

SE185: Problem Solving in Software Engineering

Quiz #3 (100 points)

Name: Jesus Horacio Soto Gonzalez	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)** Write a complete C program that ask the user to enter the grading percentage (e.g., any students from SE 185) and print the letter grade. For example, if the student entered 97, your program should output ==> **Your grade letter is A.**
 - Make sure that the student is not entering a grade less than 0 or greater than 100.
 - You can use our course grading scale which is pasted below or can be found in the syllabus.

Grading Scale

```

93 - 100 = A
90 - less than 93 = A-
+++++
87 - less than 90 = B+
83 - less than 87 = B
80 - less than 83 = B-
+++++
77 - less than 80 = C+
73 - less than 77 = C
70 - less than 73 = C-
+++++
67 - less than 70 = D+
63 - less than 67 = D
60 - less than 63 = D-
+++++
0 - less than 60 = F

```

Inputs and outputs format:

```

Please enter your grading percentage:
92
Your grade letter is A-.

maruf@maruf-surface /cygdrive/c/se185
$ ./test
Please enter your grading percentage:
110
Your grade must be between 0 percent and 100 percent inclusively.

```

SS #1:

```

jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question1
Please enter your grading percentage:
92
Your letter grade is A-
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question1
Please enter your grading percentage:
110
Your grade must be between 0 and 100 percent inclusively.

```

SS #2:

```

jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question1
Please enter your grading percentage:
65
Your letter grade is D
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question1
Please enter your grading percentage:
84
Your letter grade is B

```

SS #3:

C:\fall2022\se185\quiz03\question1.c - Notepad++

File Edit Search View Encoding Language Settings Tools Macro

question1.c question2.c

```

1  #include <stdio.h>
2
3
4
5  void main()
6  {
7      int gradePercentage;
8
9      printf("Please enter your grading percentage: \n");
10     scanf("%d",&gradePercentage);
11
12     if(gradePercentage<0 || gradePercentage>100)
13     {
14         printf("Your grade must be between 0 and 100 percent inclusively.");
15     }
16     else if(gradePercentage<60)
17     {
18         printf("Your letter grade is F");
19     }
20     else if(gradePercentage>=60 && gradePercentage<62)
21     {
22         printf("Your letter grade is D-");
23     }
24     else if(gradePercentage>=62 && gradePercentage<67)
25     {
26         printf("Your letter grade is D");
27     }
28     else if(gradePercentage>=67 && gradePercentage<70)
29     {
30         printf("Your letter grade is D+");
31     }
32     else if(gradePercentage>=70 && gradePercentage<73)
33     {
34         printf("Your letter grade is C-");
35     }
36     else if(gradePercentage>=73 && gradePercentage<77)
37     {
38         printf("Your letter grade is C");
39     }
40     else if(gradePercentage>=77 && gradePercentage<80)
41     {
42         printf("Your letter grade is C+");
43     }
44     else if(gradePercentage>=80 && gradePercentage<83)
45     {
46         printf("Your letter grade is B-");
47     }
48     else if(gradePercentage>=83 && gradePercentage<87)
49     {
50         printf("Your letter grade is B");
51     }
52     else if(gradePercentage>=87 && gradePercentage<90)
53     {
54         printf("Your letter grade is B+");
55     }
56     else if(gradePercentage>=90 && gradePercentage<93)
57     {
58         printf("Your letter grade is A-");
59     }
60     else
61     {
62         printf("Grade A+");
63     }
64 }

```

2. (50 points) Write a complete C program that asks the user to enter the correct username and password and checks whether the user's inputs are correct. Let the correct credentials be as follows:

Username: se185@iastate.edu

Password: ds4rd

If both the user-entered username and password are correct, **print "Success!"** If either the user-entered username and password are incorrect, **print "Username or password is incorrect."**

Inputs and outputs format:

Test 1:

```
Enter your username: se185@iastate.edu
Enter your password: ds4rd
Success!
```

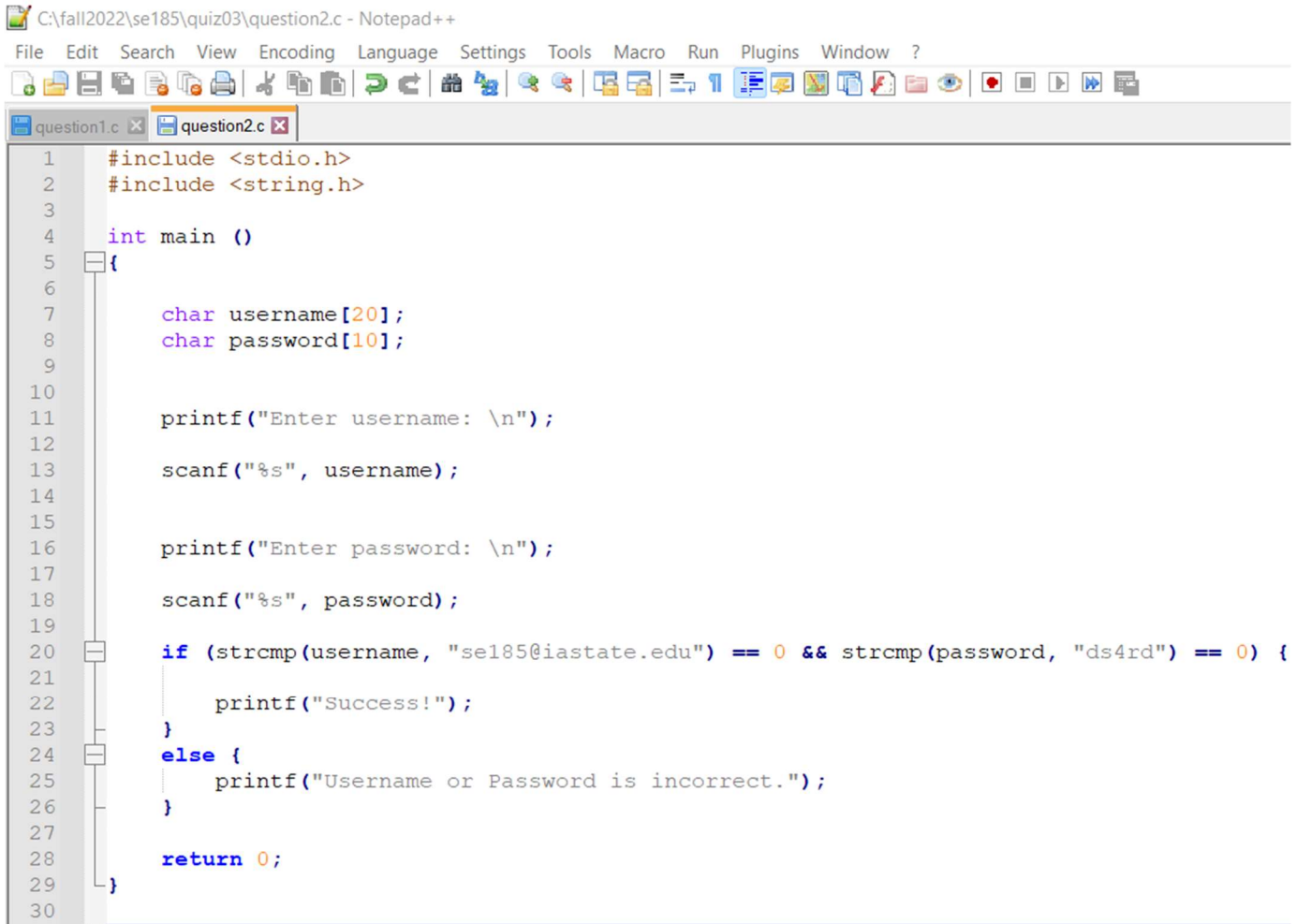
Test 2:

```
Enter your username: se185
Enter your password: ds4rd
Username or password is incorrect.
```

SS #1:

```
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question2
Enter username:
se185@iastate.edu
Enter password:
ds4rd
Success!
jesus@ASUS_GA503 /cygdrive/c/fall2022/se185/quiz03
$ ./question2
Enter username:
jhsoto@iastate.edu
Enter password:
NotMyRealPassword
Username or Password is incorrect.
```

SS #2:



The screenshot shows a Notepad++ window with the title bar "C:\fall2022\se185\quiz03\question2.c - Notepad++". The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Tools, Macro, Run, Plugins, Window, and ?. The toolbar contains various icons for file operations and editing. The active tab is "question2.c". The code is a C program for a login system, with line numbers 1 through 30 on the left margin. The code includes `<stdio.h>` and `<string.h>`, defines a `main` function, declares `username` and `password` arrays, prompts for input, and checks if the credentials match "se185@iastate.edu" and "ds4rd".

```
1  #include <stdio.h>
2  #include <string.h>
3
4  int main ()
5  {
6
7      char username[20];
8      char password[10];
9
10
11     printf("Enter username: \n");
12
13     scanf("%s", username);
14
15
16     printf("Enter password: \n");
17
18     scanf("%s", password);
19
20     if (strcmp(username, "se185@iastate.edu") == 0 && strcmp(password, "ds4rd") == 0) {
21         printf("Success!");
22     }
23     else {
24         printf("Username or Password is incorrect.");
25     }
26
27     return 0;
28 }
29
30
```