
Practice Problems

Outline

Exercise 1

- Write a recursive function `printMessage` that take as input arguments a message (a string) and `n` (an integer) and prints the message `n` number of times.

Exercise 2

- Write a recursive function `findSum` that takes as input argument **`n`** and returns the sum of first **`n`** numbers.

Example,

`findSum(5)` will return 15, i.e. $5+4+3+2+1$

Exercise 3

- Write a recursive function `findSumDigits` that takes as input **n** (a number) and returns the sum of all digits in **n**.

Example:

`findSumDigits(1234)` will return 10, i.e. $1+2+3+4$

Tracing Problems

```
def function(x):
```

```
    print(x)
```

```
    x=4.5
```

```
    y=3.4
```

```
    print(y)
```

```
x=2
```

```
y=4
```

```
function(x)
```

```
print(x)
```

```
print(y)
```

```
def f(x,y=1,z=2):
```

```
    return x+y+z
```

```
print(f(1,1,1))
```

```
print(f(y=1,x=2,z=3))
```

```
print(f(1,z=3))
```

Tracing Problems contd.

```
def f(n):  
    if n>0:  
        print(n, end=' ')  
        f(n-1)
```

f(5)

Here, **end** defines the delimiter and it is an empty space in the above example.

Example:

```
>>> print("Hello",end="-")
```

Hello-



Thank you!
Questions?