EXERCISE#1

QUESTION#1

Create a basic Scratch application that prompts the user to input their First Name and Last Name. Once entered, the app should display the message "Hello Mr. First Name Last Name."

QUESTION#2

Ask the user to input two numbers. Once you have these two numbers, calculate the sum of these numbers and find the square of that sum. Finally, display the result, which is the square of the sum of the two numbers.

QUESTION#3

Sara has a cylindrical water tank with a radius of 5 meters and a height of 8 meters. Calculate and output the volume of the water tank using Scratch. (Hint V = π * r^2 * h)

QUESTION#4

A gadget store is offering a discount on a high-tech gadget. The gadget's original price is 2000 Rs. The store is giving a 15% discount on this gadget. Using Scratch, calculate and print the discounted price of the gadget..

QUESTION#5

An ice cream seller sets up shop in four different areas of Karachi: Clifton Corner, Saddar Square, Gulshan Glades, and Korangi Crossing. The price of each ice cream is 150 Rs. In Clifton Corner, 35 ice creams are sold; in Saddar Square, 50 are sold; in Gulshan Glades, 20 are sold; and in Korangi Crossing, 45 are sold. To calculate the total sales, the seller adds up the ice creams sold in each area and computes the total money earned.

QUESTION#6

Imagine you're developing a drone for navigating around obstacles. Create a Scratch program that takes the drone's position (x1, y1) and the obstacle's position (x2, y2) as input. Then, use the 2-dimensional distance formula, D = √((x2 - x1)^2 + (y2 - y1)^2), to calculate and display the distance between the drone and the obstacle. This will help the drone decide whether it can safely fly over the obstacle and avoid collisions.