

6.00 Handout, Lecture 4

(Not intended to make sense outside of lecture)

```
#find gcd of two integers
int1 = int(raw_input('Enter an integer: '))
int2 = int(raw_input('Enter an integer: '))
smaller = min(int1, int2)
for i in range(1, smaller):
    if int1%i == 0 and int2%i == 0:
        gcd = i
print 'GCD of', int1, 'and', int2, '=', gcd

smaller = min(int1, int2)
for i in range(smaller, 0, -1):
    if int1%i == 0 and int2%i == 0:
        break
print 'GCD of', int1, 'and', int2, '=', i

smaller = min(int1, int2)
i = smaller
gcd = None
while i >= 1 and gcd == None:
    if int1%i == 0 and int2%i == 0:
        gcd = i
        i = i - 1
print 'GCD of', int1, 'and', int2, '=', gcd

divisors = ()
for i in range(1,x):
    if x%i == 0:
        divisors = divisors+(i,)
print divisors

D = {1: 'one', 'deux': 'two', 'pi': 3.14159}
D1 = D
print D1
D[1] = 'uno'
print D1
for k in D1.keys(): print k, '=', D1[k]

def gcd(int1, int2):
    """int1 and int2 are of type integer
       returns the greatest common divisor of int1 and int2"""
    smaller = min(int1, int2)
    i = smaller
    result = None
    while i >= 1 and result == None:
        if int1%i == 0 and int2%i == 0:
            result = i
            i = i - 1
    return result

vall = int(raw_input('Enter an integer: '))
val2 = int(raw_input('Enter an integer: '))
print 'GCD of', vall, 'and', val2, '=', gcd(vall, val2)
```