     print("naomi")
3 except:
4     print("nao")
5 finally:
6     print('naomi')
```

Output:



```
C:\Users\HP\AppData\Local\Microsoft\Windows\CurrentVersion\Explorer\RecentItems
naomi
naomi
```

- a) no, there is no such thing as finally
  - b) no, finally cannot be used with except
  - c) no, finally must come before except
  - d) yes**
4. Is the following Python code valid?

```
try:
    # Do something
except:
    # Do something
else:
    # Do something
```

```

1 try:
2     print("naomi")
3 except:
4     print("nao")
5 finally:
6     print('naomi')

```

Output:

```

C:\Users\HP\AppData\Local\Microsoft\WindowsApps\PythonSoftwareFoundation\Python39\python.exe
naomi
naomi

```

- a) no, there is no such thing as else
  - b) no, else cannot be used with except
  - c) no, else must come before except
  - d) **yes**
5. When is the finally block executed?
- a) when there is no exception
  - b) when there is an exception
  - c) only if some condition that has been specified is satisfied
  - d) **always**


## Part 2

1. Using try...except, showcase the ZeroDivisionError.

```

1 try:
2     result=1/0
3 except ZeroDivisionError as e:
4     print("error: cannot divide by zero")

```

Run:  excep X

```

C:\Users\HP\AppData\Local\Microsoft\WindowsApps\PythonSoftwareFoundation\Python39\python.exe
error: cannot divide by zero

```

2. Create a simple list containing five elements and try to print the sixth element of the list. [use IndexError exception]

```
1 lists=[1,2,3,4,5]
2 try:
3     print(lists[5])
4 except IndexError as e:
5     print("error: Index out of range")

except IndexError as e
Run: excep X
C:\Users\HP\AppData\Local\Microsoft\Win
error: Index out of range
Process finished with exit code 0
```

3. Try printing a variable without declaring it first. [use NameError exception]

```
1 try:
2     print(i)
3 except NameError as e:
4     print("error: no declaration or variable.")

except NameError as e
Run: excep X
C:\Users\HP\AppData\Local\Microsoft\WindowsApps
error: no declaration or variable.
```

4. The 'else' in try...except...else statements is used to run the code on the else block if there are no exceptions in the 'except' block. Show an example.

```
1 id = [1, 2, 8, 3, 9]
2 try:
3     print(id[4])
4     #if error then except block of code will be executed
5 except IndexError as e:
6     print("error: index out of range")
7 else: #It will execute after the try statement is true
8     print("no exceptions were raised.")

else
Run: excep X
C:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.
9
no exceptions were raised.
```

5. In Python, we can choose to throw an exception if a condition occurs. To throw the exception, we use 'raise' keyword. Show an example.

```
1      #initialize the variables
2      a=1
3      b=0
4      #check if b is equal to zero
5      if b==0: #raise an exception with an error message
6          raise ZeroDivisionError("error! cannot divide by zero")
7      #try to divide a by b
8      try:
9          result = a/b
10         #pass the ZeroDivisionError
11     except ZeroDivisionError as e:
12         #print the error message
13         print(e)
```

### **Part 3**

1. Ask the user for the numerator and denominator value; and perform division. If the user enters a number, the program will evaluate and produce the result.

If the user enters a non-numeric value then, the try block will throw a `ValueError` exception, and we can catch that using a first catch block 'except `ValueError`' by printing the message 'Entered value is wrong'.

And suppose the user enters the denominator as zero. In that case, the try block will throw a `ZeroDivisionError`, and we can catch that using a second catch block by printing the message 'Can't divide by zero'.

```
1  while True:
2      try:
3          num = int(input("enter the numerator: "))
4          den = int(input("enter the denominator: "))
5          result = num/den
6          print("result: ", result)
7          break
8      #incase of value error
9      except ValueError:
10         print('entered value is wrong')
11         #incase of division error
12         except ZeroDivisionError:
13             print("cannot be divided by zero")
```

Run: excep X

C:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.  
enter the numerator: 2  
enter the denominator: 1  
result: 2.0  
Process finished with exit code 0

2. Ask the user to enter an amount of money. In the try block, run a condition to check if the input value is less than 10 thousand; in which case raise a ValueError and print your message inside it. In the except block, catch the ValueError we previously raised and print the message inside it.

```
1 while True:
2     try:
3         ask = int(input('enter salary: '))
4         if ask >= 10000:
5             raise ValueError
6         else:
7             print("your salary: ", ask)
8             break
9     except ValueError:
10        print('salary must be less than 10,000.')
```

while True > except ValueError

Run: excep X

C:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.  
enter salary: 20000  
salary must be less than 10,000.  
enter salary: 2000  
your salary: 2000

3. An EOFError is raised when built-in functions like input() hits an end-of-file condition (EOF) without reading any data. The file methods like readline() return an empty string when they hit EOF. Show an example.

```
1 try:
2     value = input("enter a value: ")
3     if value == "":
4         raise EOFError
5 except EOFError:
6     print("an EOFError occurred.")
```

Run: excep X

C:\Users\HP\AppData\Local\Microsoft\WindowsApps\python3.  
enter a value:  
an EOFError occurred.