NAME _____ **ICA-7**

NetID_____ @email.arizona.edu

Work with your neighbor.

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1. Add try and except statements to handle an exception that may occur.

```
def foo():
    try:
        n = int(input("Enter a number:"))
        print("n = ", n)
        print("reciprocal = ", str(1/n))
    except ZeroDivisionError:
        print("input must not be 0")
    except ValueError:
        print("input must be integer")
```

2. Read the following code:

```
def fun1(x):
    return 1/x

def fun2(x):
    return 1 + fun1(x)

def main():
    z = fun2(3)
    print(z)
    z = fun2(0)
    print(z)

main()
```

(1) Circle the line that generates the exception error.

Code in fun1()

(2) Modify the code to catch the exception in fun2().

Add try…except… in fun2()

(3) In which function does the error occur?

fun1()

(4) Which function catches the error after (2)?

fun2()

(5) Modify the code to catch the exception in main()

Add try…except in main()

(6) After (5) replaces (2), in which function does the error occur, and which function catches the error?

main()

3. In this code snipet, `args` is a Python list and `my_dict` is a dicionary:

```
index = int(input('Index: '))      # line 1 ValueError
num1 = args[index]                 # line 2 IndexError/
                                           TypeError
sum = num1 + index                 # line 3
value = sum/index                  # line 4 ZeroDivisionError
my_dict[index] = value             # line 5
```

(a) Name four different exceptions that can give occur in the code fragment shown. In each case, give the line number where the exception can arise.

(b) Suppose that we want to give the same error message, “Something’s wrong!”, for all of these exceptions. How this can you do this using a single try statement with just one except clause?

```
try:
      (all code)
except
      print(“Something’s wrong!”)
```

(c) Suppose we want to give different error messages for different exceptions. Show how this can be done using a try statement by giving code that has at least two different error messages for at least two different exceptions.

```
try:
      (all code)
except ValueError:
      print(“input must be integer”)
except ZeroDivisionError:
      print("input must not be 0")
```