

SE185: Problem Solving in Software Engineering

Quiz #2 (100 points)

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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 scans in your first and last name, major, year in college (ex. Freshman, sophomore, etc.), and graduation year. Then, print the output in following format:

Inputs and outputs format:

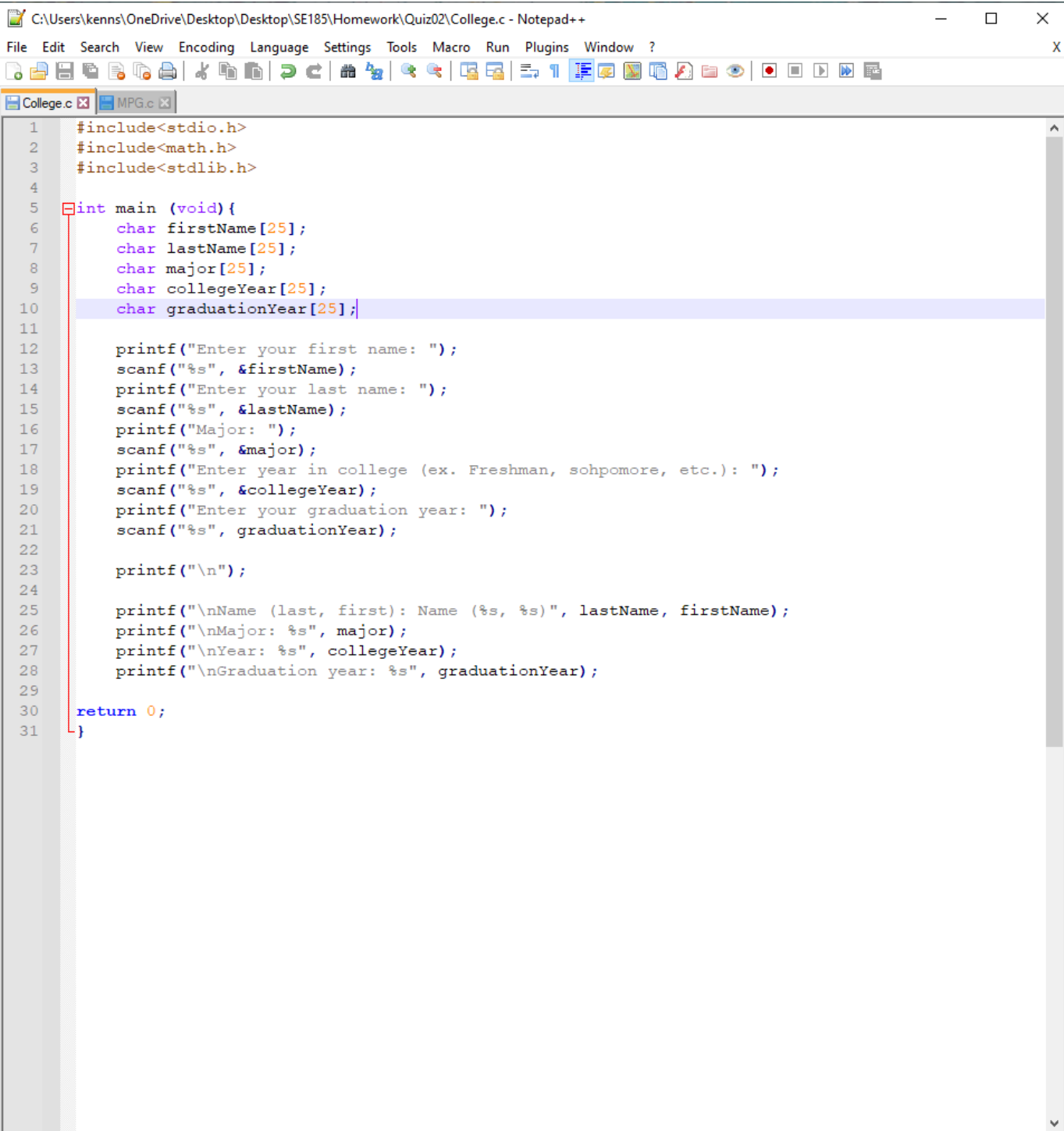
```
Enter your first name: Marcus
Enter the last name: Kavars
Enter your major: CPRE
Enter year in college (ex. Freshman, sophomore, etc.): Freshman
Enter your graduation year: 2024

Name (last, first): Name (Kavars, Marcus)
Major: CPRE
Year: Freshman
Graduation year: 2024
```

2. (50 points) Write a complete c program that ask the user to enter the drivenMiles, milesPerGallon, dollarsPerGallon, and print the dollar cost to drive those miles.
 - Your program must use an user defined function named **DrivingCost** with input parameters **drivenMiles, milesPerGallon, and dollarsPerGallon**, that **returns the dollar cost** to drive those miles.

Inputs and outputs format:

```
$ ./test
Enter driven Miles:300.7
Enter Miles per Gallon:22.3
Enter dollars per Gallon:3.1599
Driving Cost= 42.61
```

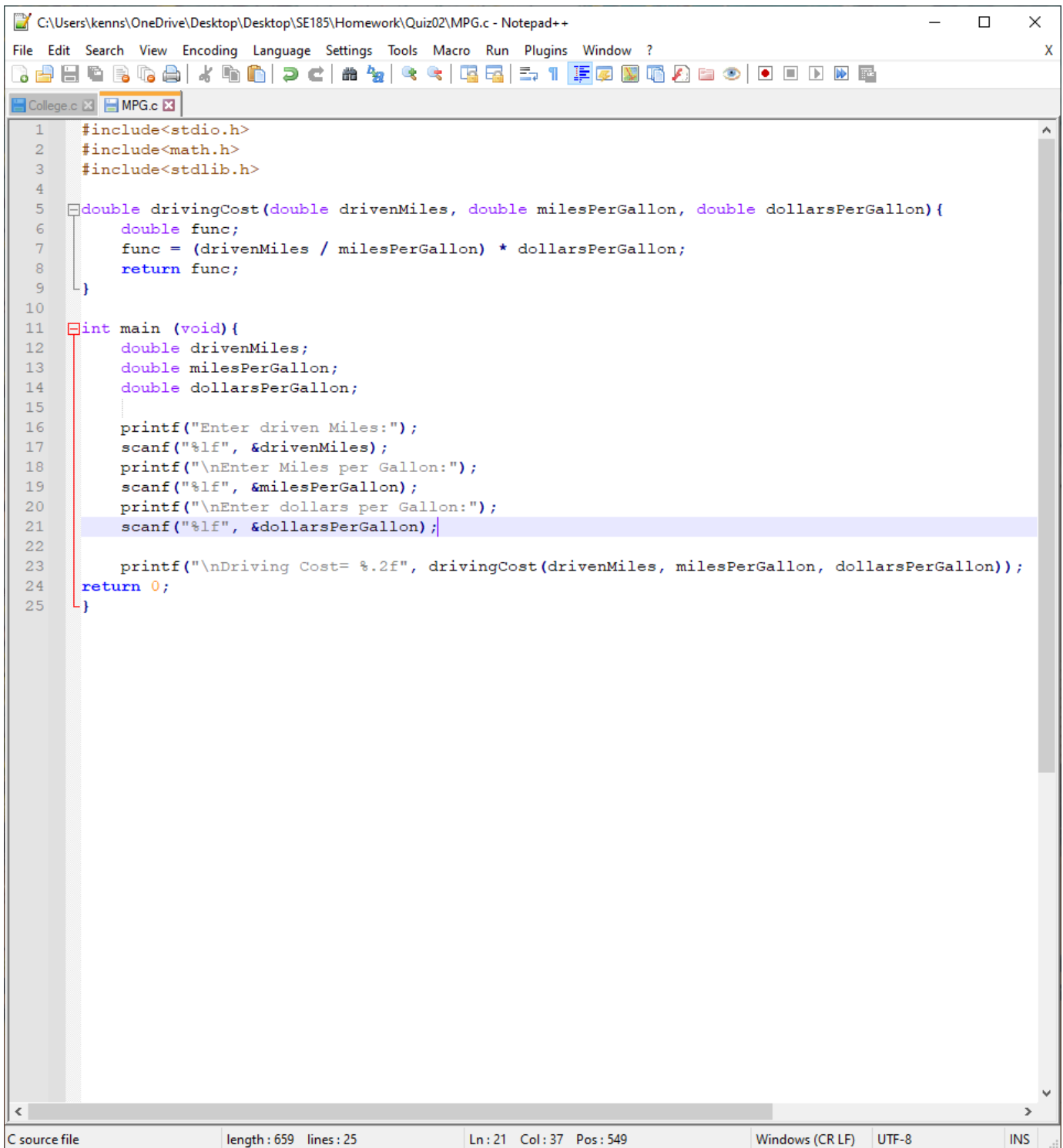


```
1  #include<stdio.h>
2  #include<math.h>
3  #include<stdlib.h>
4
5  int main (void){
6      char firstName[25];
7      char lastName[25];
8      char major[25];
9      char collegeYear[25];
10     char graduationYear[25];
11
12     printf("Enter your first name: ");
13     scanf("%s", &firstName);
14     printf("Enter your last name: ");
15     scanf("%s", &lastName);
16     printf("Major: ");
17     scanf("%s", &major);
18     printf("Enter year in college (ex. Freshman, sophomore, etc.): ");
19     scanf("%s", &collegeYear);
20     printf("Enter your graduation year: ");
21     scanf("%s", graduationYear);
22
23     printf("\n");
24
25     printf("\nName (last, first): Name (%s, %s)", lastName, firstName);
26     printf("\nMajor: %s", major);
27     printf("\nYear: %s", collegeYear);
28     printf("\nGraduation year: %s", graduationYear);
29
30     return 0;
31 }
```

C source file length : 760 lines : 31 Ln : 10 Col : 29 Pos : 188 Windows (CR LF) UTF-8 INS

```
/cygdrive/c/Users/kenns/OneDrive/Desktop/Desktop/SE185/Homework/Quiz02
kenns@LAPTOP-L53JNR5E /cygdrive/c/Users/kenns/OneDrive/Desktop/Desktop/SE185/Homework/Quiz02
$ ./college
Enter your first name: Kenneth
Enter your last name: Schueman
major: SE
Enter year in college (ex. Freshman, sophomore, etc.): Freshman
Enter your graduation year: 2025

Name (last, first): Name (Schueman, Kenneth)
Major: SE
Year: Freshman
Graduation year: 2025
kenns@LAPTOP-L53JNR5E /cygdrive/c/Users/kenns/OneDrive/Desktop/Desktop/SE185/Homework/Quiz02
$ |
```



The screenshot shows a Notepad++ window titled "C:\Users\kenns\OneDrive\Desktop\Desktop\SE185\Homework\Quiz02\MPG.c - Notepad++". The window contains a C program for calculating driving cost. The code is as follows:

```
1  #include<stdio.h>
2  #include<math.h>
3  #include<stdlib.h>
4
5  double drivingCost(double drivenMiles, double milesPerGallon, double dollarsPerGallon){
6      double func;
7      func = (drivenMiles / milesPerGallon) * dollarsPerGallon;
8      return func;
9  }
10
11 int main (void){
12     double drivenMiles;
13     double milesPerGallon;
14     double dollarsPerGallon;
15     ...
16     printf("Enter driven Miles:");
17     scanf("%lf", &drivenMiles);
18     printf("\nEnter Miles per Gallon:");
19     scanf("%lf", &milesPerGallon);
20     printf("\nEnter dollars per Gallon:");
21     scanf("%lf", &dollarsPerGallon);
22
23     printf("\nDriving Cost= %.2f", drivingCost(drivenMiles, milesPerGallon, dollarsPerGallon));
24     return 0;
25 }
```

The status bar at the bottom indicates: "C source file", "length: 659 lines: 25", "Ln: 21 Col: 37 Pos: 549", "Windows (CR LF)", "UTF-8", "INS".

```
kenns@LAPTOP-L53JNR5E /cygdrive/c/Users/kenns/OneDrive/Desktop/Desktop/SE185/Homework/Quiz02
$ ./MPG
Enter driven Miles:300.7
Enter Miles per Gallon:22.3
Enter dollars per Gallon:3.1599
Driving Cost= 42.61
kenns@LAPTOP-L53JNR5E /cygdrive/c/Users/kenns/OneDrive/Desktop/Desktop/SE185/Homework/Quiz02
$ |
```