

Pencil/Paper Quiz - NOT GRADED!!
Practice for Midterm

Name: _____

The purpose of this assessment is to give you practice for the upcoming midterm.
The following questions are supposed to be challenging - do much as you can!

Setup:

- No computers, phones, or notes (for the real midterm you can use a cheat sheet)
- The first 20-30 min of lab
- Do not erase, simply cross out (put comments only if you have time)
- Write prose / pseudo-code if you cannot think of the exact function
- Only write on this sheet (front and back) so it can be returned to you easily

Question A:

Write a main function to accomplish the following task (see example below):

1. Ask the user for their name and a number
2. Generate an ascending and descending list showing their name repeated

Enter your name: **Abigail**

Enter a number: **5**

Abigail

AbigailAbigail

AbigailAbigailAbigail

AbigailAbigailAbigailAbigail

AbigailAbigailAbigailAbigailAbigail

AbigailAbigailAbigailAbigail

AbigailAbigailAbigail

AbigailAbigail

Abigail

def main(): # start your code here

Question B:

- User enters a string
- If the user input is a **palindrome**, then output a “palindrome square”
 - A palindrome is defined as a word, phrase, or sequences that read the same backwards as forward (ex: *madam*, *Kayak*)
- If the input is **not** a palindrome, output what its palindrome would look like

```
def reverse(word):
    new_word = ""
    for i in range(len(word)-2,-1,-1):
        new_word = new_word + word[i]
    return new_word

def palindrome(word): # TODO (should return either True or False)
```

```
def main():
    str = input()
    if palindrome(str):
        print(">>" + str, "is a palindrome")
        for i in range(len(str)):
            if i == 0 or i == len(str)-1:
                print(str)
            else:
                stars = "*" * len(str)-2
                print(str[i] + stars + str[i])
    else:
        print(">>" + str, "is not a palindrome")
        print(str+reverse(str))

main()
```

- 1) Complete the palindrome function in the code above.
- 2) Predict the output (i.e. what is this “palindrome square”?) for the following examples:

Example #1:

Example #2:

Example #3:

User entered **TACOCAT**

User entered **KAYAK**

User entered **HELLO**