

IDSN 599: Machine Intelligence

Lab 7

Due: Saturday, 12/11/2021, 11:59 pm

Goal

Practice writing recursive functions! Today you'll write 2 recursive functions. One to sum the digits of a positive integer and another to calculate the greatest common divisor.

Setup

- Create a Python file called **lp07.py**.
- Your **lp07.py** file must begin with comments in the following format (replace the name and email with your actual information):

```
'''  
Name  
IDSN 599, Fall 2021  
USC email  
Lab practical 7  
'''
```

Requirements

Your program must perform the following:

sumDigits function:

Accepts a single int as input and returns an int holding the sum of the digits.

getGCD function:

Accepts two int variables as input and returns an int holding the greatest common denominator.

main function:

Prompt the user for 2 numbers. Use the function you created to calculate the sum of the digits for the 2 numbers. Use the function you created to calculate the greatest common denominator.

Sample output

Below is your target output for a full run-through of the program. User input is in **red**.

```
Give me a number: 121  
Give me another number: 25795  
Sum digits (121) = 4  
Sum digits (25795) = 28  
gcd(121, 25795) = 11
```

Deliverables

1. A compressed folder containing **lp07.py**.