LAB-2

# AIM : VARIABLES, DATA TYPES AND CONTROL STRUCTURES

# Prac-1 : Temprature Conversion

# Code :

# import 'dart:io';

# import 'package:lab\_2/lab\_2.dart' as lab\_2;

# double celciusToFehranhight(double celcius) {

# double feh = (celcius \*  (9/5)) + 32;

# return feh;

# }

# double fehranhightToCelcius(double fehrenhight) {

# double cel = (fehrenhight - 32) \* (5/9);

# return cel;

# }

# void Practical1() {

# double ans;

# 

# while(true) {

# print(Process.runSync("cls", [], runInShell: true).stdout);

# 

# print("\*\*\*\*\* Select \*\*\*\*\*");

# print("1. Celcius to Fehranhight");

# print("2. Fehranhight to Celcius");

# stdout.write("Enter choice : ");

# int choice = int.parse(stdin.readLineSync()!);

# switch(choice) {

# case 1 : {

# stdout.write("Enter Celcius : ");

# double celcius = double.parse(stdin.readLineSync()!);

# ans = lab\_2.celciusToFehranhight(celcius);

# print("Fehrenhight = $ans");

# break;

# }

# case 2 : {

# stdout.write("Enter Fehrenhight : ");

# double fehrenhight = double.parse(stdin.readLineSync()!);

# ans = lab\_2.fehranhightToCelcius(fehrenhight);

# print("Celcius = $ans");

# break;

# }

# default : {

# print("Enter valid choice !");

# }

# }

# }

# }

# Output :

# 

# Prac-2 : Number Guesing Game

# Code :

# import 'dart:io';

# import 'dart:math';

# void main(List<String> arguments) {

# int guess;

# Random random = Random();

# int ans = random.nextInt(100);

# do {

# print("Enter your Guess : ");

# guess = int.parse(stdin.readLineSync()!);

# if(guess < ans) {

# print("Too low!");

# } else if(guess > ans) {

# print("Too High!");

# }

# } while(guess != ans);

# print("You got it!");

# }

# Output :

# 

# Prac-3 : Mounty Hall

# Code :

# import 'dart:math';

# void main(List<String> arguments) {

# const int trails = 1000000;

# int correct = 0;

# Random rand = Random();

# 

# for(int i = 0; i < trails; i++) {

# int randDoor = rand.nextInt(4);

# int guess = 1;

# int eliminated;

# if(randDoor == 2) {

# eliminated = 3;

# } else if(randDoor == 3) {

# eliminated = 2;

# } else {

# eliminated = rand.nextInt(2) + 2;

# }

# if(eliminated == 2) {

# guess = 3;

# } else if(eliminated == 3) {

# guess = 2;

# }

# if(guess == randDoor) {

# correct++;

# }

# }

# print("The percentage of correct guesses was ${(correct / trails) \* 100}%");

# }

# Output :

# 

# Prac-4 : Pi Calculator

# Code :

# *// ignore\_for\_file: constant\_identifier\_names*

# import 'dart:math';

# void main(List<String> arguments) {

# const int iterations = 100000;

# double series = 1.0;

# double denominator = 3.0;

# double negate = -1.0;

# const double PI = 3.1415926535897932;

# for(int i = 0; i < iterations; i++) {

# series += (negate \* (1 / denominator));

# denominator += 2.0;

# negate \*= -1.0;

# }

# double pi = 4 \* series;

# print("We calculated pi as $pi");

# print("The real pi is $PI");

# print("We were off by ${PI - pi}");

# }

# Output :

# 

# Prac-5 : Math Test

# Code :

# import 'dart:io';

# import 'dart:math';

# void main(List<String> arguments) {

# Random rand = Random();

# int correctAnswer = 0, userAnswer, opr1, opr2, operation;

# int questionAttempted = 0, numCorrect = 0;

# 

# while(true) {

# operation = rand.nextInt(3);

# opr1 = rand.nextInt(11);

# opr2 = rand.nextInt(11);

# switch(operation) {

# case 0 :

# print("$opr1 + $opr2 = ");

# correctAnswer = opr1 + opr2;

# break;

# case 1:

# print("$opr1 + $opr2 = ");

# correctAnswer = opr1 + opr2;

# break;

# case 2:

# print("$opr1 + $opr2 = ");

# correctAnswer = opr1 + opr2;

# break;

# }

# String temp = stdin.readLineSync()!;

# try {

# userAnswer = int.parse(temp);

# } on FormatException {

# print("Thanks for playing!");

# print("You got $numCorrect out of $questionAttempted correct.");

# break;

# }

# if(userAnswer == correctAnswer) {

# numCorrect++;

# print("Correct!");

# } else {

# print("Wrong!");

# }

# questionAttempted++;

# }

# }

# Output :

# 