Quiz 2

Name: ____________________________________________

Question 1. For each of the following expressions, show the resulting value and type, given the assignments for L, S, and x:

L = ["Econ","CS","Art","Bio","Hist","Ling"]
S = "bow ties are cool"
x = 42

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>x&gt;0 and x&lt;100</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>x&lt;0 or x&gt;100</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>range(len(L))</td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td>&quot;bio&quot; in L</td>
<td></td>
</tr>
<tr>
<td>(e)</td>
<td>len(S)</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>L[0] * 2</td>
<td></td>
</tr>
<tr>
<td>(g)</td>
<td>L[2] + S[8:]</td>
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Question 2. Write a program that asks the user for a phrase and then prints out half the phrase horizontally on one line, and the other half vertically. Here's an example of the running program (user input in bold):

phrase: we love comp sci!

we love

  c
  o
  m
  p

  s
  c
  i
  !
Question 3. Trace through the following program and show it's output (what would be printed on the screen).

```python
phrase = "ABCDE"
for i in range(len(phrase) - 1):
    output = phrase[:i] + phrase[i+1] + phrase[i] + phrase[i+2:]
    print("%2d: %s" % (i, output))
```

Question 4. Password Strength Checker: given the assignments below for `alph`, `nums`, and `pw`, write some python code to either print `OK` or `not OK`, depending on what the user enters for a password. If the entered password is at least 8 characters in length and contains at least one lowercase letter and one number (0-9), it is considered `OK`. For example, `c5rocks!` is `OK`, but `csrocks!` is `not OK` (no digit in the password).

```python
alph = "abcdefghijklmnopqrstuvwxyz"
nums = "0123456789"
pw = raw_input("new password: ")
```