

SE185: Problem Solving in Software Engineering

Quiz #2 (100 points)

Name: Adam Jennissen

Name: Carter Bebee

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.

- (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:

The screenshot shows a Visual Studio Code editor with a C program named 'quiz02-1.c'. The program prompts the user for their first name, last name, major, year in college, and graduation year. It then prints the information in a formatted manner. The output window shows the program being run twice, with the first run using 'Adam Jennissen' and the second run using 'Carter Bebee'.

```

1 #include <stdio.h>
2
3 int main(void)
4 {
5     char firstName[50];
6     char lastName[50];
7     char major[50];
8     char yearCollege[50];
9     int gradYear;
10
11     printf("Enter your first name: ");
12     scanf("%s", firstName);
13     printf("Enter the last name: ");
14     scanf("%s", lastName);
15     printf("Enter your major: ");
16     scanf("%s", major);
17     printf("Enter year in college: ");
18     scanf("%s", yearCollege);
19     printf("Enter your graduation year: ");
20     scanf("%d", &gradYear);
21
22     printf("\nName (last, first): Name %s, %s\n", lastName, firstName);
23     printf("Major: %s\n", major);
24     printf("Year: %s\n", yearCollege);
25     printf("Graduation year: %d\n", gradYear);
26 }
  
```

```

/cygdrive/d/quiz02
$ ./test
Enter your first name: Adam
Enter the last name: Jennissen
Enter your major: SE
Enter year in college: Freshman
Enter your graduation year: 2026

Name (last, first): Name Jennissen, Adam
Major: SE
Year: Freshman
Graduation year: 2026

/cygdrive/d/quiz02
$ ./test
Enter your first name: Carter
Enter the last name: Bebee
Enter your major: SE
Enter year in college: Freshman
Enter your graduation year: 2026

Name (last, first): Name Bebee, Carter
Major: SE
Year: Freshman
Graduation year: 2026
  
```

- (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:

The image shows a Visual Studio Code editor with a C program named `quiz02-2.c` open. The program defines a function `DrivingCost` and a `main` function that takes user input for miles, miles per gallon, and dollars per gallon, then calculates and prints the driving cost.

```

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

```

A terminal window titled `/cygdrive/d/quiz02` shows the execution of the program:

```

Adam@Laptop-OF-Gods /cygdrive/d/quiz02
$ gcc quiz02-2.c -o test
Adam@Laptop-OF-Gods /cygdrive/d/quiz02
$ ./test
Enter driven Miles:300.7
Enter Miles per Gallon:22.3
Enter dollars per Gallon:3.1599
Driving Cost= 42.61
Adam@Laptop-OF-Gods /cygdrive/d/quiz02
$

```