

Exam 1

1) Determine what each of the following Python expressions will return. In other words, if these expressions were entered into the Python terminal, what would they return? (5 points each)

a.

`5/2`

returns 2

b.

`5./2.`

returns 2.5

c.

`5%3`

returns 2

d.

`not(5>6) and (True or False)`

returns True

e.

`(5==4) or (not True)`

returns False

2) Write the output of the following programs. (8 points each)

a.

```
for i in range(3):  
    print i*i  
print "hi"
```

returns

0

1

4

hi

b.

s=0

```
for x in [5,3,1]:  
    s=s+x  
print s
```

returns 9

c.

x=16

```
while x > 5:  
    x=x/2  
print x
```

returns 4

d.

```
a=7
if a%2==1:
    print "yoda"
else:
    print "do yoga"

returns yoda
```

3) The following questions are about Git. (10 points each)

a. Explain how to create a new git repository. Include all terminal commands and things you must do on github.

Assume your github user name is "Charlie" and your project is in a folder named "Project" in your Documents folder. Name the repository "ProjRepo".

```
1. cd documents/Project
2.git global --config user.name "Charlie"
3.git global --config user.email ~
4.git init
5.git add .
6.git remote add origin https://github.com/Charlie/ProjRepo.git
7.git push -u origin remote
```

b. Explain how to clone a repository name "Awesome" from github user named "Barry22". Clone the repository into your Documents folder.

```
1.cd documents
2.git clone https://github.com/Barry22/Awesome.git
```

4) Write a program that constructs an array filled with all of the prime numbers between 2 and 100. (20 points)

```
a=[]
for i in range(2,100):
    Prime=True
    for x in range(2,i):
        if i%x==0:
            prime=False
    if prime:
        a=a+[i]
```