CS 61A Structure and Interpretation of Computer Programs

Spring 2013

Quiz

INSTRUCTIONS

- You have 20 minutes to complete the quiz.
- The quiz is closed book, closed notes, closed computer, and closed calculator.
- Mark your answers in the space provided.

Last name	
First name	
SID	
Login	
TA & section time	

For staff use only

Total
/2

1. Suppose the following code is located in guide.py:

```
def dont(x):
    return mul(x, x)

def panic(y):
    return mul(x, y)
```

What does the interpreter display when you execute

```
python -i guide.py
```

from the terminal? Assume that guide.py is located in the current directory, and ignore any standard startup message. Circle one of the following:

An error **Just a prompt (i.e. >>>)** **Something else**

Now suppose that you enter the following:

```
>>> from operator import mul
>>> dont(3)
```

What does Python display? Circle one:

An error **Just a prompt (i.e. >>>)** **Something else**

Now suppose that you enter the following:

```
>>> panic(3)
```

What does Python display? Circle one:

An error **Just a prompt (i.e. >>>)** **Something else**

2. Consider the evaluation of the following call expression:

```
add(max(3, 4), sub(2, mul(3, 5)))
```

Assume that all names in `operator` have been imported.

In what order are the following functions *applied* by the interpreter? Fill in a number between 1 and 4 in each box.

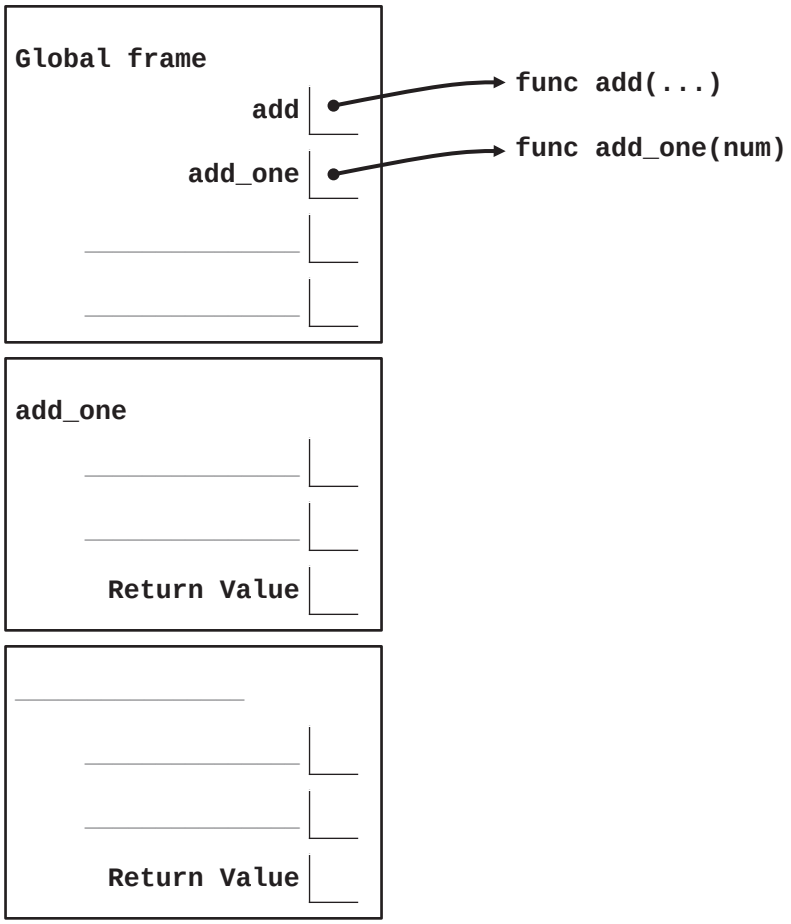
add	max	sub	mul

3. Fill in the environment that results from executing the code below until the entire program is finished. Make sure to add all missing names, values, and frame labels, and show the return value for each frame. *You may not need to use all of the spaces or frames.*

```
from operator import add

def add_one(num):
    return add(num, 1)

winners = add_one(6) * add_one(6)
print(winners)
```



4. **(For fun only.)** Name the only two quarterbacks to lead the San Francisco 49ers to a Super Bowl victory.