Name:_____ ID:_____ Signature: _____

İSTANBUL TECHNICAL UNIVERSITY
Department of Computer Engineering
BLG103E – Introduction to Information Systems – Fall 2015
Quiz 2 Question & Answer Sheet

QUIZ 2

Duration: 40 minutes.
There are 12 questions.
Rules: - Not open-book. No extra notes or papers are allowed.
- Cellphones must be put away. Calculators are not allowed.

1.

Name a way that name-value pairs are used in HTML:_____

Name a way that name-value pairs are used in CSS:_____

2.

In a LibreOffice Calc spreadsheet, the following contents are entered in the following cells:

	A	B
1	=B1*B2	5
2	=$B$2+$B$1	6

Fill in the resulting displayed contents of the cells A1,A2, B1 and B2:

	A	B
1		
2		

3.

With the following LibreOffice Calc spreadsheet open, I do the following steps:

1. I select all of the visible cells.
2. From the menu I select *Data... Sort* and from the resulting dialogue choose *Column C* and *Descending* and click *OK*.
3. From the menu I select *Data... Filter... Standard Filter* and, for the *Field name* I choose *Column B*, next to which I change the *Condition* to = and under *Value* I write 40.

	A	B	C
1	Lemonade	40	1.50
2	Tea	40	1.60
3	Slime Cordial	180	0.90

Fill in the expected resulting spreadsheet below.

	A	B	C
1			
2			
3			

Name:_____ ID:_____ Signature: _____

4.

In spreadsheets, for each of the examples on the left, determine which of the concepts at the top it is an example of (if part of the example matches the concept, do not count it – e.g. a dog is an example of an animal but a leg is only a part of an animal).

Example	Expression	Relative address	Absolute address	Function	Formula	Range
5+6						
=5+6						
B6						
=B6+5						
RAND()						
$A$5:$B$6						
=ABS(B3)						

Tick **more than one** cell in each row but only tick if the example **is** an example of the column item (**not** is a part of it).

Read the following HTML forms code then answer the questions below:

```
<form action="/login" method="POST">
    Enter your user-name and password to log in to the secret system:
    User-name: <input type="text" name="user" /> <br />
    Password: <input type="text" name="pw" /> <br />
    <input type="submit" value="Show" />
</form>
```

5.

Considering the above code, describe what each of the underlined parts does in a short sentence.

action="/login": _____

type="text": _____

value="Show": _____

6.

Complete the following Python code to extract the user-name and password entered by the user in the HTML form given previously (see above):

```
form_data = request.POST
username = form_data[            ]
password = form_data[            ]
```

Name:_____ ID:_____ Signature: _____

7.

For each Python expression on the left (each of which you can assume is run in a fresh Python session), determine whether it is likely to result in a `ValueError`, `TypeError`, `SyntaxError`, `NameError` or no error.

Example	ValueError	TypeError	SyntaxError	NameError	No Error
`int) 5(+)'5'`					
`int('A') + 5`					
`str(5) + 5`					
`str('5') + 5`					
`int('5') + 5`					
`str(A) + 5`					

Tick the cells for which the expression on the left of the row results in the error at the top of the column.

8.

In Python, functions are useful mostly because:

A They are by definition functional, which means useful.

B They merge their operands.

C They are a good way of making the indentation clearer.

D They serve as a bridge between Python and LibreOffice.

E They are a good way to stop us needing to write the same code twice.

F They serve as a bridge between Python and HTML.

Circle one letter.

9.

What would the output of the following Python code be? Write in the box on the right.

```
a = [5,4,3]
if a[0] > a[2]:
    print('Not sorted ascending.')
if a[1] > a[2]:
    print('Not sorted ascending.')
```

10.

Complete the following Python function by filling in the boxes. The function should take a list of numbers and return the same list but in reverse order.

```
def reverse(to_be_reversed):
    [            ] = []
    [      ] item in to_be_reversed:
        to_be_returned = [item] + to_be_returned
    return [            ]
```

Name:_____ ID:_____ Signature: _____

11.

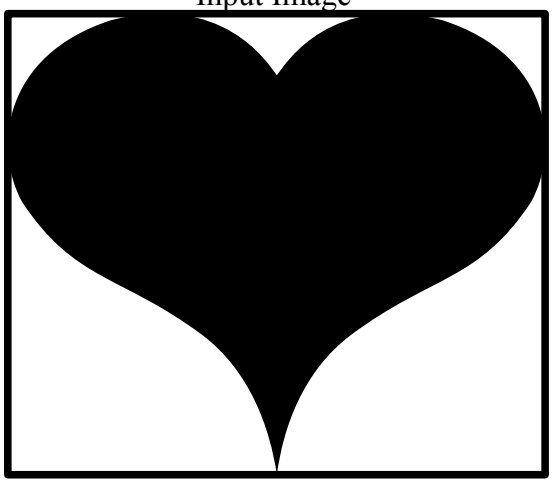
In class you saw that one way of representing an image in Python is as a "list of list of lists". That is, a list of rows, each of which is a list of pixels within that row, each of which is a 3-element list containing the red, green and blue values for that pixel (each with a maximum value of 255).

For the following code and input image, draw what the output image will look like.

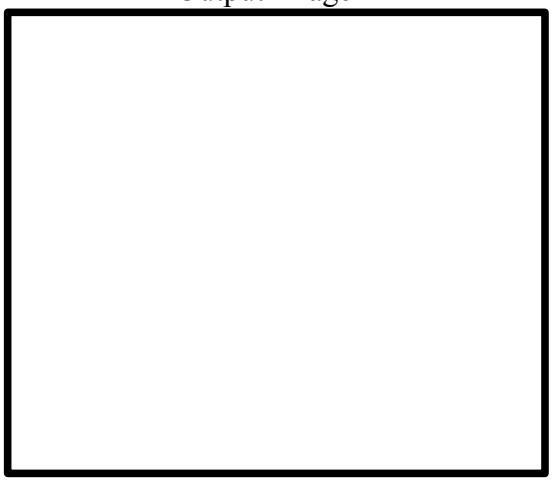
You can assume that the image has been stored in the variable `image` and that its height (number of rows) and width (number of columns) are both 1000.

```
row = 0
while row < 1000:
    col = 0
    while col < 1000:
        image[row][col][0] = 255 - image[row][col][0]
        image[row][col][1] = 255 - image[row][col][1]
        image[row][col][2] = 255 - image[row][col][2]
        col = col + 1
    row = row + 1
```

Input Image



Output Image



12.

In HTML forms, when GET is compared with POST:

A GET results in URLs containing form information.

B POST can transmit more data than GET.

C GET allows the retrieval of form information from the web server.

D POST is a general protocol for web and email.

E GET is the only request type used by the Internet Explorer browser.

F POST is necessary when using the "text" input type.

Circle <u>all</u> that apply (there can be more than one answer)**.**