

ASSIGNMENT 01

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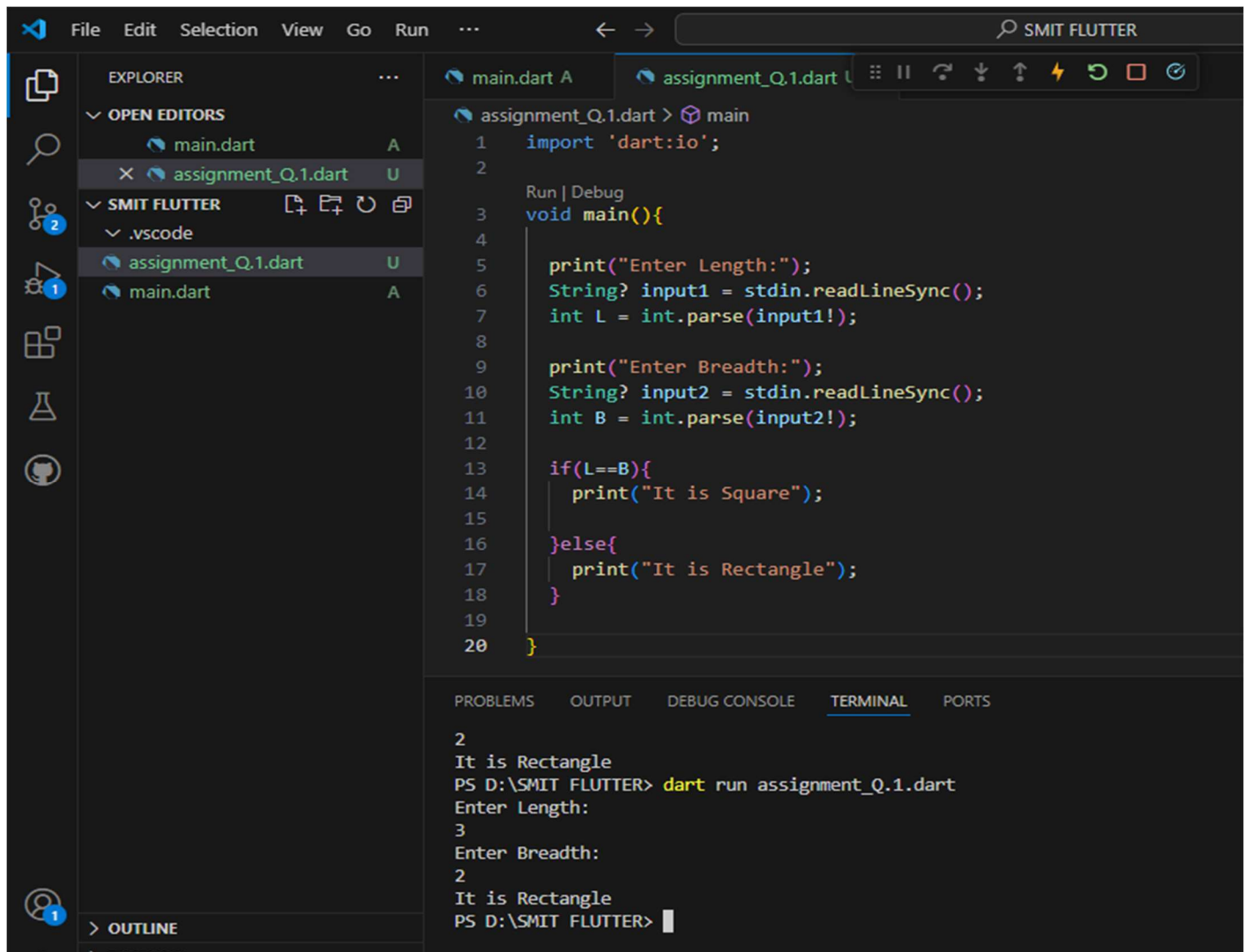
COURSE : FLUTTER

SUBMITTED TO : BILAL REHMAN

*** Submit your assignment in a pdf mentioning questions & screenshots ***

Q.1: Create two integer variables length and breadth and assign values then check if they are square values or rectangle values.

ie: if both values are equal then it's square otherwise rectangle.



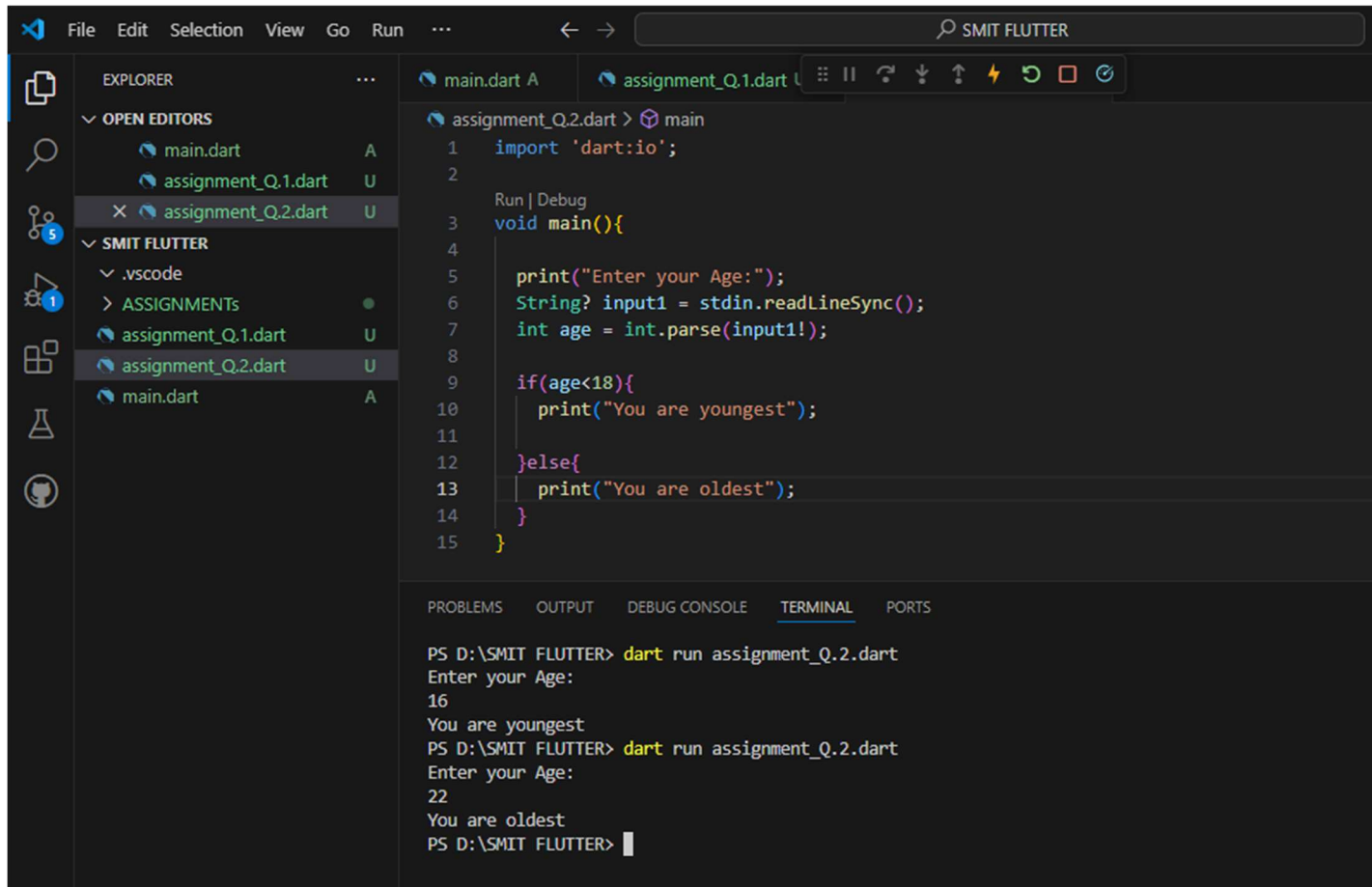
The screenshot shows the Visual Studio Code (VS Code) interface with a Dart project named 'SMIT FLUTTER'. The Explorer panel on the left shows the project structure with files 'main.dart' and 'assignment_Q.1.dart'. The main editor displays the code for 'assignment_Q.1.dart', which is a Dart program to check if two input values form a square or a rectangle. The code uses `stdin.readLineSync()` for input and `int.parse()` for parsing. It then compares the two values: if they are equal, it prints 'It is Square'; otherwise, it prints 'It is Rectangle'.

```
1 import 'dart:io';
2
3 void main(){
4
5     print("Enter Length:");
6     String? input1 = stdin.readLineSync();
7     int L = int.parse(input1!);
8
9     print("Enter Breadth:");
10    String? input2 = stdin.readLineSync();
11    int B = int.parse(input2!);
12
13    if(L==B){
14        print("It is Square");
15    }else{
16        print("It is Rectangle");
17    }
18 }
19
20 }
```

The bottom panel shows the TERMINAL output, which displays the program's execution. It shows the prompt 'Enter Length:' followed by the input '3', then 'Enter Breadth:' followed by the input '2'. The output then prints 'It is Rectangle'.

```
2
It is Rectangle
PS D:\SMIT FLUTTER> dart run assignment_Q.1.dart
Enter Length:
3
Enter Breadth:
2
It is Rectangle
PS D:\SMIT FLUTTER> 
```

Q.2: Take two variables and store age then using if/else condition to determine oldest and youngest among them.



The screenshot shows the Visual Studio Code editor with a project named "SMIT FLUTTER". The Explorer sidebar on the left shows the file structure with "assignment_Q.2.dart" selected. The main editor displays the following Dart code:

```
1 import 'dart:io';
2
3 Run | Debug
4 void main(){
5     print("Enter your Age:");
6     String? input1 = stdin.readLineSync();
7     int age = int.parse(input1!);
8
9     if(age<18){
10         print("You are youngest");
11     }else{
12         print("You are oldest");
13     }
14 }
15 }
```

The bottom panel shows the TERMINAL output:

```
PS D:\SMIT FLUTTER> dart run assignment_Q.2.dart
Enter your Age:
16
You are youngest
PS D:\SMIT FLUTTER> dart run assignment_Q.2.dart
Enter your Age:
22
You are oldest
PS D:\SMIT FLUTTER> 
```

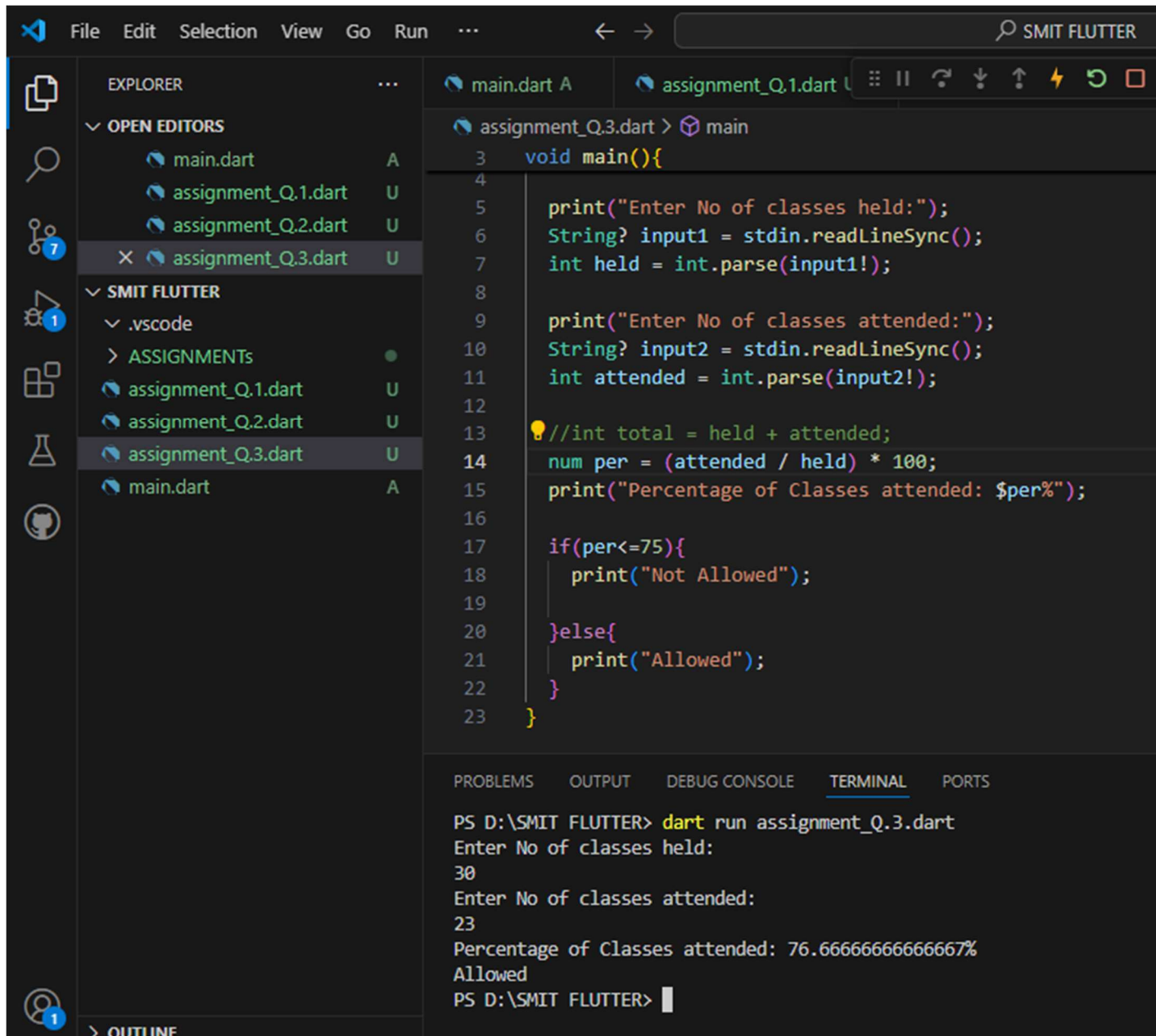
Q.3: A student will not be allowed to sit in exam if his/her attendance is less than 75%. Create integer variables and assign value:

Number of classes held = 16,

Number of classes attended = 10,

and print percentage of class attended.

Is student is allowed to sit in exam or not?



The screenshot shows the VS Code interface with the following components:

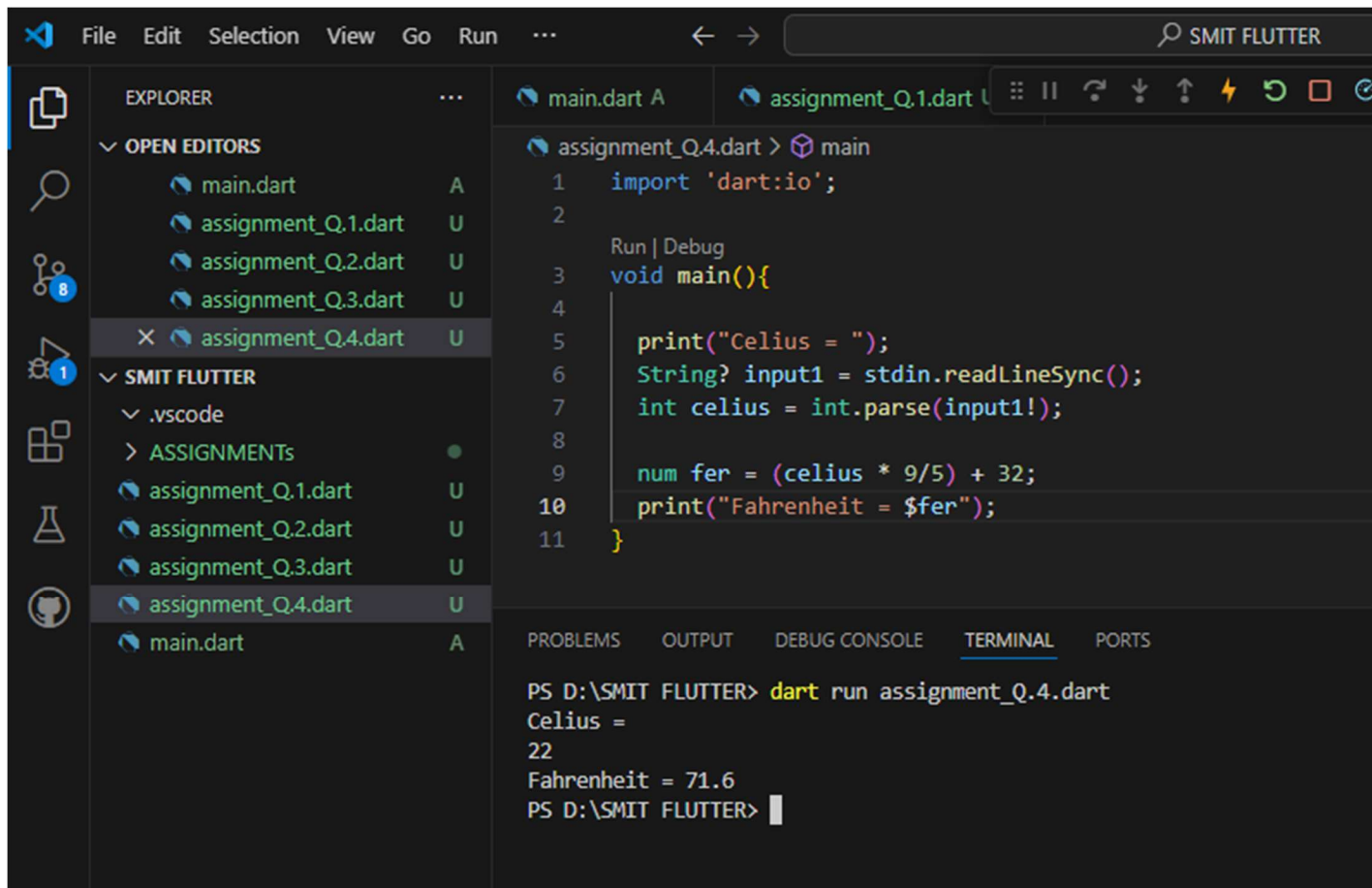
- EXPLORER:** Lists files including `main.dart`, `assignment_Q.1.dart`, `assignment_Q.2.dart`, `assignment_Q.3.dart`, and `main.dart`.
- SMIT FLUTTER:** Shows the project structure with `.vscode` and `ASSIGNMENTS` folders.
- EDITOR:** Displays the code for `assignment_Q.3.dart` with the following content:

```
3 void main(){
4
5     print("Enter No of classes held:");
6     String? input1 = stdin.readLineSync();
7     int held = int.parse(input1!);
8
9     print("Enter No of classes attended:");
10    String? input2 = stdin.readLineSync();
11    int attended = int.parse(input2!);
12
13    //int total = held + attended;
14    num per = (attended / held) * 100;
15    print("Percentage of Classes attended: $per%");
16
17    if(per<=75){
18        print("Not Allowed");
19    }else{
20        print("Allowed");
21    }
22 }
23 }
```
- TERMINAL:** Shows the execution output:

```
PS D:\SMIT FLUTTER> dart run assignment_Q.3.dart
Enter No of classes held:
30
Enter No of classes attended:
23
Percentage of Classes attended: 76.66666666666667%
Allowed
PS D:\SMIT FLUTTER>
```

Q4: Write a program to convert Celsius to Fahrenheit .

i.e: Temperature in degrees Fahrenheit (°F) = (Temperature in degrees Celsius (°C) * 9/5) + 32



The screenshot shows the Visual Studio Code interface with a Dart project named 'SMIT FLUTTER'. The Explorer panel on the left shows the project structure with files 'main.dart', 'assignment_Q.1.dart', 'assignment_Q.2.dart', 'assignment_Q.3.dart', and 'assignment_Q.4.dart'. The 'assignment_Q.4.dart' file is selected and open in the editor. The code in the editor is as follows:

```
1 import 'dart:io';
2
3 void main(){
4
5     print("Celius = ");
6     String? input1 = stdin.readLineSync();
7     int celius = int.parse(input1!);
8
9     num fer = (celius * 9/5) + 32;
10    print("Fahrenheit = $fer");
11 }
```

The bottom panel shows the TERMINAL output:

```
PS D:\SMIT FLUTTER> dart run assignment_Q.4.dart
Celius =
22
Fahrenheit = 71.6
PS D:\SMIT FLUTTER>
```

Q.5 Write a program to read temperature in centigrade and display a suitable message according to temperature:

You have num variable temperature = 42;

Now print the message according to temperature:

temp < 0 then Freezing weather

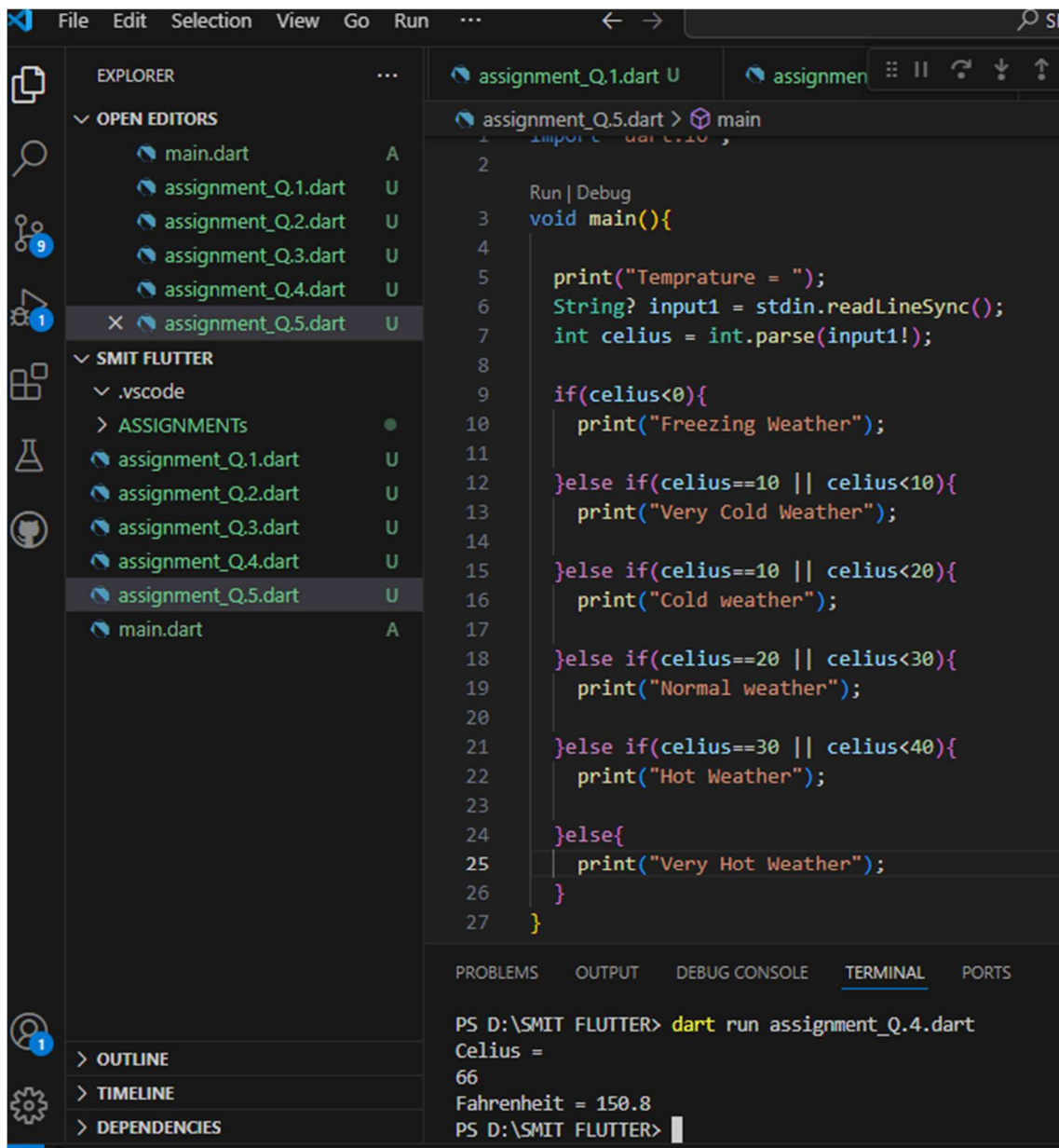
temp 0-10 then Very Cold weather

temp 10-20 then Cold weather

temp 20-30 then Normal in Temp

temp 30-40 then Its Hot

temp >=40 then Its Very Hot



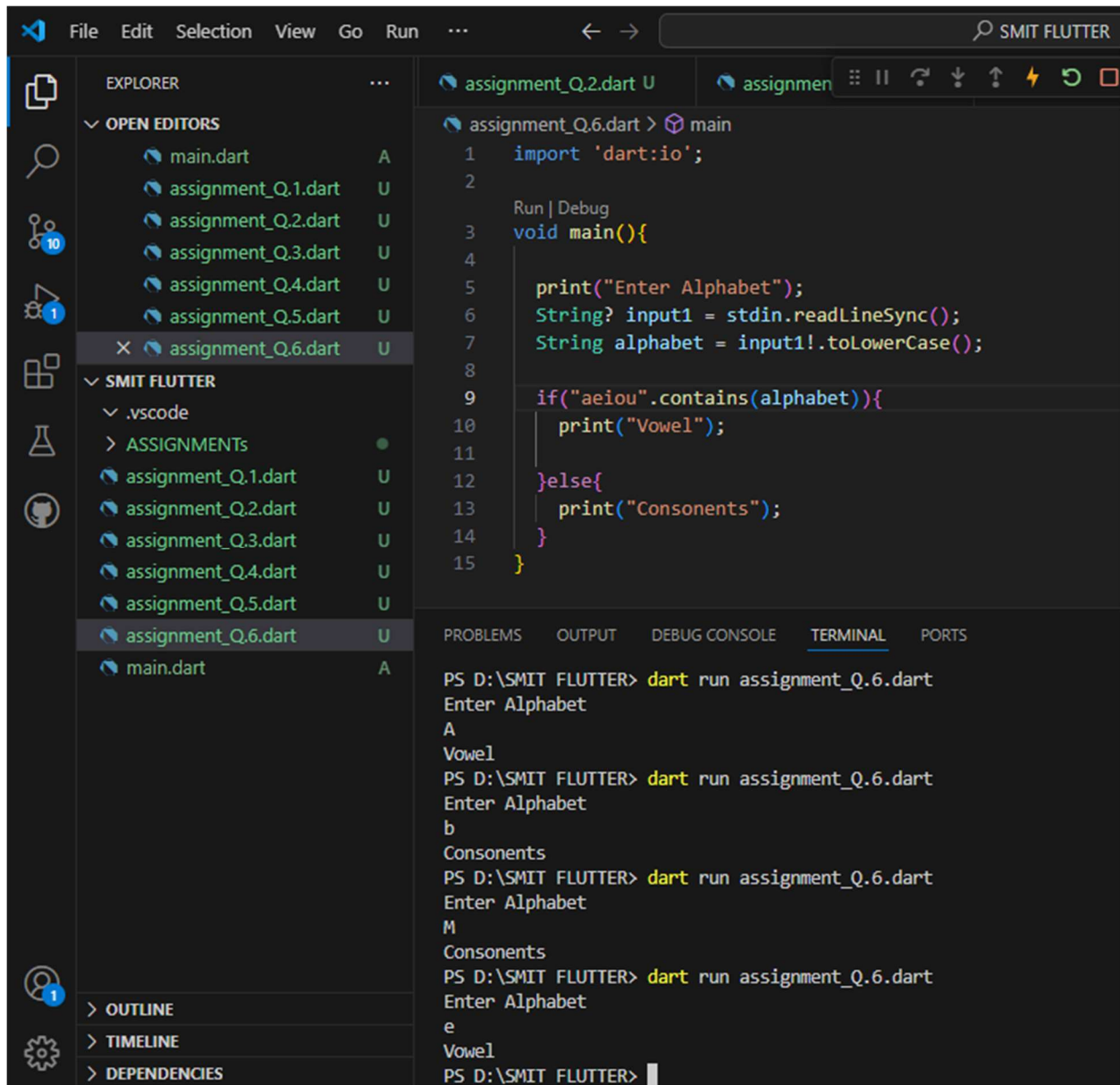
The screenshot shows the Visual Studio Code (VS Code) editor interface. The Explorer panel on the left displays the project structure, including a folder named 'SMIT FLUTTER' containing several Dart files: 'main.dart', 'assignment_Q.1.dart', 'assignment_Q.2.dart', 'assignment_Q.3.dart', 'assignment_Q.4.dart', and 'assignment_Q.5.dart'. The 'assignment_Q.5.dart' file is currently selected and open in the editor. The editor window shows the following Dart code:

```
1 import 'dart:io';
2
3 void main(){
4
5     print("Temprature = ");
6     String? input1 = stdin.readLineSync();
7     int celius = int.parse(input1!);
8
9     if(celius<0){
10         print("Freezing Weather");
11     }
12     else if(celius==10 || celius<10){
13         print("Very Cold Weather");
14     }
15     else if(celius==10 || celius<20){
16         print("Cold weather");
17     }
18     else if(celius==20 || celius<30){
19         print("Normal weather");
20     }
21     else if(celius==30 || celius<40){
22         print("Hot Weather");
23     }
24     else{
25         print("Very Hot Weather");
26     }
27 }
```

The bottom panel of the editor shows the 'TERMINAL' tab, which contains the following output:

```
PS D:\SMIT FLUTTER> dart run assignment_Q.4.dart
Celius =
66
Fahrenheit = 150.8
PS D:\SMIT FLUTTER>
```

Q.6: Write a program to check whether an alphabet is a vowel or consonant.



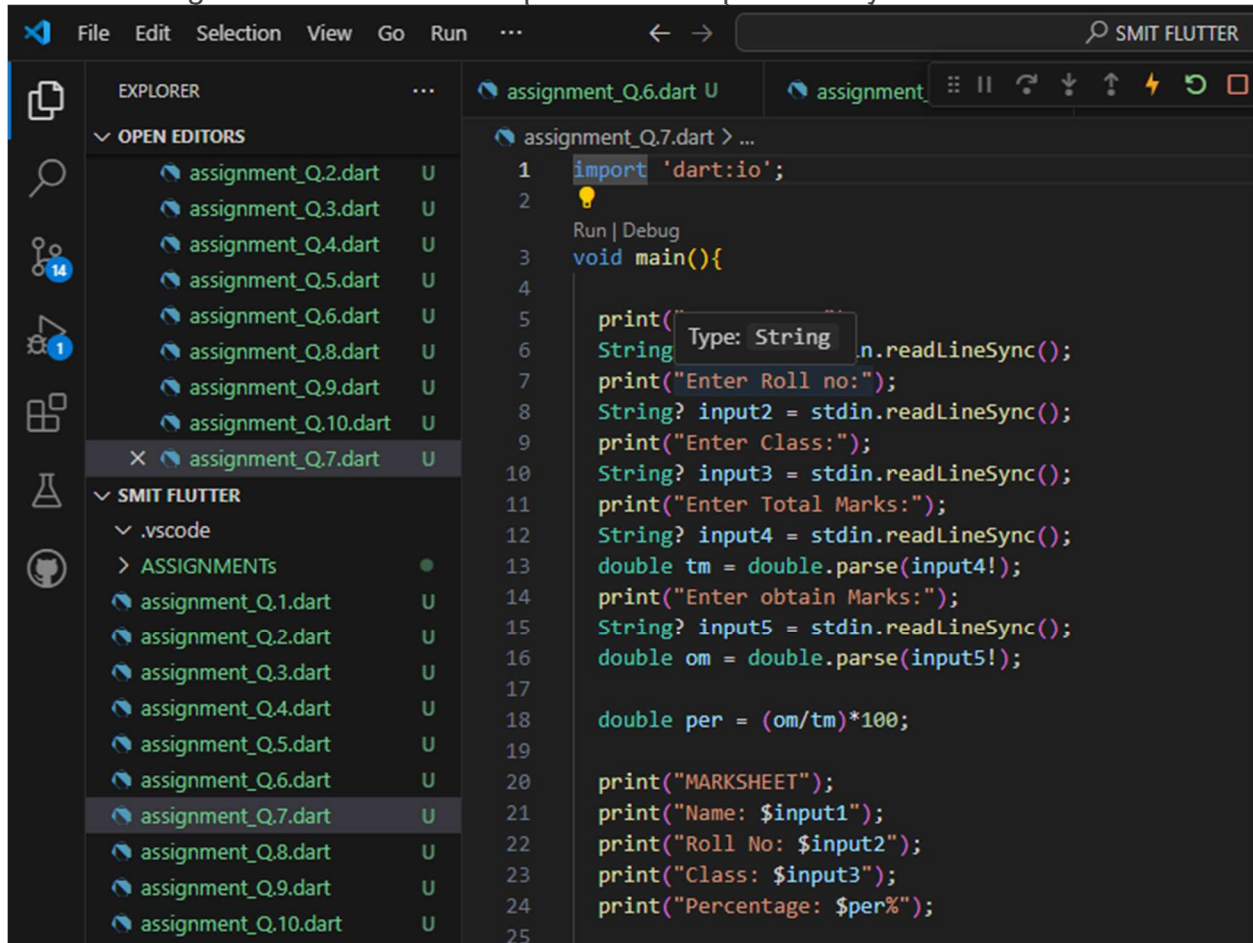
The screenshot shows the Visual Studio Code editor interface. The Explorer panel on the left displays the project structure with files like `main.dart`, `assignment_Q.1.dart`, `assignment_Q.2.dart`, `assignment_Q.3.dart`, `assignment_Q.4.dart`, `assignment_Q.5.dart`, `assignment_Q.6.dart`, and `main.dart`. The editor window shows the code for `assignment_Q.6.dart` with the following content:

```
1 import 'dart:io';
2
3 Run | Debug
4 void main(){
5     print("Enter Alphabet");
6     String? input1 = stdin.readLineSync();
7     String alphabet = input1!.toLowerCase();
8
9     if("aeiou".contains(alphabet)){
10         print("Vowel");
11     }else{
12         print("Consonents");
13     }
14 }
15 }
```

The TERMINAL panel at the bottom shows the execution of the program with the following output:

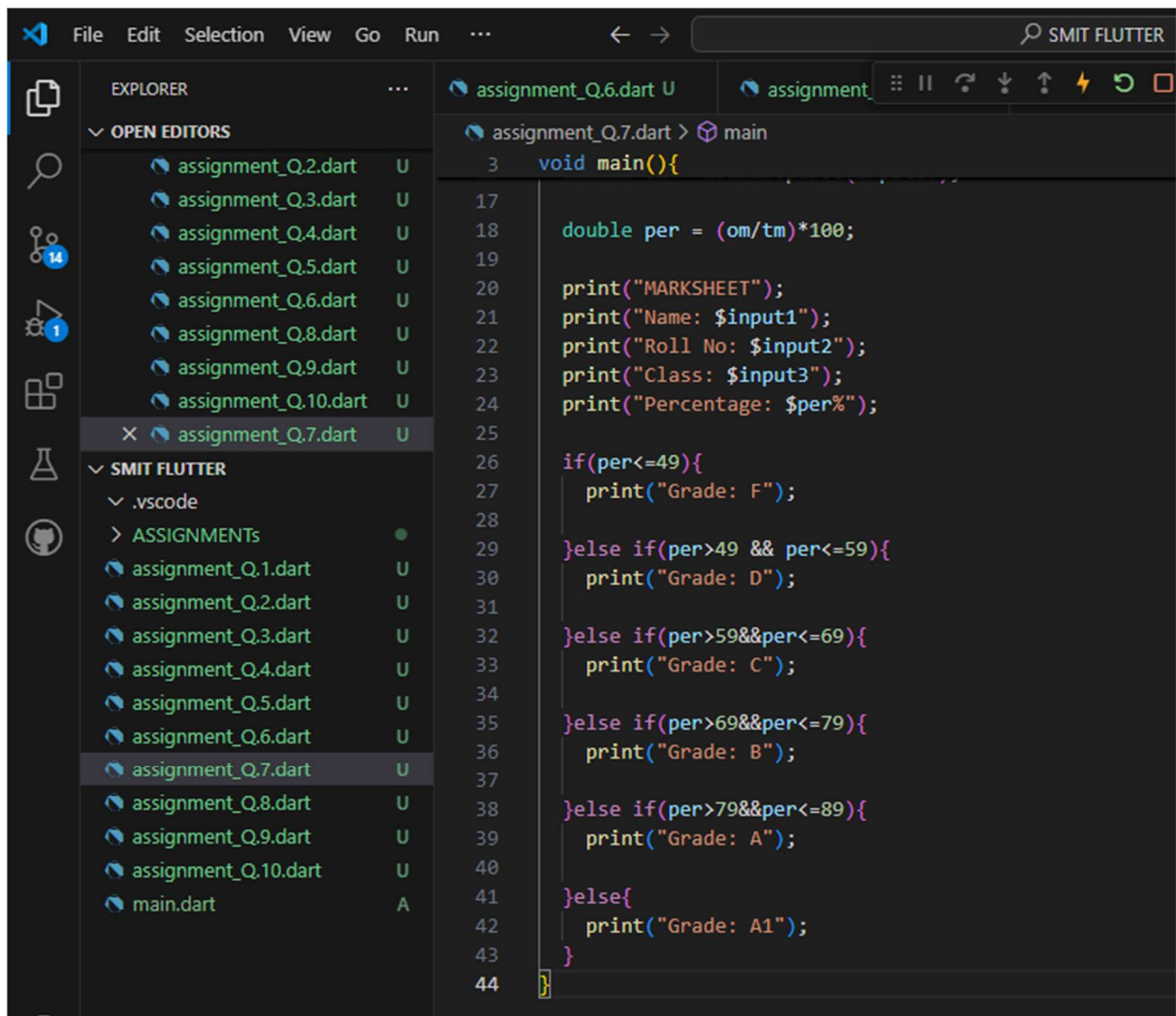
```
PS D:\SMIT FLUTTER> dart run assignment_Q.6.dart
Enter Alphabet
A
Vowel
PS D:\SMIT FLUTTER> dart run assignment_Q.6.dart
Enter Alphabet
b
Consonents
PS D:\SMIT FLUTTER> dart run assignment_Q.6.dart
Enter Alphabet
M
Consonents
PS D:\SMIT FLUTTER> dart run assignment_Q.6.dart
Enter Alphabet
e
Vowel
PS D:\SMIT FLUTTER>
```

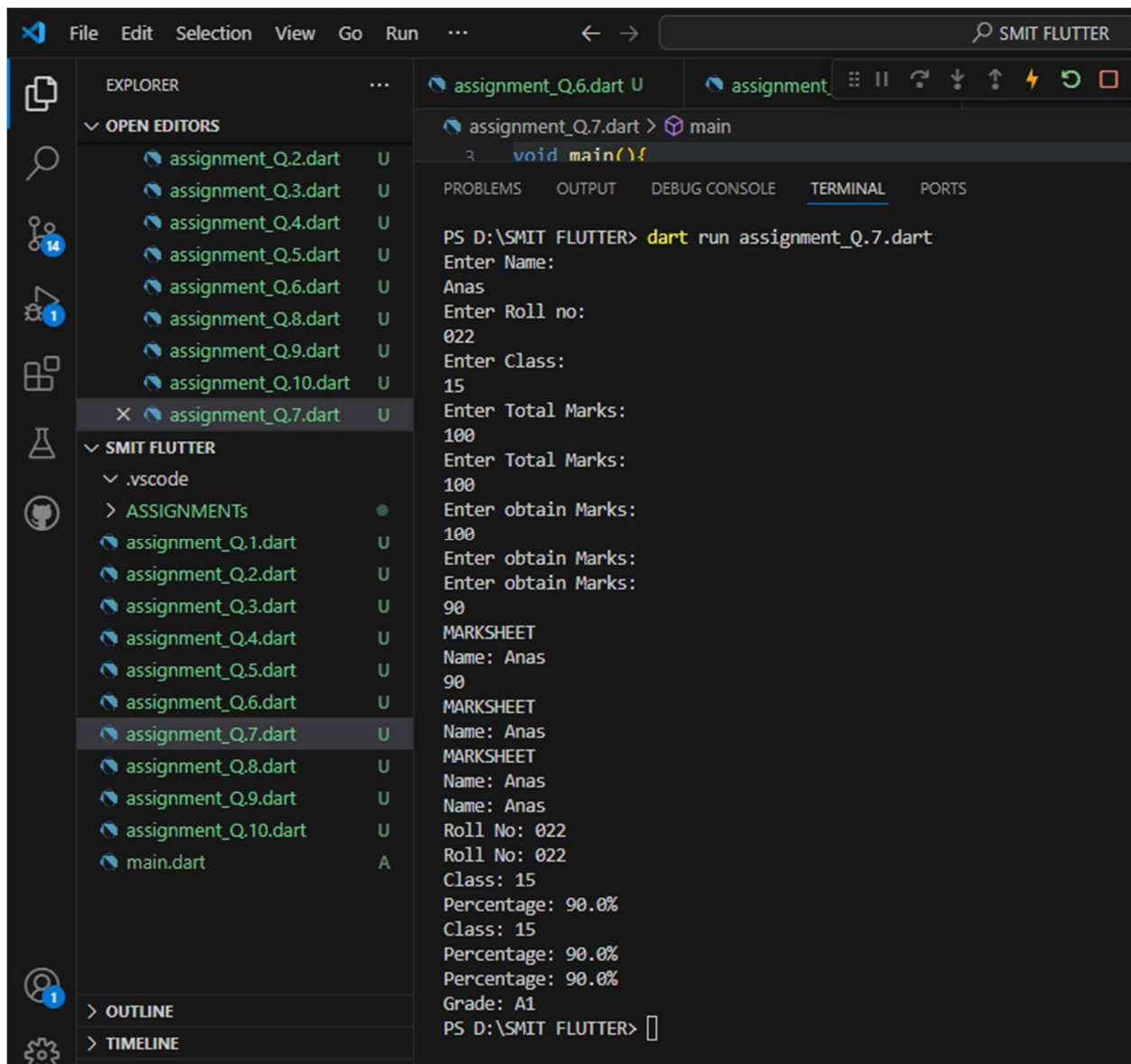

Q7: Create a marksheet using operators of at least 5 subjects and output should have Student Name, Student Roll Number, Class, Percentage, Grade Obtained etc. i.e: Percentage should be rounded upto 2 decimal places only.



The screenshot shows the Visual Studio Code editor with a Dart file named `assignment_Q.7.dart` open. The Explorer sidebar on the left shows a project named `SMIT FLUTTER` with a folder `ASSIGNMENTS` containing 10 Dart files. The main editor area displays the following Dart code:

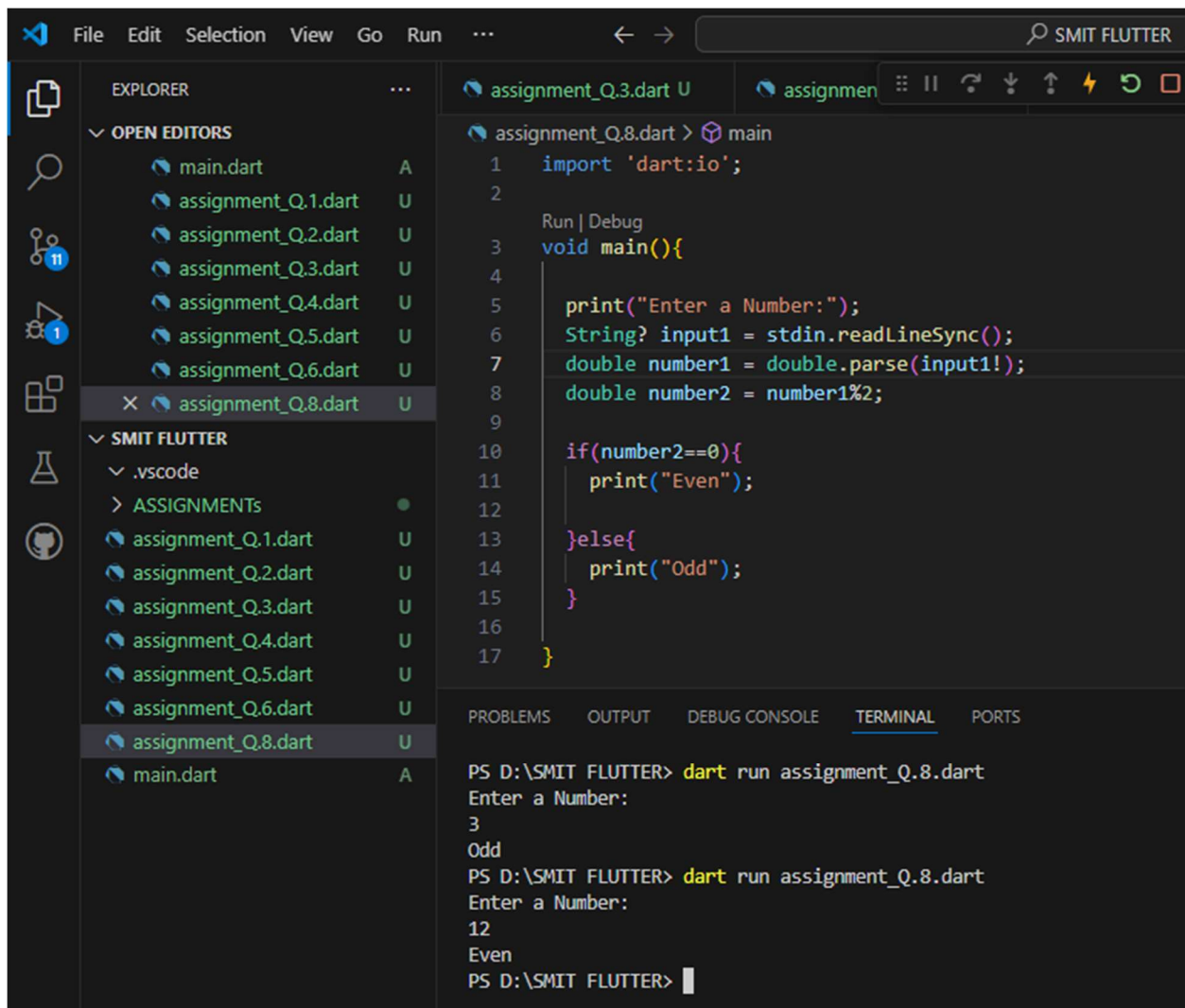
```
1 import 'dart:io';
2
3 void main(){
4
5     print("Enter Name:");
6     String input1 = stdin.readLineSync();
7     print("Enter Roll no:");
8     String? input2 = stdin.readLineSync();
9     print("Enter Class:");
10    String? input3 = stdin.readLineSync();
11    print("Enter Total Marks:");
12    String? input4 = stdin.readLineSync();
13    double tm = double.parse(input4!);
14    print("Enter obtain Marks:");
15    String? input5 = stdin.readLineSync();
16    double om = double.parse(input5!);
17
18    double per = (om/tm)*100;
19
20    print("MARKSHEET");
21    print("Name: $input1");
22    print("Roll No: $input2");
23    print("Class: $input3");
24    print("Percentage: $per%");
25 }
```



Q8: Check if the number is even or odd?

i.e : Even numbers are completely divisible by 2. (2,4,6,8,10,...)



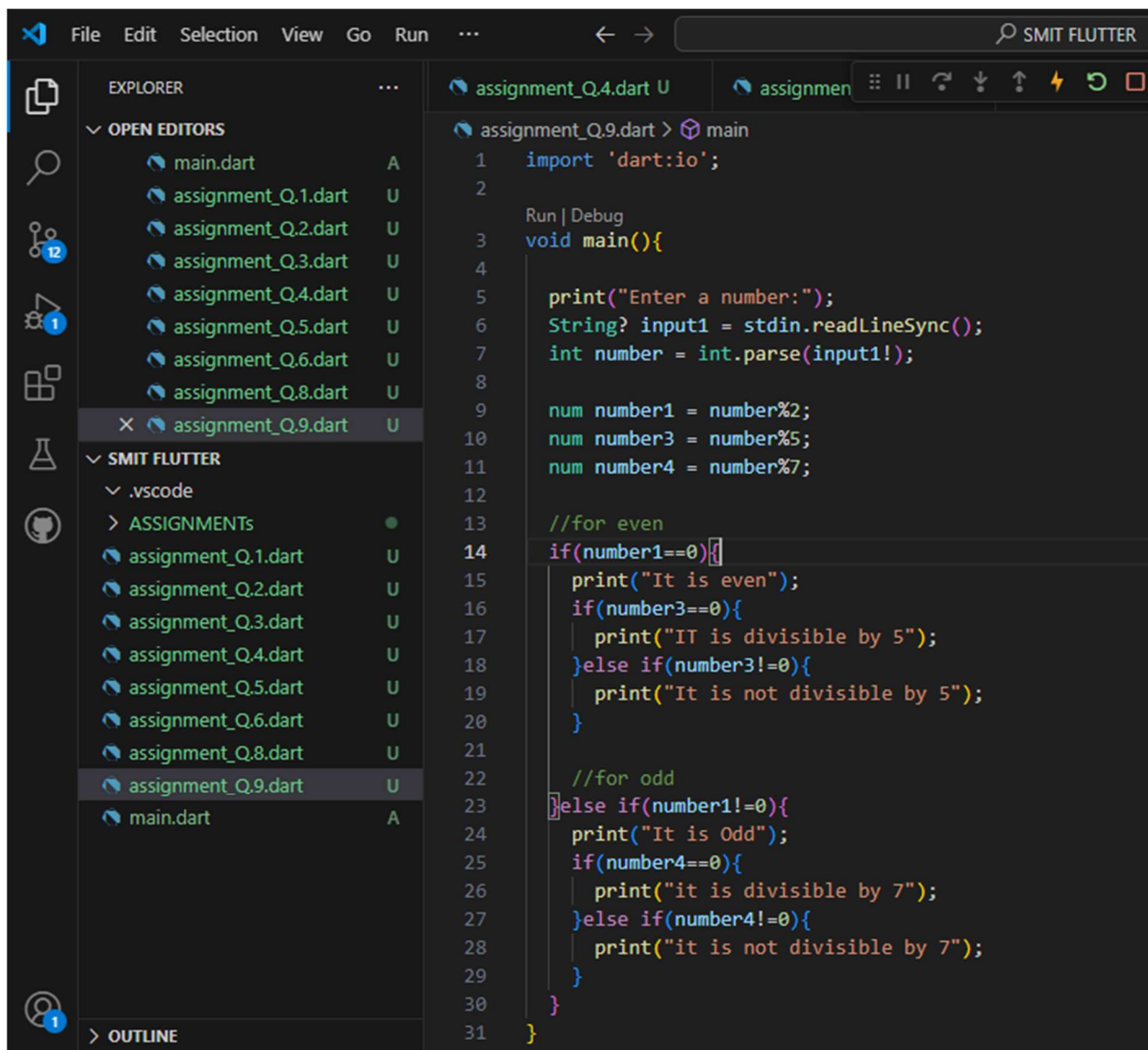
The screenshot shows the Visual Studio Code interface with the following components:

- EXPLORER:** Lists files including `main.dart` and `assignment_Q.1.dart` through `assignment_Q.8.dart`. `assignment_Q.8.dart` is selected.
- SMIT FLUTTER:** A folder containing `.vscode` and `ASSIGNMENTS`. The `ASSIGNMENTS` folder contains `assignment_Q.1.dart` through `assignment_Q.8.dart` and `main.dart`.
- EDITOR:** Displays the code for `assignment_Q.8.dart`. The code is as follows:

```
1 import 'dart:io';
2
3 void main(){
4
5     print("Enter a Number:");
6     String? input1 = stdin.readLineSync();
7     double number1 = double.parse(input1!);
8     double number2 = number1%2;
9
10    if(number2==0){
11        print("Even");
12    }else{
13        print("Odd");
14    }
15 }
16
17 }
```
- TERMINAL:** Shows the execution of the program. The first run with input `3` outputs `Odd`. The second run with input `12` outputs `Even`.

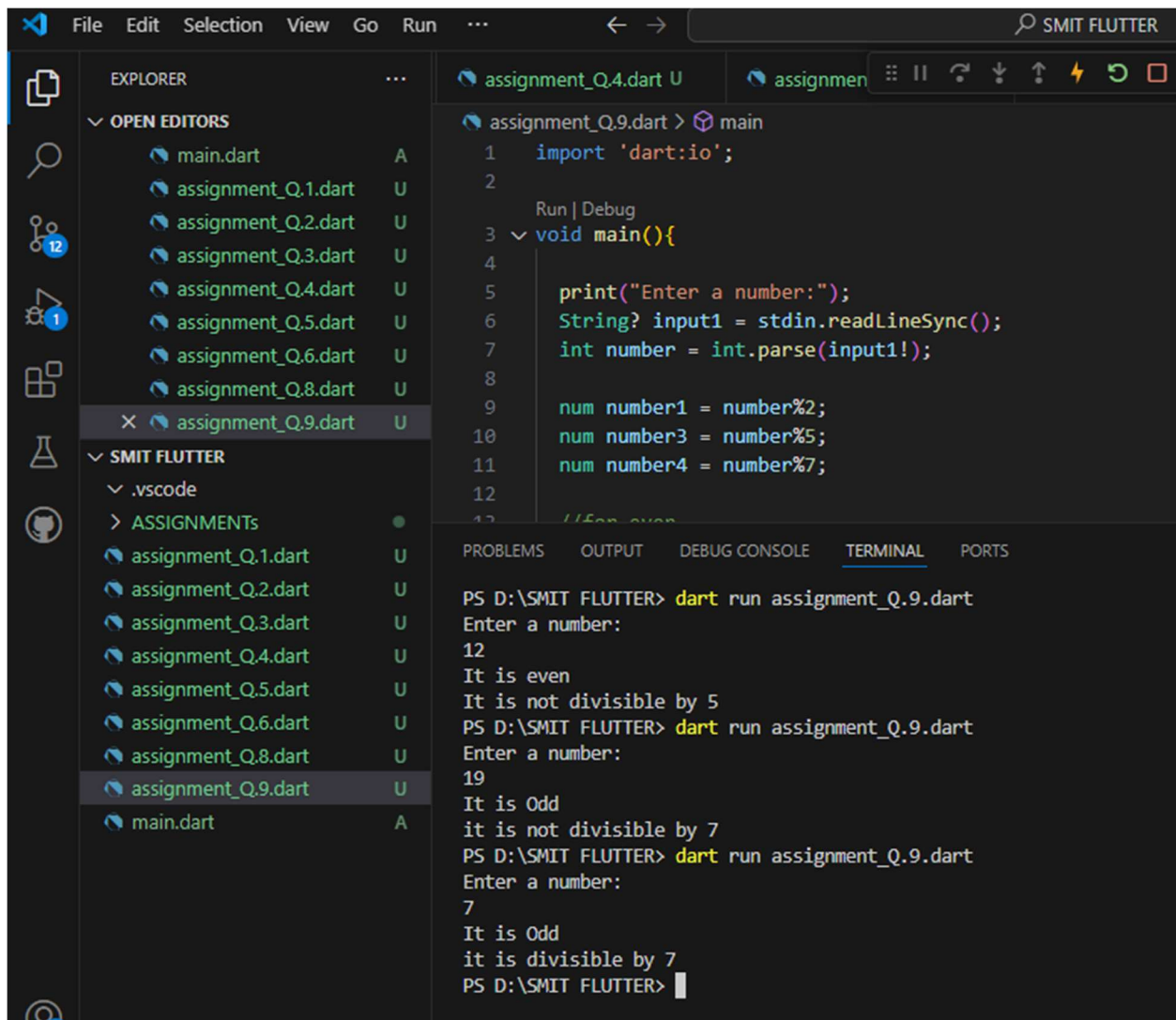
```
PS D:\SMIT FLUTTER> dart run assignment_Q.8.dart
Enter a Number:
3
Odd
PS D:\SMIT FLUTTER> dart run assignment_Q.8.dart
Enter a Number:
12
Even
PS D:\SMIT FLUTTER> 
```

Q9: Check if a number is even then check if its divisible by 5 or not & if a number is odd then check if its divisible by 7 or not.

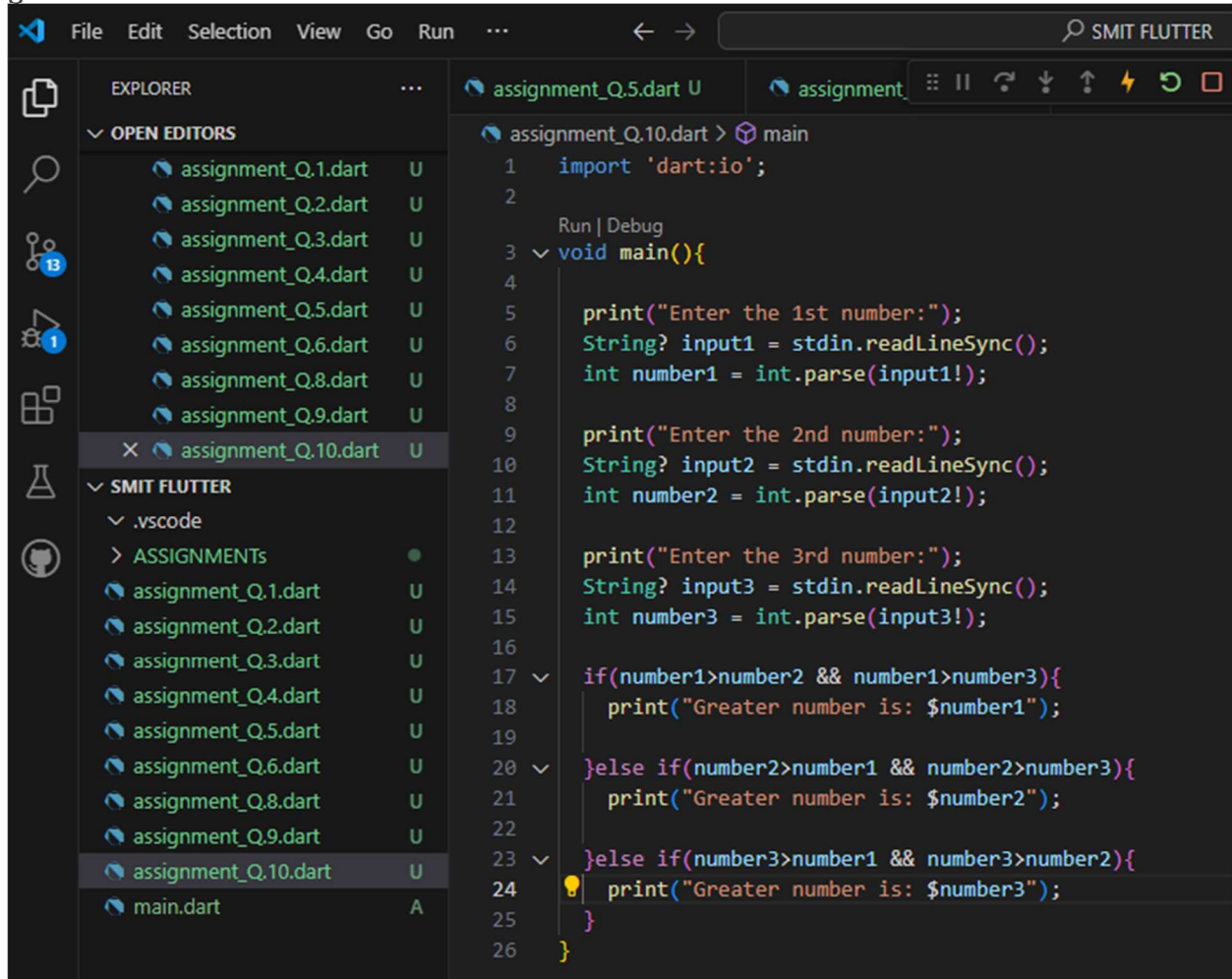


The screenshot shows the Visual Studio Code interface with a Dart file named `assignment_Q.9.dart` open. The Explorer sidebar on the left shows a project named "SMIT FLUTTER" with a file tree containing `main.dart` and a series of assignment files from `assignment_Q.1.dart` to `assignment_Q.9.dart`. The main editor displays the following Dart code:

```
1 import 'dart:io';
2
3 Run | Debug
4 void main(){
5     print("Enter a number:");
6     String? input1 = stdin.readLineSync();
7     int number = int.parse(input1!);
8
9     num number1 = number%2;
10    num number3 = number%5;
11    num number4 = number%7;
12
13    //for even
14    if(number1==0){
15        print("It is even");
16        if(number3==0){
17            print("IT is divisible by 5");
18        }else if(number3!=0){
19            print("It is not divisible by 5");
20        }
21
22        //for odd
23    }else if(number1!=0){
24        print("It is Odd");
25        if(number4==0){
26            print("it is divisible by 7");
27        }else if(number4!=0){
28            print("it is not divisible by 7");
29        }
30    }
31 }
```



Q10: Write a program that takes three numbers from the user and prints the greatest number & lowest number.



The screenshot shows the Visual Studio Code editor interface. The Explorer panel on the left displays a project named 'SMIT FLUTTER' with a folder 'ASSIGNMENTS' containing files 'assignment_Q.1.dart' through 'assignment_Q.10.dart' and 'main.dart'. The file 'assignment_Q.10.dart' is selected. The Editor panel shows the code for 'assignment_Q.10.dart' with the following content:

```
1 import 'dart:io';
2
3 void main(){
4
5     print("Enter the 1st number:");
6     String? input1 = stdin.readLineSync();
7     int number1 = int.parse(input1!);
8
9     print("Enter the 2nd number:");
10    String? input2 = stdin.readLineSync();
11    int number2 = int.parse(input2!);
12
13    print("Enter the 3rd number:");
14    String? input3 = stdin.readLineSync();
15    int number3 = int.parse(input3!);
16
17    if(number1>number2 && number1>number3){
18        print("Greater number is: $number1");
19    }
20    else if(number2>number1 && number2>number3){
21        print("Greater number is: $number2");
22    }
23    else if(number3>number1 && number3>number2){
24        print("Greater number is: $number3");
25    }
26 }
```