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Work with your neighbor.

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

```
def foo():
    n = int(input("Enter a number:"))
    print("n = ", n)
    print("reciprocal = ", str(1/n))
```

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.
(2) Modify the code to catch the exception in fun2().
(3) In which function does the error occur?

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

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

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

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

```
index = int(input('Index: '))     # line 1
num1 = args[index]                # line 2
sum = num1 + index                # line 3
value = sum/index                 # line 4
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?

(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.