

***ASSIGNMENT No***: 1

***COURSE*** : FLUTTER

***SUBMITTED TO***: Sir Bilal Rehman

***NAME:*** M. Jazeb Javed

***STUDENT-ID:*** Flutter-129766

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**ASSIGNMENT SOLUTION CODE**

import 'dart:io';

import 'dart:math';

void main(){

// Question 1

  int length = 5;

  int breadth = 6;

  if( length == breadth){

    print("It's a Square");

  }

  else{

    print("It's a Rectangle");

  }

// Question 2

  num age1 = 15;

  num age2 = 17;

  if(age1 > age2){

      print("Person 1 is Oldest");

      print("Person 2 is Youngest");

  }

  else if(age1 < age2){

      print("Person 2 is Oldest");

      print("Person 1 is Oldest");

  }

  else{

      print("Both have same age");

  }

// Question 3

  int class\_total = 16;

  int class\_attended = 10;

  num attendence\_percent = (class\_attended/class\_total) \* 100;

  print("$attendence\_percent %");

  if(attendence\_percent >= 75){

    print("He/She is allowed to sit in the exams");

  }

  else{

    print("He/She is not allowed to sit in the exams");

  }

// Question 4

  int year = 2023;

  if (year % 4 == 0){

    print("$year is a leap year");

  }

  else{

    print("$year is not a leap year");

  }

// Question 5

  num temp = 42;

  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 In Temp");

  }

  else if( temp >= 30 && temp < 40){

    print("It's Hot");

  }

  else{

    print("It's Very hOT");

  }

// Question 6

String alpha = 'e';

if( alpha == 'a' || alpha == 'A' || alpha == 'e' || alpha == 'E' || alpha == 'i' || alpha == 'I' || alpha == 'o' || alpha == 'O' || alpha == 'u' || alpha == 'U'){

  print("$alpha is a vowel");

}

else{

  print("$alpha is a consonant");

}

// Question 7

  stdout.write("Enter Customer ID: ");

  String customer\_id = stdin.readLineSync()!;

  stdout.write("Enter Customer Name: ");

  int customer\_name = int.parse(stdin.readLineSync()!);

  stdout.write("Enter no. of units used: ");

  num units\_used= int.parse(stdin.readLineSync()!);

  num charges;

  if(units\_used < 200){

    charges = 1.20;

  }

  else if(units\_used >=200 && units\_used < 400){

    charges = 1.50;

  }

  else if(units\_used >=400 && units\_used < 600){

    charges = 1.80;

  }

  else{

    charges = 2.00;

  }

  num bill = units\_used \* charges;

  // Output

  print("\n|----------- ELECTRICITY BILL ------------|\n");

  print("Customer IDNO: $customer\_id");

  print("Customer Name: $customer\_name");

  print("Unit Consumed: $units\_used");

  print("Amount Charges @Rs. $charges per unit : $bill");

  print("Net Bill Amount : $bill");

// Question 8

// Get student details

  stdout.write("Enter student name: ");

  String name = stdin.readLineSync()!;

  stdout.write("Enter roll number: ");

  int rollNumber = int.parse(stdin.readLineSync()!);

  stdout.write("Enter class: ");

  String className = stdin.readLineSync()!;

  // Get marks for 5 subjects

  stdout.write("Enter marks for Subject 1: ");

  int subject1 = int.parse(stdin.readLineSync()!);

  stdout.write("Enter marks for Subject 2: ");

  int subject2 = int.parse(stdin.readLineSync()!);

  stdout.write("Enter marks for Subject 3: ");

  int subject3 = int.parse(stdin.readLineSync()!);

  stdout.write("Enter marks for Subject 4: ");

  int subject4 = int.parse(stdin.readLineSync()!);

  stdout.write("Enter marks for Subject 5: ");

  int subject5 = int.parse(stdin.readLineSync()!);

  // Calculate total marks and percentage

  int totalMarks = subject1 + subject2 + subject3 + subject4 + subject5;

  double percentage = (totalMarks / 500) \* 100;

  // Determine grade based on percentage

  String grade;

  if (percentage >= 90) {

    grade = "A+";

  } else if (percentage >= 80) {

    grade = "A";

  } else if (percentage >= 70) {

    grade = "B";

  } else if (percentage >= 60) {

    grade = "C";

  } else if (percentage >= 50) {

    grade = "D";

  } else {

    grade = "Fail";

  }

  // Print marksheet

  print("\n|----------- MARKSHEET------------|\n");

  print("Student Name: $name");

  print("Roll Number: $rollNumber");

  print("Class: $className");

  print("Total Marks: $totalMarks");

  print("Percentage: ${percentage.toStringAsFixed(2)}%");

  print("Grade Obtained: $grade");

// Question 9

int number = 4;

if(number % 2 == 0){

  print("$number is an even number and");

  if(number % 5 == 0 ){

  print("$number is divisible by 5");

  }

  else{

    print("$number is not divisible by 5");

  }

}

else{

  print("$number is odd number and");

  if(number % 7 == 0 ){

  print("$number is divisible by 7");

  }

  else{

    print("$number is not divisible by 7");

  }

}

// Question 10

stdout.write("Enter first number : ");

num num1 = int.parse(stdin.readLineSync()!);

stdout.write("Enter first number : ");

num num2 = int.parse(stdin.readLineSync()!);

stdout.write("Enter first number : ");

num num3 = int.parse(stdin.readLineSync()!);

num greatest;

num lowest;

if(num1 > num2 && num1 > num3){

  greatest = num1;

  if(num2 > num3){

    lowest = num3;

  }

  else{

    lowest = num2;

  }

}

else if(num2 > num1 && num2 > num3){

  greatest = num2;

  if(num1 > num3){

    lowest = num3;

  }

  else{

    lowest = num1;

  }

}

else{

  greatest = num3;

  if(num1 > num2){

    lowest = num2;

  }

  else{

    lowest = num1;

  }

}

print("Gretest = $greatest \nLowest = $lowest");

// Question 11

num x = 16;

num root = pow(x, 1/2);

print("Root of $x is $root");

// Question 12

num centigrade = 35.5;

num fahrenheit = (centigrade \* (9/5)) + 32;

print("Centigrade = $centigrade \nFahrenheit = $fahrenheit");

}