ASSIGNMENT NO: 1

NAME:	BILAL
FATHER NAME:	PEER MUHAMMAD
ROLL NO:	182210
COURSE:	FLUTTER
SUBMITTED TO:	BILAL REHMAN

Question 1:

Code:

```
void main(){
  int length = 20;
  int breadth = 20;
  if(length != breadth){
    print('It is a Rectangle');
  } else{
    print('It is a Square');
  }
}
```

```
1   void main(){
2     int length = 20;
3     int breadth = 21;
4     if(length != breadth){
5       print('It is a Rectangle');
6     } else{
7       print('It is a Square');
8     }
9   }
10
```

Output:

```
It is a Square

Exited.
```

```
It is a Rectangle

Exited.
```

Question 2:

Code:

```
void main() {
  int age1 = 35;
  int age2 = 35;
  if (age1 > age2) {
    print('Person 1 is the oldest.');
    print('Person 2 is the youngest.');
  } else if (age1 < age2) {
    print('Person 2 is the oldest.');
    print('Person 1 is the youngest.');
  } else {
    print('Both persons are of the same age.');
  }
}
```

```
void main() {
  int age1 = 25;
  int age2 = 30;
  if (age1 > age2) {
    print('Person 1 is the oldest.');
    print('Person 2 is the youngest.');
  } else if (age1 < age2) {
    print('Person 2 is the oldest.');
    print('Person 1 is the youngest.');
  } else {
    print('Both persons are of the same age.');
  }
}
```

```
void main() {
  int age1 = 35;
  int age2 = 30;
  if (age1 > age2) {
    print('Person 1 is the oldest.');
    print('Person 2 is the youngest.');
  } else i                    ) {
    print(                    e oldest.');
    print('Person 1 is the youngest.');
  } else {
    print('Both persons are of the same age.');
  }
}
```

Type: String

Output:

```
Both persons are of the same age.

Exited.
```

```
Person 2 is the oldest.
Person 1 is the youngest.

Exited.
```

```
Person 1 is the oldest.
Person 2 is the youngest.

Exited.
```

Question 3:

Code:

```
void main() {
  int numberOfClassesHeld = 16;
  int numberOfClassesAttended = 10;
  double attendancePercentage =
      (numberOfClassesAttended / numberOfClassesHeld) * 100;
  print('Percentage of classes attended: $attendancePercentage%');
  if (attendancePercentage >= 75) {
    print('Student is allowed to sit in the exam.');
  } else {
    print('Student is not allowed to sit in the exam due to low attendance.');
  }
}
```

Output:

```
Percentage of classes attended: 62.5%
Student is not allowed to sit in the exam due to low attendance.

Exited.
```

Question 4:

Code:

```
void main() {
double temperatureCelsius = 33.6;
  double temperatureFahrenheit = (temperatureCelsius * 9/5) + 32;
  print('Temperature in Fahrenheit: $temperatureFahrenheit°F');
}
```

Output:

```
Temperature in Fahrenheit: 92.48°F

Exited.
```

Question 5:

Code:

```
void main() {
  double temperature = 42;
  if (temperature < 0) {
    print('Freezing weather');
  } else if (temperature >= 0 && temperature <= 10) {
    print('Very Cold weather');
  } else if (temperature > 10 && temperature <= 20) {
    print('Cold weather');
  } else if (temperature > 20 && temperature <= 30) {
    print('Normal in Temp');
  } else if (temperature > 30 && temperature <= 40) {
    print('It\'s Hot');
  } else {
    print('It\'s Very Hot');
  }
}
```

```
void main() {
  double temperature = 22;
  if (temperature < 0) {
    print('Freezing weather');
  } else if (temperature >= 0 && temperature <= 10) {
    print('Very Cold weather');
  } else if (temperature > 10 && temperature <= 20) {
    print('Cold weather');
  } else if (temperature > 20 && temperature <= 30) {
    print('Normal in Temp');
  } else if (temperature > 30 && temperature <= 40) {
    print('It\'s Hot');
  } else {
    print('It\'s Very Hot');
  }
}
```

Output:

```
It's Very Hot

Exited.
```

```
 Normal in Temp

 Exited.
```

Question 6:

Code:

```dart
void main() {
  String alphabet = 'c';
    if (alphabet == 'a' || alphabet == 'e' || alphabet == 'i' || alphabet == 'o' || alphabet == 'u') {
      print('$alphabet is a vowel.');
    } else {
      print('$alphabet is a consonant.');
    }
  }
```

```dart
void main() {
  String alphabet = 'a';
    if (alphabet == 'a' || alphabet == 'e' || alphabet == 'i' || alphabet == 'o' || alphabet == 'u') {
      print('$alphabet is a vowel.');
    } else {
      print('$alphabet is a consonant.');
    }
  }
```

Output:

```
c is a consonant.

Exited.
```

```
a is a vowel.

Exited.
```

Question 7:

Code:

```dart
import 'dart:math';
Run | Debug
void main() {
  double number = 25;
  double squareRoot = sqrt(number);
  print('Square root of $number is: $squareRoot');
}
```

```dart
import 'dart:math';
Run | Debug
void main() {
  double number = 49;
  double squareRoot = sqrt(number);
  print('Square root of $number is: $squareRoot');
}
```

Output:

```
Square root of 25.0 is: 5.0

Exited.
```

```
Square root of 49.0 is: 7.0

Exited.
```

Question 8:

Code:

```
void main() {
  String studentName = 'Bilal';
  String rollNumber = '182210';
  String studentClass = '16';

  double subject1 = 85.5;
  double subject2 = 92.0;
  double subject3 = 78.5;
  double subject4 = 88.0;
  double subject5 = 94.0;
  double totalMarks = subject1 + subject2 + subject3 + subject4 + subject5;
  double percentage = (totalMarks / (5 * 100)) * 100;

  String grade;
  if (percentage >= 90) {
    grade = 'A';
  } else if (percentage >= 80) {
    grade = 'B';
  } else if (percentage >= 70) {
    grade = 'C';
  } else if (percentage >= 60) {
    grade = 'D';
  } else {
    grade = 'F';
  }
  print('Mark Sheet:');
  print('Student Name: $studentName');
  print('Roll Number: $rollNumber');
  print('Class: $studentClass');
  print('-----------------------------');
  print('Subject 1: $subject1');
  print('Subject 2: $subject2');
  print('Subject 3: $subject3');
  print('Subject 4: $subject4');
  print('Subject 5: $subject5');
  print('-----------------------------');
  print('Total Marks: $totalMarks');
  print('Percentage: ${percentage.toStringAsFixed(2)}%');
  print('Grade: $grade');
}
```

Output:

```
Mark Sheet:
Student Name: Bilal
Roll Number: 182210
Class: 16
-----------------------------
Subject 1: 85.5
Subject 2: 92.0
Subject 3: 78.5
Subject 4: 88.0
Subject 5: 94.0
-----------------------------
Total Marks: 438.0
Percentage: 87.60%
Grade: B

Exited.
```

Question 9:

Code:

```
void main() {
  int number = 14;
  if (number % 2 == 0) {
    if (number % 5 == 0) {
      print('$number is even and divisible by 5.');
    } else {
      print('$number is even but not divisible by 5.');
    }
  } else {
    if (number % 7 == 0) {
      print('$number is odd and divisible by 7.');
    } else {
      print('$number is odd but not divisible by 7.');
    }
  }
}
```

```
void main() {
  int number = 21;
  if (number % 2 == 0) {
    if (number % 5 == 0) {
      print('$number is even and divisible by 5.');
    } else {
      print('$number is even but not divisible by 5.');
    }
  } else {
    if (number % 7 == 0) {
      print('$number is odd and divisible by 7.');
    } else {
      print('$number is odd but not divisible by 7.');
    }
  }
}
```

Output:

```
14 is even but not divisible by 5.

Exited.
```

```
21 is odd and divisible by 7.

Exited.
```

Question 10:

Code:

```dart
import 'dart:io';
Run | Debug
void main() {
  stdout.write('Enter the first number: ');
  double num1 = double.parse(stdin.readLineSync()!);

  stdout.write('Enter the second number: ');
  double num2 = double.parse(stdin.readLineSync()!);

  stdout.write('Enter the third number: ');
  double num3 = double.parse(stdin.readLineSync()!);
  double greatestNumber;
  if (num1 >= num2 && num1 >= num3) {
    greatestNumber = num1;
  } else if (num2 >= num1 && num2 >= num3) {
    greatestNumber = num2;
  } else {
    greatestNumber = num3;
  }
  double lowestNumber;
  if (num1 <= num2 && num1 <= num3) {
    lowestNumber = num1;
  } else if (num2 <= num1 && num2 <= num3) {
    lowestNumber = num2;
  } else {
    lowestNumber = num3;
  }
  print('Greatest Number: $greatestNumber');
  print('Lowest Number: $lowestNumber');
}
```

Output:

```
Enter the first number: 21
Enter the second number: 144
Enter the third number: 17
Greatest Number: 144.0
Lowest Number: 17.0
```