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.

```dart

import 'dart:io';

Run | Debug
void main() {
  print("Enter length");
  num length = num.parse(stdin.readLineSync()!);
  print("Enter width");
  num width = num.parse(stdin.readLineSync()!);

  if(length == width) {
    print("According to your length and width input. The object is SQUARE");
  } else {
    print("According to your length and width input. The object is RECTANGLE");
  }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
Enter length
10
Enter width
10
According to your length and width input. The object is SQUARE
PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question1.dart"
Enter length
10
Enter width
20
According to your length and width input. The object is RECTANGLE
```

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

```dart
import 'dart:io';

Run | Debug
void main() {
  print("Enter the first age");
  num age1 = num.parse(stdin.readLineSync()!);
  print("Enter the second age");
  num age2 = num.parse(stdin.readLineSync()!);

  if (age1>age2) {
    print("The First age that you have inserted is older than the second one.");
  } else {
    print("The second age that you have inserted is older than the first one.");
  }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

Enter the first age
50
Enter the second age
30
The First age that you have inserted is older than the second one.
PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question2.dart"
Enter the first age
20
Enter the second age
30
The second age that you have inserted is older than the first one.
PS D:\Dart>
```

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?

```dart
Run | Debug
void main() {
  num numOfClasses = 16;
  num classesAttended = 10;
  num percent = (classesAttended/numOfClasses)*100;
  if (percent>70) {
    print("You are eligible to sit in EXAM.");
  } else {
    print("You are not eligible to sit in EXAM");
  }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question3.dart"
You are not eligible to sit in EXAM
PS D:\Dart>
```

Q4: Write a program to convert Celsius to Fahrenheit .
i.e: Temperature in degrees Fahrenheit (°F) = (Temperature in degrees Celsius (°C) * 9/5) + 32

```dart
import 'dart:io';

Run | Debug
void main() {
  print("Celsius to Fahrenheit Converter");
  num celsius = num.parse(stdin.readLineSync()!);
  num converter = (celsius * 9/5) + 32;
  print("It is $converter Fahrenheit");
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question4.dart"
Celsius to Fahrenheit Converter
36
It is 96.8 Fahrenheit
PS D:\Dart>
```

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

```dart
Run | Debug
void main() {
  num temp = 25;
  if (temp < 0) {
    print("Freezing Weather");
  } else if (temp >=0 && temp <=10) {
    print("Very Cold Weather");
  } else if (temp > 10 && temp <= 20) {
    print("Cold Weather");
  } else if(temp >20 && temp<=30) {
    print("Normal Weather");
  } else if(temp >30 && temp <= 40) {
    print("Hot Weather");
  } else {
    print("Very Hot Weather");
  }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question5.dart"
Normal Weather
PS D:\Dart>
```

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

```dart
Run | Debug
void main() {
  String letter = "o";

  if(letter == "a" || letter == "e" || letter == "i" || letter == "o" || letter == "u") {
    print("The input letter is a VOWEL");
  } else {
    print("The input letter is an APLHABET");
  }
}
```

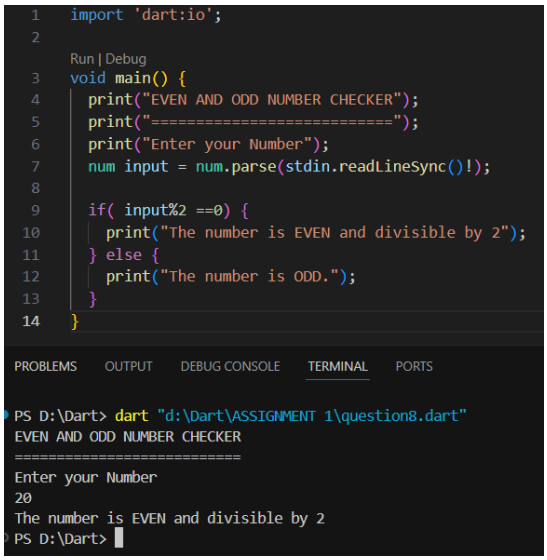
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question6.dart"
The input letter is a VOWEL
PS D:\Dart>
```

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.

```dart
import 'dart:io';

Run | Debug
void main() {
print("Enter your Class");
var className = stdin.readLineSync();
print("Enter your Name");
var name = stdin.readLineSync();
print("Enter your Roll No");
int rollNo = int.parse(stdin.readLineSync()!);
print("--------------------------------");

print("Class: $className");
print("Name: $name");
print("Roll No: $rollNo");
num Math = 80;
num Eng = 85;
num Comp = 90;
num Phy = 80;
num Isl = 75;
num Urdu = 70;

num obtMarks = Math + Eng + Comp + Phy + Isl + Urdu;
num percent = (obtMarks/600) * 100;

if(percent>= 80) {
  print("Your Grade is A+");
} else if (percent<80 && percent >=70) {
  print("Your Grade is A");
} else if (percent<70 && percent >=60) {
  print("Your Grade is B");
} else if (percent < 60 && percent >=50) {
  print("Your Grade is C");
} else if (percent < 50 && percent>=40) {
  print("Your Grade is D");
} else {
  print("You are Fail");
}
print("Your Obtained Marks are: $obtMarks");
print("Your Percent is: $percent");

}
```

```
PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question7.dart"
Enter your Class
X
Enter your Name
M. Basheer
Enter your Roll No
13532
--------------------------------
Class: X
Name: M. Basheer
Roll No: 13532
Your Grade is A+
Your Obtained Marks are: 480
Your Percent is: 80.0
PS D:\Dart>
```

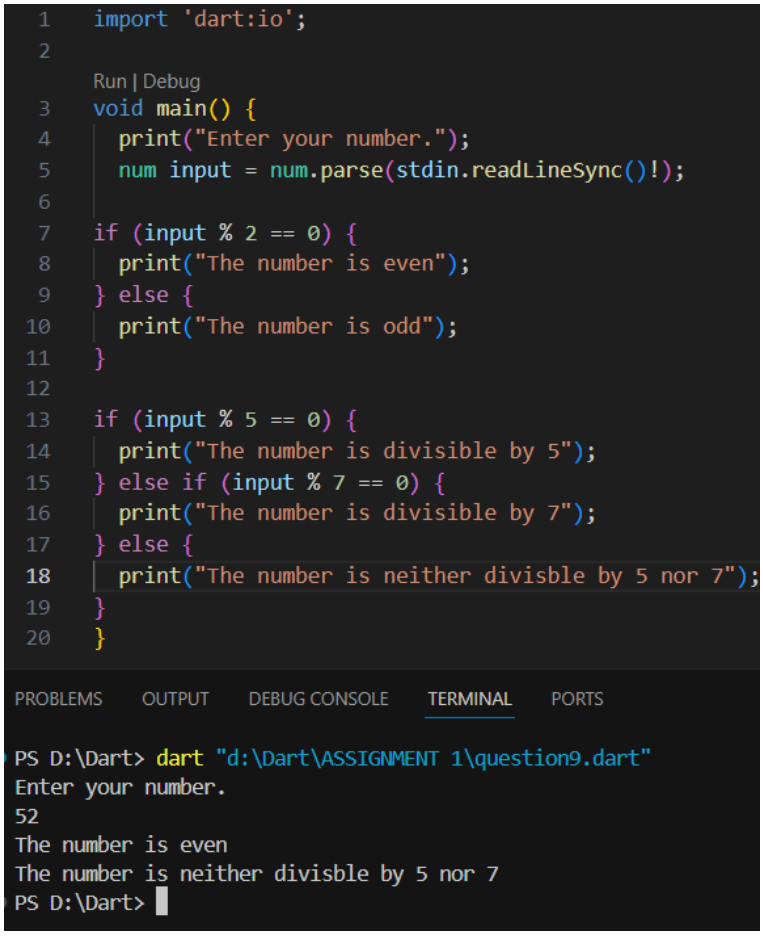
Q8: Check if the number is even or odd?



```dart
import 'dart:io';

Run | Debug
void main() {
  print("EVEN AND ODD NUMBER CHECKER");
  print("==========================");
  print("Enter your Number");
  num input = num.parse(stdin.readLineSync()!);

  if( input%2 ==0) {
    print("The number is EVEN and divisible by 2");
  } else {
    print("The number is ODD.");
  }
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question8.dart"
EVEN AND ODD NUMBER CHECKER
==========================
Enter your Number
20
The number is EVEN and divisible by 2
PS D:\Dart>
```

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.



```dart
import 'dart:io';

Run | Debug
void main() {
  print("Enter your number.");
  num input = num.parse(stdin.readLineSync()!);

if (input % 2 == 0) {
  print("The number is even");
} else {
  print("The number is odd");
}

if (input % 5 == 0) {
  print("The number is divisible by 5");
} else if (input % 7 == 0) {
  print("The number is divisible by 7");
} else {
  print("The number is neither divisble by 5 nor 7");
}
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question9.dart"
Enter your number.
52
The number is even
The number is neither divisble by 5 nor 7
PS D:\Dart>
```

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

```dart
import 'dart:io';

Run | Debug
void main() {
  print("Enter the first value");
  num val1 = num.parse(stdin.readLineSync()!);
  print("Enter the second value");
  num val2 = num.parse(stdin.readLineSync()!);
  print("Enter the third value");
  num val3 = num.parse(stdin.readLineSync()!);

if (val1 > val2 && val2 > val3) {
  print("$val1 is the greatest and $val3 is the smallest value");
}else if( val1< val2 && val2 < val3) {
  print("$val3 is the greatest and $val1 is the smallest value");
} else if(val2 > val1 && val1 > val3) {
  print("$val2 is the greatest and $val3 is the smallest value");
}else if (val2 > val3 && val3> val1) {
  print("$val2 is the greatest and $val1 is the smallest vale");
}
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Dart> dart "d:\Dart\ASSIGNMENT 1\question10.dart"
Enter the first value
89
Enter the second value
100
Enter the third value
25
100 is the greatest and 25 is the smallest value
PS D:\Dart>
```