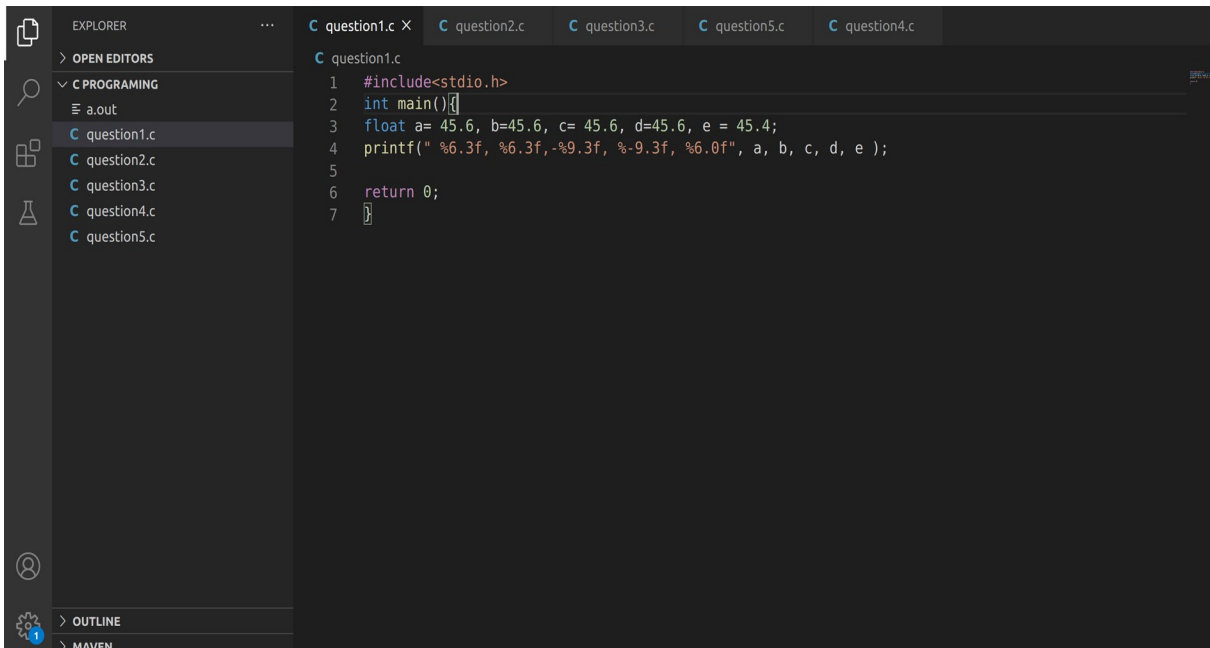


## Lab submission

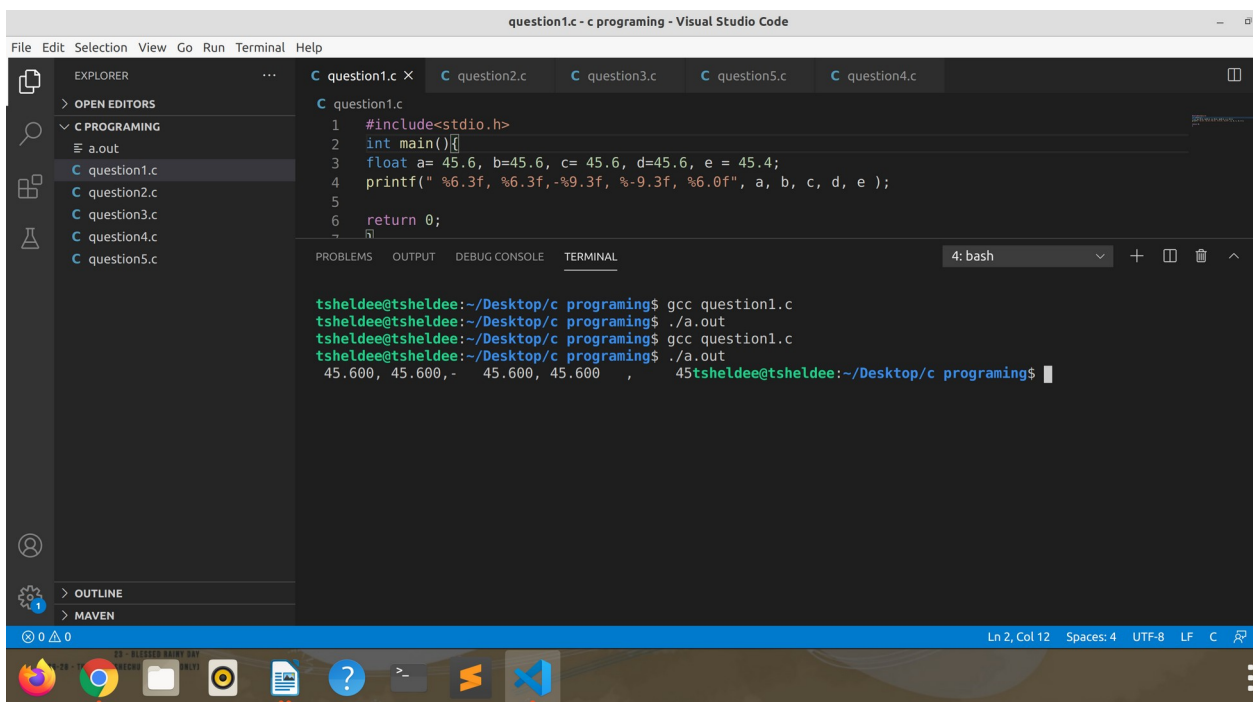
### Question 1



The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The Explorer sidebar shows a project named 'C PROGRAMING' with a file 'a.out' and five C source files: 'question1.c', 'question2.c', 'question3.c', 'question4.c', and 'question5.c'. The 'question1.c' file is selected and its content is displayed in the main editor. The code is as follows:

```
1 #include<stdio.h>
2 int main()
3 {
4     float a= 45.6, b=45.6, c= 45.6, d=45.6, e = 45.4;
5     printf(" %6.3f, %6.3f,-%9.3f, %9.3f, %6.0f", a, b, c, d, e );
6     return 0;
7 }
```

### output



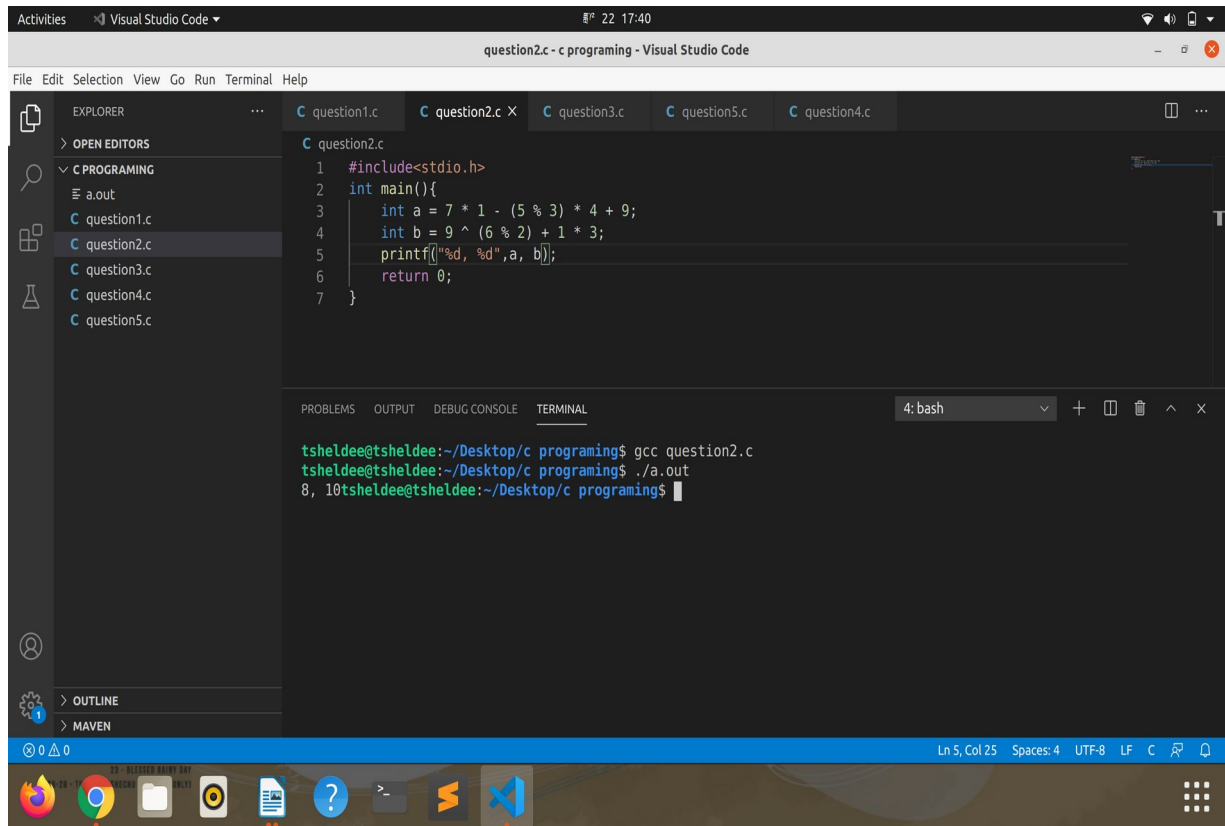
The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The Explorer sidebar shows a project named 'C PROGRAMING' with a file 'a.out' and five C source files: 'question1.c', 'question2.c', 'question3.c', 'question4.c', and 'question5.c'. The 'question1.c' file is selected and its content is displayed in the main editor. The code is as follows:

```
1 #include<stdio.h>
2 int main()
3 {
4     float a= 45.6, b=45.6, c= 45.6, d=45.6, e = 45.4;
5     printf(" %6.3f, %6.3f,-%9.3f, %9.3f, %6.0f", a, b, c, d, e );
6     return 0;
7 }
```

The terminal output shows the following commands and their results:

```
tsheldee@tsheldee:~/Desktop/c programming$ gcc question1.c
tsheldee@tsheldee:~/Desktop/c programming$ ./a.out
tsheldee@tsheldee:~/Desktop/c programming$ gcc question1.c
tsheldee@tsheldee:~/Desktop/c programming$ ./a.out
45.600, 45.600, - 45.600, 45.600 , 45tsheldee@tsheldee:~/Desktop/c programming$
```

## Question2



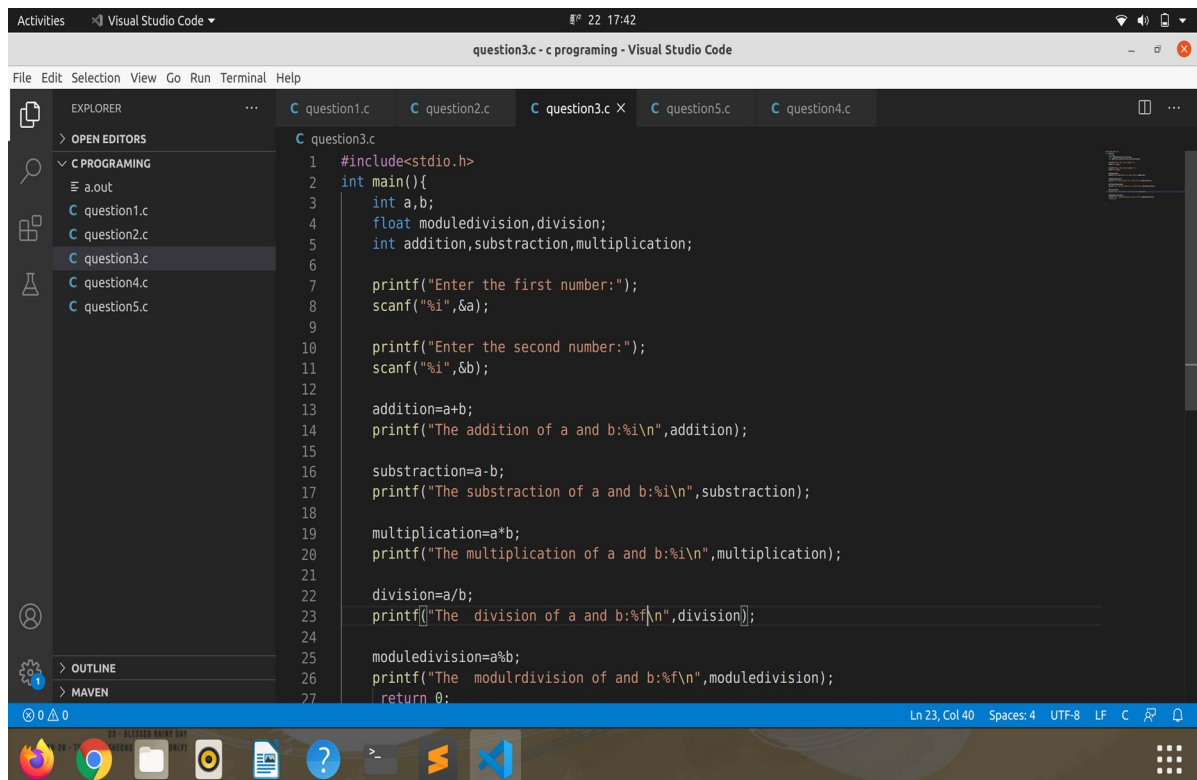
Visual Studio Code interface showing the execution of a C program (question2.c). The code calculates the value of a and b, and prints them. The terminal output shows the values 8 and 10.

```
1 #include<stdio.h>
2 int main(){
3     int a = 7 * 1 - (5 % 3) * 4 + 9;
4     int b = 9 ^ (6 % 2) + 1 * 3;
5     printf("%d, %d", a, b);
6     return 0;
7 }
```

Terminal output:

```
tsheldee@tsheldee:~/Desktop/c programming$ gcc question2.c
tsheldee@tsheldee:~/Desktop/c programming$ ./a.out
8, 10tsheldee@tsheldee:~/Desktop/c programming$
```

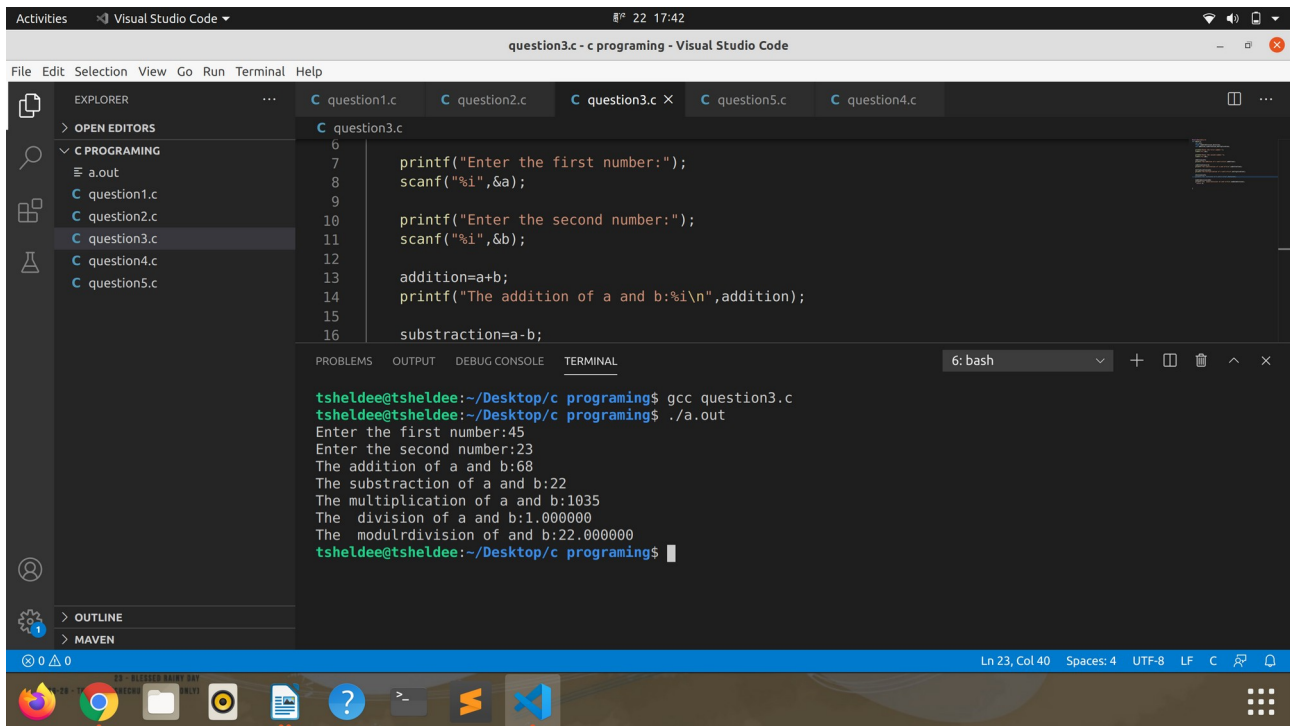
## Question3



Visual Studio Code interface showing the code for question3.c. The code prompts the user for two numbers and performs addition, subtraction, multiplication, and division.

```
1 #include<stdio.h>
2 int main(){
3     int a,b;
4     float moduledivision,division;
5     int addition,substraction,multiplication;
6
7     printf("Enter the first number:");
8     scanf("%i",&a);
9
10    printf("Enter the second number:");
11    scanf("%i",&b);
12
13    addition=a+b;
14    printf("The addition of a and b:%i\n",addition);
15
16    subtraction=a-b;
17    printf("The subtraction of a and b:%i\n",substraction);
18
19    multiplication=a*b;
20    printf("The multiplication of a and b:%i\n",multiplication);
21
22    division=a/b;
23    printf("The division of a and b:%f\n",division);
24
25    moduledivision=a%b;
26    printf("The modulrdivision of and b:%f\n",moduledivision);
27    return 0;
28 }
```

output

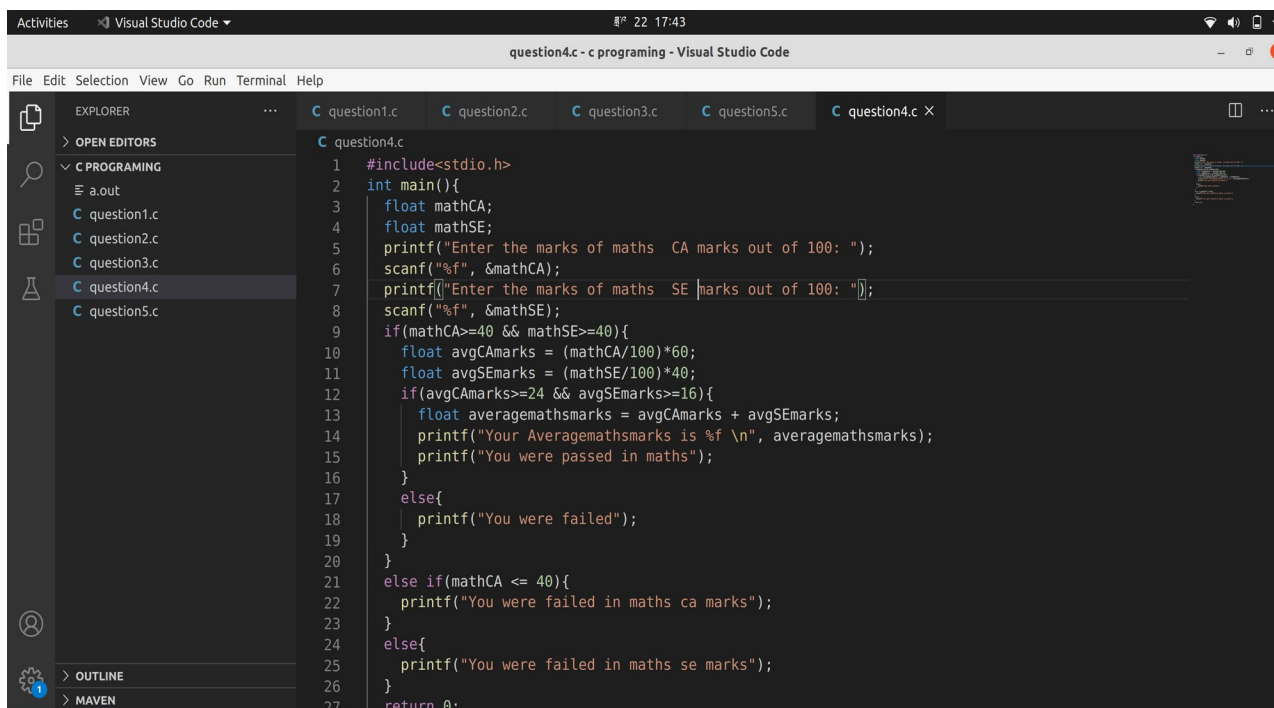


```
question3.c - c programing - Visual Studio Code

6
7     printf("Enter the first number:");
8     scanf("%i",&a);
9
10    printf("Enter the second number:");
11    scanf("%i",&b);
12
13    addition=a+b;
14    printf("The addition of a and b:%i\n",addition);
15
16    subtraction=a-b;
```

```
tsheldee@tsheldee:~/Desktop/c programing$ gcc question3.c
tsheldee@tsheldee:~/Desktop/c programing$ ./a.out
Enter the first number:45
Enter the second number:23
The addition of a and b:68
The subtraction of a and b:22
The multiplication of a and b:1035
The division of a and b:1.000000
The moduldivision of and b:22.000000
tsheldee@tsheldee:~/Desktop/c programing$
```

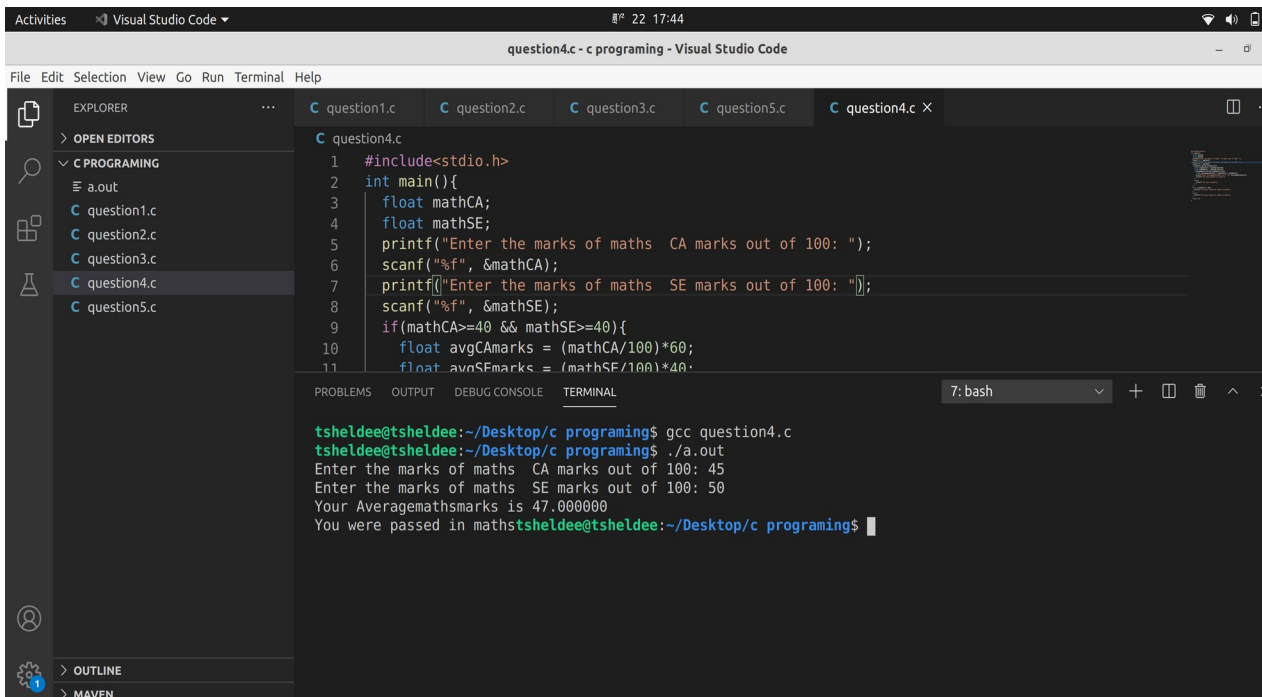
## Question4



```
question4.c - c programing - Visual Studio Code

1  #include<stdio.h>
2  int main(){
3      float mathCA;
4      float mathSE;
5      printf("Enter the marks of maths  CA marks out of 100: ");
6      scanf("%f", &mathCA);
7      printf("Enter the marks of maths  SE marks out of 100: ");
8      scanf("%f", &mathSE);
9
10     if(mathCA>=40 && mathSE>=40){
11         float avgCAmarks = (mathCA/100)*60;
12         float avgSEmarks = (mathSE/100)*40;
13         if(avgCAmarks>=24 && avgSEmarks>=16){
14             float averagemathsmarks = avgCAmarks + avgSEmarks;
15             printf("Your Averagemathsmarks is %f \n", averagemathsmarks);
16             printf("You were passed in maths");
17         }
18         else{
19             printf("You were failed");
20         }
21     }
22     else if(mathCA <= 40){
23         printf("You were failed in maths ca marks");
24     }
25     else{
26         printf("You were failed in maths se marks");
27     }
28     return 0;
```

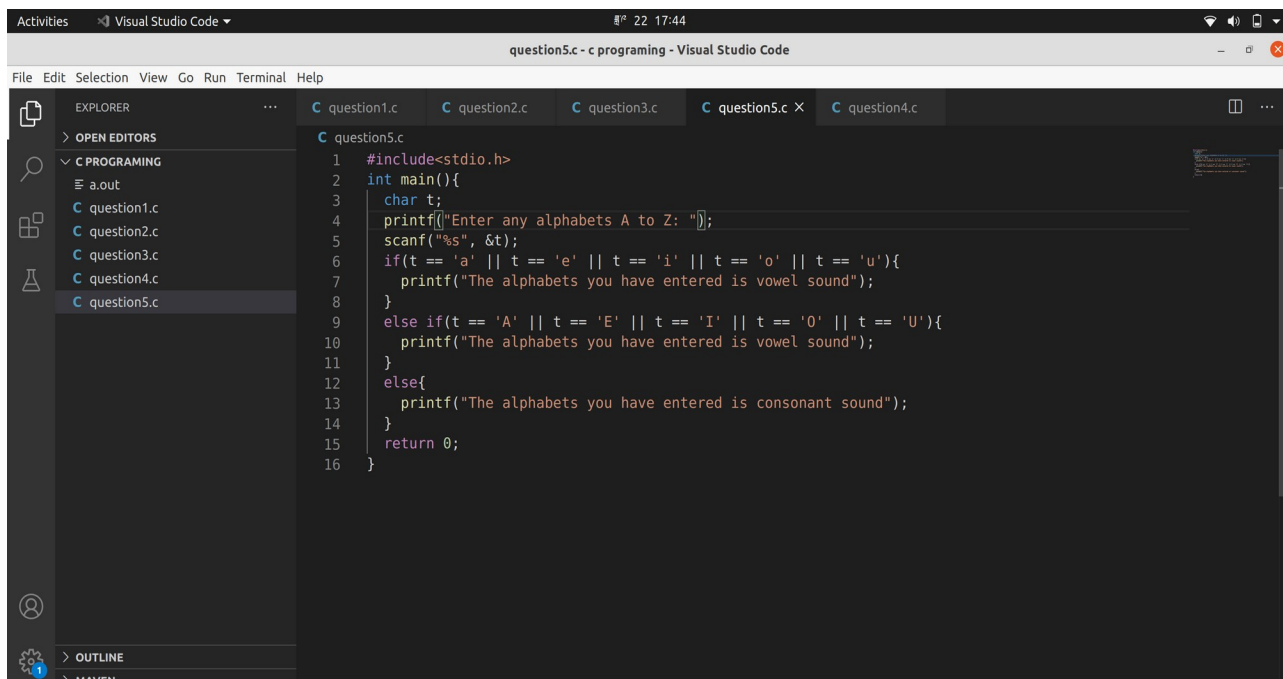
output



```
1 #include<stdio.h>
2 int main(){
3     float mathCA;
4     float mathSE;
5     printf("Enter the marks of maths  CA marks out of 100: ");
6     scanf("%f", &mathCA);
7     printf("Enter the marks of maths  SE marks out of 100: ");
8     scanf("%f", &mathSE);
9     if(mathCA>=40 && mathSE>=40){
10         float avgCAMarks = (mathCA/100)*60;
11         float avgSEmarks = (mathSE/100)*40;
```

tsheeldee@tsheeldee:~/Desktop/c programing\$ gcc question4.c  
tsheeldee@tsheeldee:~/Desktop/c programing\$ ./a.out  
Enter the marks of maths CA marks out of 100: 45  
Enter the marks of maths SE marks out of 100: 50  
Your Averagemathsmarks is 47.000000  
You were passed in mathstsheldee@tsheeldee:~/Desktop/c programing\$

## Question5



```
1 #include<stdio.h>
2 int main(){
3     char t;
4     printf("Enter any alphabets A to Z: ");
5     scanf("%s", &t);
6     if(t == 'a' || t == 'e' || t == 'i' || t == 'o' || t == 'u'){
7         printf("The alphabets you have entered is vowel sound");
8     }
9     else if(t == 'A' || t == 'E' || t == 'I' || t == 'O' || t == 'U'){
10         printf("The alphabets you have entered is vowel sound");
11     }
12     else{
13         printf("The alphabets you have entered is consonant sound");
14     }
15     return 0;
16 }
```

## output

The screenshot shows the Visual Studio Code interface with a C program named `question5.c` open. The program is designed to check if an entered character is a vowel or a consonant. The code is as follows:

```
1 #include<stdio.h>
2 int main(){
3     char t;
4     printf("Enter any alphabets A to Z: ");
5     scanf("%s", &t);
6     if(t == 'a' || t == 'e' || t == 'i' || t == 'o' || t == 'u'){
7         printf("The alphabets you have entered is vowel sound");
8     }
9     else if(t == 'A' || t == 'E' || t == 'I' || t == 'O' || t == 'U'){
10        printf("The alphabets you have entered is vowel sound");
11    }
12 }
```

The terminal output shows the execution of the program:

```
tsheldee@tsheldee:~/Desktop/c programing$ gcc question5.c
tsheldee@tsheldee:~/Desktop/c programing$ ./a.out
Enter any alphabets A to Z: f
The alphabets you have entered is consonant soundtsheldee@tsheldee:~/Desktop/c programing$ ./a.out
Enter any alphabets A to Z: a
The alphabets you have entered is vowel soundtsheldee@tsheldee:~/Desktop/c programing$
```