

# Exam #1b

Started: Nov 14 at 4:16pm

## Quiz Instructions

\*\*\*\*Remember the academic honor pledge that you signed.

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Programming directions:

- 1.) This assessment should be taken in the laboratory only. You will be asked to physically sign in the attendance/exam sheet after taking the exam. NO sign-in is automatically 0 for this part of the exam.
- 2.) This programming exam part is an ALL-OR-NOTHING checking.
- 3.) There will be point deductions for submitting a null program/template program or program with compilation errors.
- 4.) Submission filename: EXSurnameFirstcharofyourfirstnamN.asm [surname max of 4 characters only; N = is the question sequence (i.e., 1,2). Example: EXBoniA1.asm for 1st programming question, EXBoniA2.asm for the 2nd programming question].
- 5.) Place your name and section (as a comment) on the first line of the program.
- 6.) You can always resume your exam page if you have not pressed the submit button.
- 7.) If your code pattern is the same as your other classmates (i.e., the difference only in the comment lines, difference in registers and label only, but the code pattern is the same), all students involved will automatically get a 0 for the entire exam series.



Question 1 15 pts

Write an x86-64 program that capitalizes the first letter in each word of a given sentence. Words in a given sentence are separated by the space character (ASCII: 0x20). Hint: The ASCII values of letters in lowercase have a difference of 0x20 from the ASCII values of letters in uppercase (i.e., 'a' = 0x61 and 'A' = 0x41). If the first letter of the word, or the entire word, is already in uppercase, then it does not need to be converted.

Input [Initialized/hardcoded in memory]: Null terminated string with a maximum length of 200 characters.

Output [Message dialog box]: String where the first character in each word is capitalized.

Example #1:

```
var db "the quick brown fox jumps over the lazy dog.",0
```

Screen Output: The Quick Brown Fox Jumps Over The Lazy Dog.

Example #2:

```
var db "I am having fun in LBYARCH",0
```

Screen Output: I Am Having Fun In LBYARCH

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Question 2 15 pts

Create an x86 program that joins 2 datasets

A [a1, a2, a3, ...] and B [b1, b2, b3, ...]

where each element of A is combined with every element of B.

AB [a1, b1, b2, b3, ..., a2, b1, b2, b3, ..., ...]

Provide the length of the dataset followed by its element as the input

Assume that the maximum number of elements in a dataset is 100

Example

A has [7, 8]

B has [1, 2, 3]

Inputs:

2 7 8 3 1 2 3

Output:

7 1 2 3 8 1 2 3

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Quiz saved at 4:34pm

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