

SE185: Problem Solving in Software Engineering

Quiz #4 (100 points)

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Name:

Answer the following questions and make a pdf file that includes the **source code, sample inputs, and outputs**. You must submit the **pdf file and all of the .c files** on Canvas for full credit. Do not forget to add your group partner name on the pdf file and the source codes.

1. (50 points) The following program prints the alphabet in lower case from 'a' to 'z'. Rewrite it using a for loop instead. Remember that chars can be referenced by their ASCII codes.

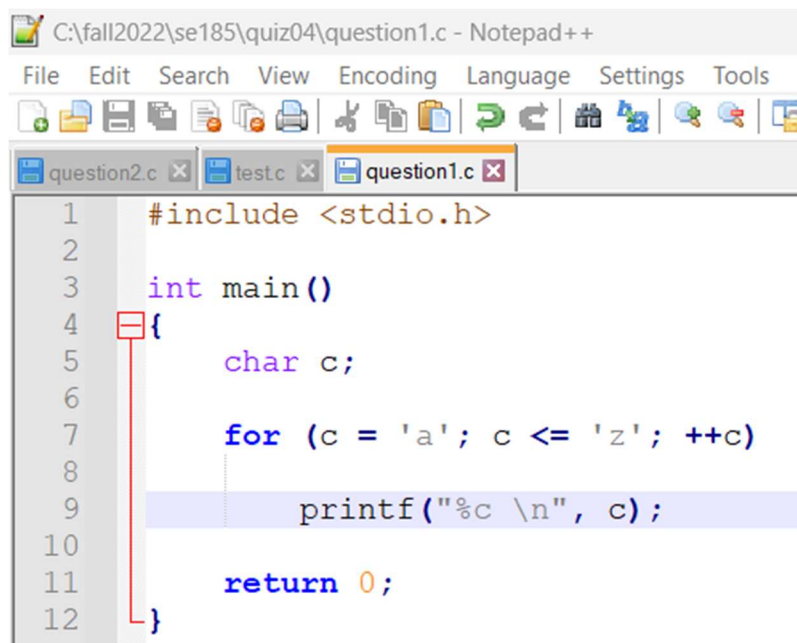
```
#include<stdio.h>

int main() {

    char letter = 'a';

    while(letter <= 'z') {
        printf("%c\n" , letter);
        letter++;
    }

    return 0;
}
```

SS #1:

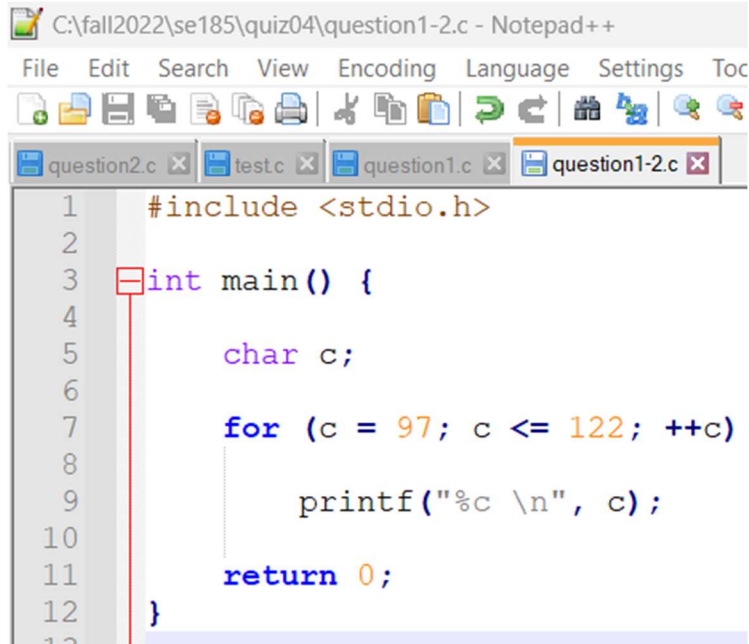
The screenshot shows a Notepad++ window titled "C:\fall2022\se185\quiz04\question1.c - Notepad++". The window has a menu bar (File, Edit, Search, View, Encoding, Language, Settings, Tools) and a toolbar. Below the toolbar are three tabs: "question2.c", "test.c", and "question1.c". The "question1.c" tab is active, displaying the following C code:

```
1  #include <stdio.h>
2
3  int main()
4  {
5      char c;
6
7      for (c = 'a'; c <= 'z'; ++c)
8
9          printf("%c \n", c);
10
11      return 0;
12 }
```

SS #2

```
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz04
$ ./question1
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
```

SS #3



The screenshot shows a Notepad++ window titled "C:\fall2022\se185\quiz04\question1-2.c - Notepad++". The window contains a C program that prints lowercase letters from 'a' to 'z'. The code is as follows:

```
1  #include <stdio.h>
2
3  int main() {
4
5      char c;
6
7      for (c = 97; c <= 122; ++c)
8      {
9          printf("%c \n", c);
10     }
11     return 0;
12 }
```

SS #4

```
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz04
$ gcc question1-2.c -o question1-2

jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz04
$ ./question1-2
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
```

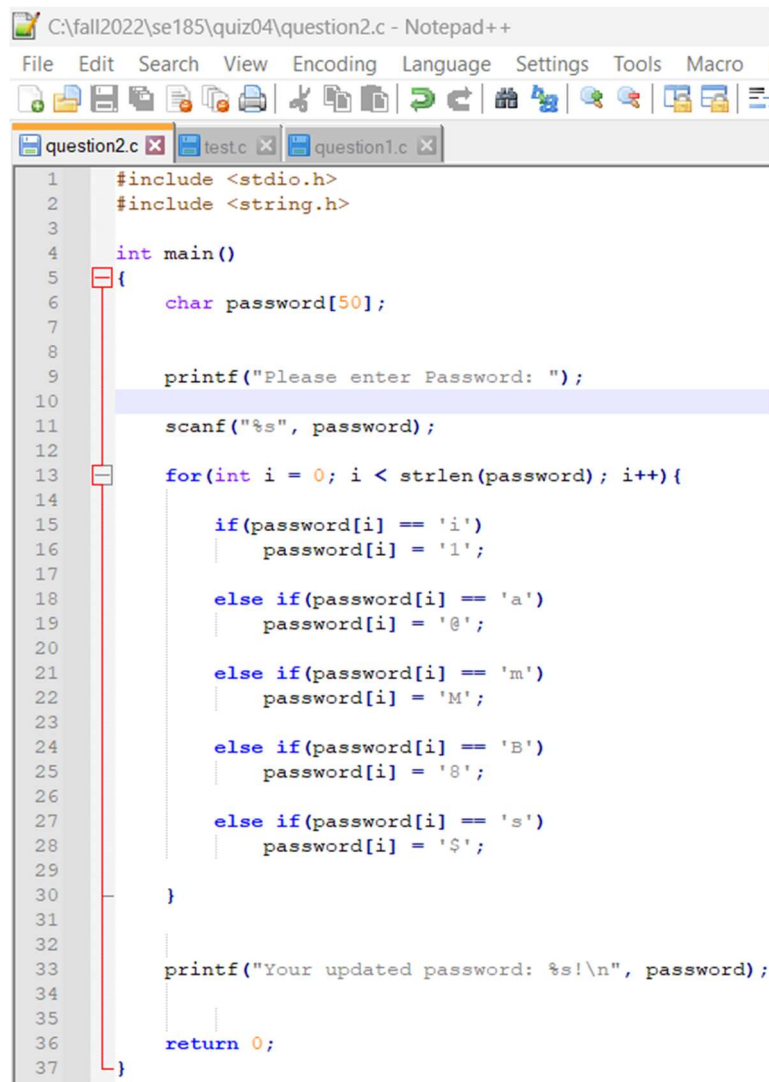
(50 points) Many user-created passwords are simple and easy to guess. Write a program that takes a simple password and makes it stronger by replacing characters using the key below, and by appending "!" to the end of the input string. You may assume that the string does not contain spaces and will always contain less than 50 characters.

- i becomes l
- a becomes @
- m becomes M
- B becomes 8
- s becomes \$

Sample Inputs and outputs format:

```
Please enter a password: mypassword
Your updated password: Myp@$$word!
```

SS #5



```
1  #include <stdio.h>
2  #include <string.h>
3
4  int main()
5  {
6      char password[50];
7
8
9      printf("Please enter Password: ");
10
11     scanf("%s", password);
12
13     for(int i = 0; i < strlen(password); i++) {
14
15         if(password[i] == 'i')
16             password[i] = 'l';
17
18         else if(password[i] == 'a')
19             password[i] = '@';
20
21         else if(password[i] == 'm')
22             password[i] = 'M';
23
24         else if(password[i] == 'B')
25             password[i] = '8';
26
27         else if(password[i] == 's')
28             password[i] = '$';
29
30     }
31
32
33     printf("Your updated password: %s!\n", password);
34
35
36     return 0;
37 }
```

SS #6

```
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz04
$ ./question2
Please enter Password: mypassword
Your updated password: Myp@$sword!
```