CSI 11
Preparation to the Final Exam
Additional Questions

1. What does the following code fragment produce (show the output)?

```
a=[1,2,3]
b = ['a','b','c']
a.extend(b)
print(a)
print(b)
```

Output:

Another variation of the question:

Given

```
a=[1,2,3]
b = ['a','b','c']
```

give a Python command to extend the list `a` with all the elements of the list `b`:

2. Answer the questions:
(a) How to reverse a Python `list`?
(b) How to reverse a Python `string`?
(c) Can I reverse a Python `dictionary`?
(d) Can I reverse a Python `set`?

3. Give a Python command to open the file `'out.txt'` for appending some data to it:

4. Define a function that find the area of a triangle given the length of the base and the height of the triangle. Recall that the formula for the area of the triangle is $area = \frac{1}{2} heght \cdot base$

Here how you can start the definition:

```
def triangleArea(base, height):
```

5. Write a definition of the function `addRecord()` that given a Python dictionary `PersonalRecords` as parameter, allows to add another personal record to the dictionary.

Here is an example of one record in the dictionary `PersonalRecords`. You can see the *keys* (that are ids) and the *values* (that are composed of a full name, birth year and birth place).

```
PersonalRecords = {
  '8887772345' : ('Genevieve cobain', '2001-02-12', 'New York, NY'),
  '8375544112' : ('Tom Hunter', '1974-01-17','Teaneck, NJ')
}
```

Here is how you can start defining the function :

```
def addRecord(PersonalRecords):
```

6. The following message was encrypted using a shift of 4 letters to the left in the alphabet. Decrypt it. Spaces are kept in place.

Encrypted message:
kjya qlkj w peia pdana swo w heppha lqilgej

Here is the alphabet you can use:

a b c d e f g h i j k l m n o p q r s t u v w x y z

Decrypted message:
