**LAB REPORT: 9**

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**Part A: Inter-Arduino transfer of strings**

Aim/Objective of the experiment: To verify the transfer of data (string) between two Arduinos

Electronic components used: 2 Arduino Boards, wires.

Reference Circuit:

Diagram, schematic

Description automatically generated

Procedure:

1. The RX of one Arduino is connected to the TX of the other Arduino and vice-versa.
2. The Arduinos are grounded commonly.
3. Appropriate codes are written to verify the transfer of data (string) between two Arduinos

The code for sender Arduino:

char c[19]="no more dsm lab :(";

void setup()

{

Serial.begin(9600);

}

void loop()

{

Serial.write(c,18);

delay(1000);

}

The code for receiver Arduino:

char str[19];

void setup()

{

Serial.begin(9600);

}

void loop()

{

Serial.readBytes(str,18);

Serial.println(str);

delay(1000);

}

Conclusion:

We observe that the receiver Arduino indeed prints the string sent from the sender Arduino.

So, the transfer of data (string) between two Arduinos.

TinderCAD simulation:

<https://www.tinkercad.com/things/6IawblB9kan-lab-9-string-transfer/>

**Part B: Inter-Arduino transfer of integers**

Aim/Objective of the experiment: To verify the transfer of data (integer) between two Arduinos

Electronic components used: 2 Arduino Boards, wires.

Reference Circuit:

Diagram, schematic

Description automatically generated

Procedure:

1. The RX of one Arduino is connected to the TX of the other Arduino and vice-versa.
2. The Arduinos are grounded commonly.
3. Appropriate codes are written to verify the transfer of data (integer) between two Arduinos

The code for sender Arduino:

int num;

void setup()

{

num=12345;

Serial.begin(9600);

}

void loop()

{

Serial.println(num);

delay(500);

}

The code for receiver Arduino:

int n;

void setup()

{

n=0;

Serial.begin(9600);

}

void loop()

{

if(Serial.available()>0)

{

n=Serial.parseInt();

Serial.println(n);

}

delay(500);

}

Conclusion:

We observe that the receiver Arduino indeed prints the integer sent from the sender Arduino.

So, the transfer of data (integer) between two Arduinos.

TinderCAD simulation:

<https://www.tinkercad.com/things/71XJYxwhZYm-lab-9-integer-transfer/>