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
```

```
>>> 2
```

returns 2

b.

```
5./2.
```

```
>>> 2.5
```

c.

```
5%3
```

```
>>> 2
```

d.

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

>>> True

    e.

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

>>> False

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

a.

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

>>> 0

>>> 1

>>> 4

>>> hi

b.

```
s=0
for x in [5,3,1]:
        s=s+x
print s
```

>>> 9

c.

```
x=16
while x  > 5:
        x=x/2
print x
```

>>> 4

d.

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

```
>>> 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".

```
$ git config --global user.name "Charlie"
$ git config --global user.email charlie@email.com

$ cd path/to/project/folder
$ git init
$ git add .

$ ?git commit -m " "

$ git remote add origin https://github.com/Charlie/ProjRepo.git
$ git remote -v

$ git push origin master
```

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

```
$ cd path/to/whereYouWant/folder
```

```
$ git clone https://github.com/Barry22/Awesome
```

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

```
array = [ ]

Prime = True

num=2

for i in range(98):

    Prime=True

    for x in range(2, num/2):
        if num%x==0:
            Prime = False

        if not Prime:
            break

    if Prime:
        array.append(num)

    num = num + 1



print array
```