SlipNo.1& 12: Write a program to sense the available networks using Arduino

```
#include < ESP8266WiFi.h>  // For ESP32, use <ESP8266WiFi.h>
void setup() {
 Serial.begin(115200);
 WiFi.mode(WIFI_STA);  // Set the Wi-Fi mode to station (client)
 Serial.println("Scanning for Wi-Fi networks...");
 // Start the scan for Wi-Fi networks
 int networkCount = WiFi.scanNetworks();
 Serial.println("Scan complete.");
 if (networkCount == 0) {
  Serial.println("No networks found.");
 } else {
  Serial.print(networkCount);
  Serial.println(" networks found:");
  for (int i = 0; i < networkCount; i++) {
   Serial.print(i + 1);
   Serial.print(": ");
   Serial.print(WiFi.SSID(i));       // Network name (SSID)
   Serial.print(" | Signal Strength: ");
   Serial.print(WiFi.RSSI(i));       // Signal strength (in dBm)
   Serial.print(" dBm | Encryption: ");
   Serial.println(WiFi.encryptionType(i)); // Encryption type
  } } }
```

SlipNo.20:

Write python programs on Pi like:

a) Read your name and print Hello message with name

```
name = input("Enter your name: ")
print("Hello", name + "!")
```

b) Read two numbers and print their sum, difference, product and division.

```
a = float(input("Enter first number: "))
b = float(input("Enter second number: "))
print("Sum =", a + b)
print("Difference =", a - b)
print("Product =", a * b)

if b != 0:
    print("Division =", a / b)
else:
    print("Division not possible (second number is zero)")
```

c) Word and character count of a given string.

```
text = input("Enter a string: ")
char_count = len(text)

word_count = len(text.split())

print("Total Characters =", char_count)
print("Total Words =", word_count)
```

d) Area of a given shape (rectangle, triangle and circle) reading shape and appropriate values from standard input.

```
import math
shape = input("Enter shape (rectangle / triangle / circle): ").lower()
if shape == "rectangle":
    length = float(input("Enter length: "))
    width = float(input("Enter width: "))
    area = length * width
    print("Area of Rectangle =", area)

elif shape == "triangle":
    base = float(input("Enter base: "))
    height = float(input("Enter height: "))
    area = 0.5 * base * height
```

```
    print("Area of Triangle =", area)

elif shape == "circle":
    radius = float(input("Enter radius: "))
    area = math.pi * radius * radius
    print("Area of Circle =", area)

else:
    print("Invalid shape entered")
```