

LAB REPORT: 9

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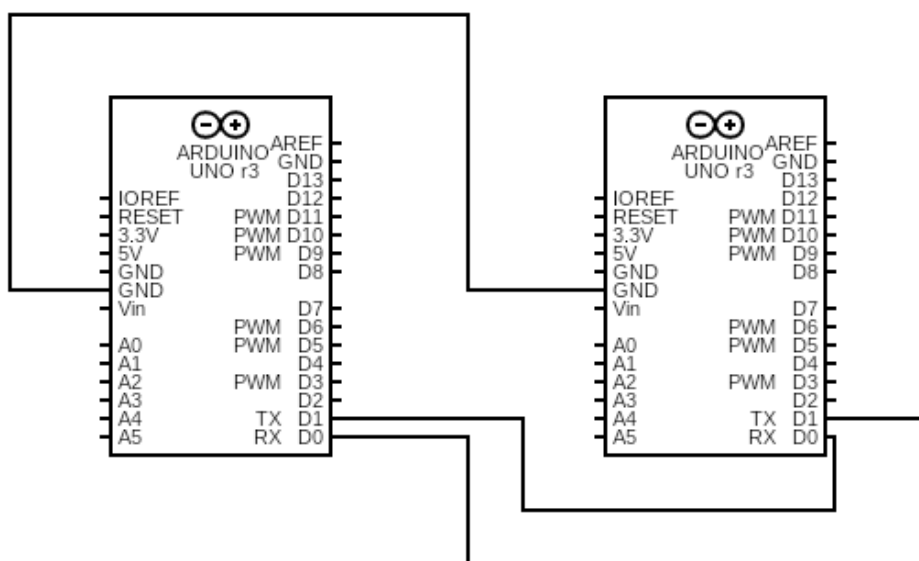
Group: 8

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:



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:

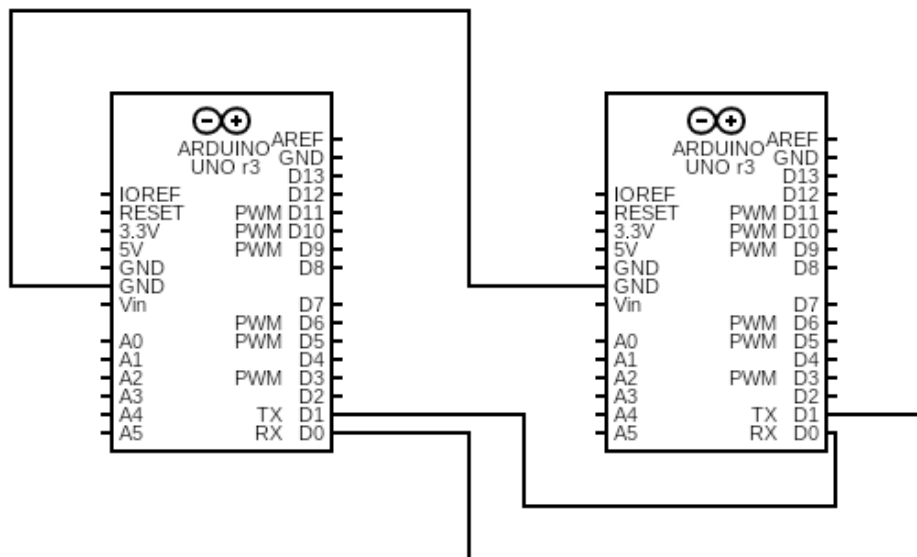
<https://www.tinkercad.com/things/6lawblB9kan-lab-9-string-transfer/>

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:



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/>
