IB Computer Science **Name** :*AlanKantserov* (3 points)

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
```

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"

First, we should initialize git in Project folder with git -init command. Then we add files with the command git add in order to track the files. After that we should commit all the files in the repository - git commit -m "(notes go here)" Later, we go to github and create a repository "ProjRepo". In git bash we need to set origin to it and use git push method to upload it there. Next type user-name and password.

b. Explain how to clone a repository name "Awesome" from github user named "Barry22". Clone the repository into your Documents folder. Firstly we need to find documents folder using "cd" to surf and "ls to check which repository we are now in" Then we should type git clone "https://www.github.com/Trismeg/Barry22/Awesome.git"

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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(2,101):
    prime=True
        for x in range(2,1):
            if i%x==0:
                Prime=False
            if prime:
                a.append(i)
print a
```