Topic 05: Exceptions

Problem 1. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
s = 'hello world'
print(s[60])
```

Fraction of LLMs with correct answer: 11 / 15 = 0.73

Problem 2. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = []
while xs:
    total += 1
    assert(xs)
print('total=', total)
```

Fraction of LLMs with correct answer: 5 / 15 = 0.33

Problem 3. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = []
while len(xs)<5:
    xs.append('test')
print('len(xs)=',len(xs))
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 4. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = []
while len(xs)<5:
    xs.append('test')
assert(xs)
print('len(xs)=',len(xs))
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 5. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [1, 2, 3]
while xs:
    xs += 'test'
print('len(xs)=',len(xs))
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 6. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [1, 2, 3]
total = 10
for x in xs:
    total %= x
print("total=",total)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 7. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [0, 1, 2]
xs.replace(1, 2)
print("xs=", xs)
```

Fraction of LLMs with correct answer: 11 / 15 = 0.73

Problem 8. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
s = 'hello␣world'
i = s.find('␣')
print("i=", i)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 9. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
for k,v in sorted(grades.items()):
    print(v['hw1'])
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 10. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
for k,v in sorted(grades.items()):
    print(k['hw1'])
```

Fraction of LLMs with correct answer: 9 / 15 = 0.60

Problem 11. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
for k,v in sorted(grades.items()):
    print(v[0])
```

Fraction of LLMs with correct answer: 5 / 15 = 0.33

Problem 12. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
for k,v in sorted(grades.items()):
    print(k[0])
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 13. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
output = "grade=" + grades['alice']['hw1']
print('output=', output)
```

Fraction of LLMs with correct answer: 5 / 15 = 0.33

Problem 14. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
output = "grade=" + grades['charlie']['hw1']
print('output=', output)
```

Fraction of LLMs with correct answer: 10 / 15 = 0.67

Problem 15. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
output = "grade=" + grades['bob']['hw2'][91]
print('output=', output)
```

Fraction of LLMs with correct answer: 8 / 15 = 0.53

Problem 16. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
output = alice['hw1']
print('output=', output)
```

Fraction of LLMs with correct answer: 3 / 15 = 0.20

Problem 17. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
total = 0
for i in grades:
    for j in i:
        total += 1
print('total=',total)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 18. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [1, 2, 3]
try:
    result = xs[3]
except IndexError:
    result = -1
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 19. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [1, 2, 3]
try:
    result = xs[3]
except:
    result = -1
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 20. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
xs = [1, 2, 3]
try:
    result = xs[3]
except NameError:
    result = -1
print('result=', result)
```

Fraction of LLMs with correct answer: 12 / 15 = 0.80

Problem 21. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
try:
    output = "grade=" + grades['charlie']['hw1']
except KeyError:
    output = 'oops'
print('output=', output)
```

Fraction of LLMs with correct answer: 2 / 15 = 0.13

Problem 22. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
grades={
    'alice':{'hw1':99,'hw2':88},
    'bob':{'hw1':82,'hw2':91},
}
try:
    output = "grade=" + grades['charlie']['hw1']
except IndexError:
    output = 'oops'
print('output=', output)
```

Fraction of LLMs with correct answer: 11 / 15 = 0.73

Problem 23. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
foo()
```

Fraction of LLMs with correct answer: 5 / 15 = 0.33

Problem 24. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
try:
    foo([1,2,3])
except AssertionError:
    pass
```

Fraction of LLMs with correct answer: 15 / 15 = 1.00

Problem 25. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
result = 0
try:
    result += foo([1,2,3])
except AssertionError:
    result -= 1
print('result=', result)
```

Fraction of LLMs with correct answer: 4 / 15 = 0.27

Problem 26. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
example = 0
try:
    example += foo([1,2,3])
    example += 1
except ValueError:
    pass
print('example=', example)
```

Fraction of LLMs with correct answer: 3 / 15 = 0.20

Problem 27. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
example = 0
try:
    example += foo([1,2,3])
    example += 1
except AssertionError:
    pass
print('example=', example)
```

Fraction of LLMs with correct answer: 1 / 15 = 0.07

Problem 28. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def foo(xs):
    assert(len(xs) > 0)
example = 0
try:
    example += foo([1,2,3])
    example += 1
except ValueError:
    pass
print('example=', example)
```

Fraction of LLMs with correct answer: 4 / 15 = 0.27

Problem 29. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    assert(len(xs) > 0)
    return len(xs)*2
result = 0
try:
    result += bar([1,2,3])
    result += bar([2,3])
    result += bar([])
    result += bar([5])
except AssertionError:
    pass
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 30. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    assert(len(xs) > 0)
    return len(xs)*2
result = 0
try:
    result += bar([1,2,3])
    result += bar([2,3])
    result += bar([])
    result += bar([5])
except ValueError:
    pass
print('result=', result)
```

Fraction of LLMs with correct answer: 8 / 15 = 0.53

Problem 31. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    assert(len(xs) > 0)
    return len(xs)*2
result = 0
try:
    result += bar([1,2,3])
    result += bar([2,3])
    result += bar()
    result += bar([5])
except AssertionError:
    result += 1
except TypeError:
    result += 5
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 32. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    if not len(xs) > 0:
        raise ValueError('input␣list␣must␣be␣non-empty')
    return len(xs)*2
result = 0
try:
    result += bar([1,2,3])
    result += bar([2,3])
    result += bar()
    result += bar([5])
except AssertionError:
    result += 1
except TypeError:
    result += 5
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 33. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    if not len(xs) > 0:
        raise ValueError('input␣list␣must␣be␣non-empty')
    return len(xs)*2
result = 0
try:
    result += bar([1,2,3])
    result += bar([2,3])
    result += bar()
    result += bar([5])
except ValueError:
    result += 1
except TypeError:
    result += 5
print('result=', result)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 34. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
def bar(xs):
    if not len(xs) > 0:
        raise ValueError('input␣list␣must␣be␣non-empty')
    return len(xs)*2
result = 0
result += bar
print('result=', result)
```

Fraction of LLMs with correct answer: 8 / 15 = 0.53

Problem 35. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for tweet in tweets:
    if tweet['text'] in greetings:
        num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 36. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for tweet in tweets:
    if tweets['text'] in greetings:
        num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 6 / 15 = 0.40

Problem 37. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = '0'
for tweet in tweets:
    if tweet['text'] in greetings:
        num_greetings += '1'
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 38. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for tweet in tweets:
    if tweet['text'] in greetings:
        if 'username' == 'Trump':
            num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 39. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for tweet in tweets:
    if tweet['text'] in greetings:
        if tweet['username'] == 'Trump':
            num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 40. The following code (circle one)

terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for i in range(len(tweets)):
    if tweets[i]['text'] in greetings:
        num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 0 / 15 = 0.00

Problem 41. The following code (circle one)

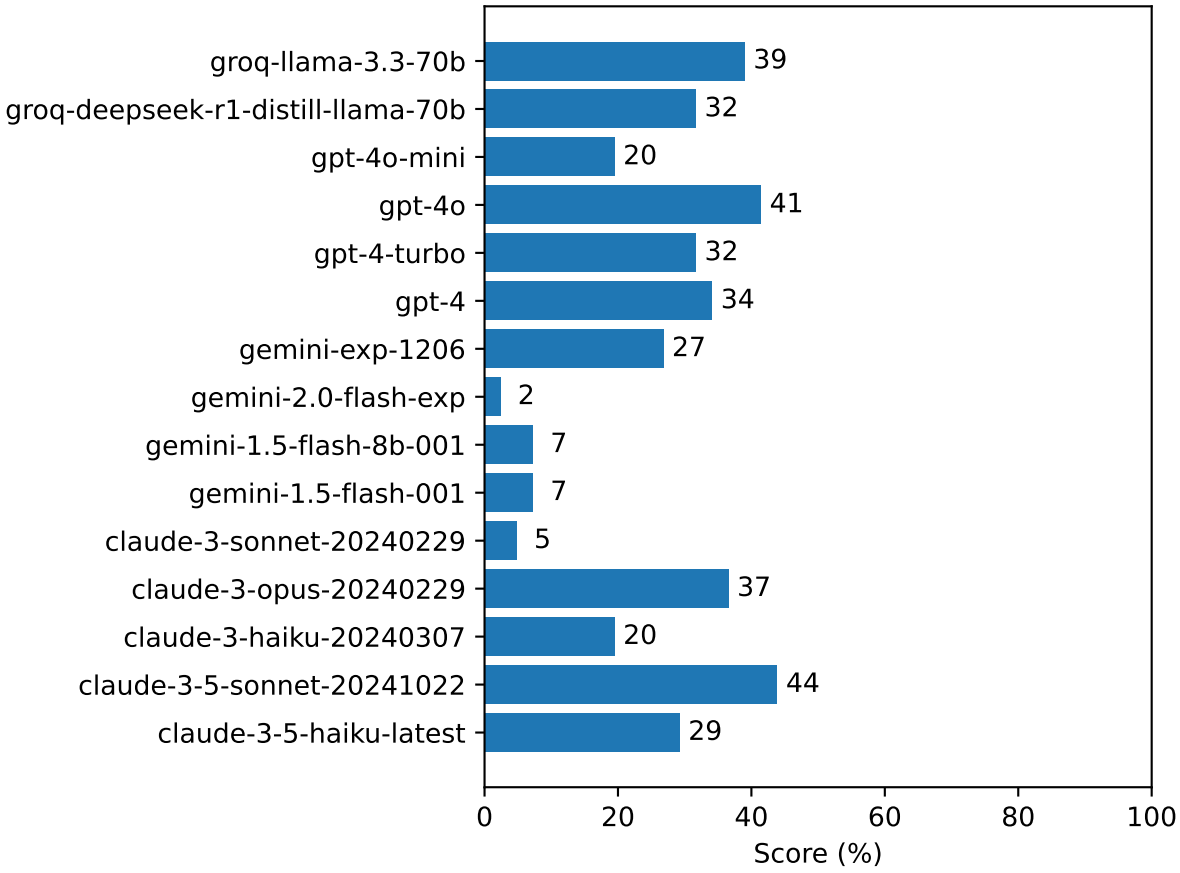
terminates without error throws an exception runs forever

If the code terminates without error, write the output. If the code throws an exception, state the exception.

```
tweets = [
    { 'text': 'hello', 'username': 'Trump' },
    { 'text': 'world', 'username': 'Obama' },
    { 'text': 'hola', 'username': 'Obama' },
    { 'text': 'mundo', 'name': 'Trump' },
]
greetings = ['hello', 'world']
num_greetings = 0
for i in range(len(tweets)):
    if tweet[i]['text'] in greetings:
        num_greetings += 1
print('num_greetings=', num_greetings)
```

Fraction of LLMs with correct answer: 8 / 15 = 0.53

LLM Model Performance



Answer Key

problem 1

```
IndexError
```

problem 2

```
NameError
```

problem 3

```
len(xs)= 5
```

problem 4

```
len(xs)= 5
```

problem 5

```
runs forever
```

problem 6

```
num_greetings= 2
```

problem 7

```
AttributeError
```

problem 8

```
i= 5
```

problem 9

```
99
82
```

problem 10

```
TypeError
```

problem 11

```
KeyError
```

problem 12

```
a
b
```

problem 13

```
TypeError
```

problem 14

```
KeyError
```

problem 15

```
TypeError
```

problem 16

```
NameError
```

problem 17

```
total= 8
```

problem 18

```
result= -1
```

problem 19

```
result= -1
```

problem 20

```
IndexError
```

problem 21

```
output= oops
```

problem 22

```
KeyError
```

problem 23

```
TypeError
```

problem 24

problem 25

```
TypeError
```

problem 26

```
TypeError
```

problem 27

```
TypeError
```

problem 28

```
TypeError
```

problem 29

```
result= 10
```

problem 30

```
AssertionError
```

problem 31

```
result= 15
```

problem 32

```
result= 15
```

problem 33

```
result= 15
```

problem 34

```
TypeError
```

problem 35

```
num_greetings= 2
```

problem 36

```
TypeError
```

problem 37

```
num_greetings= 011
```

problem 38

```
num_greetings= 0
```

problem 39

```
num_greetings= 1
```

problem 40

```
num_greetings= 2
```

problem 41

```
NameError
```