



Lecture (-) hardware serial interface

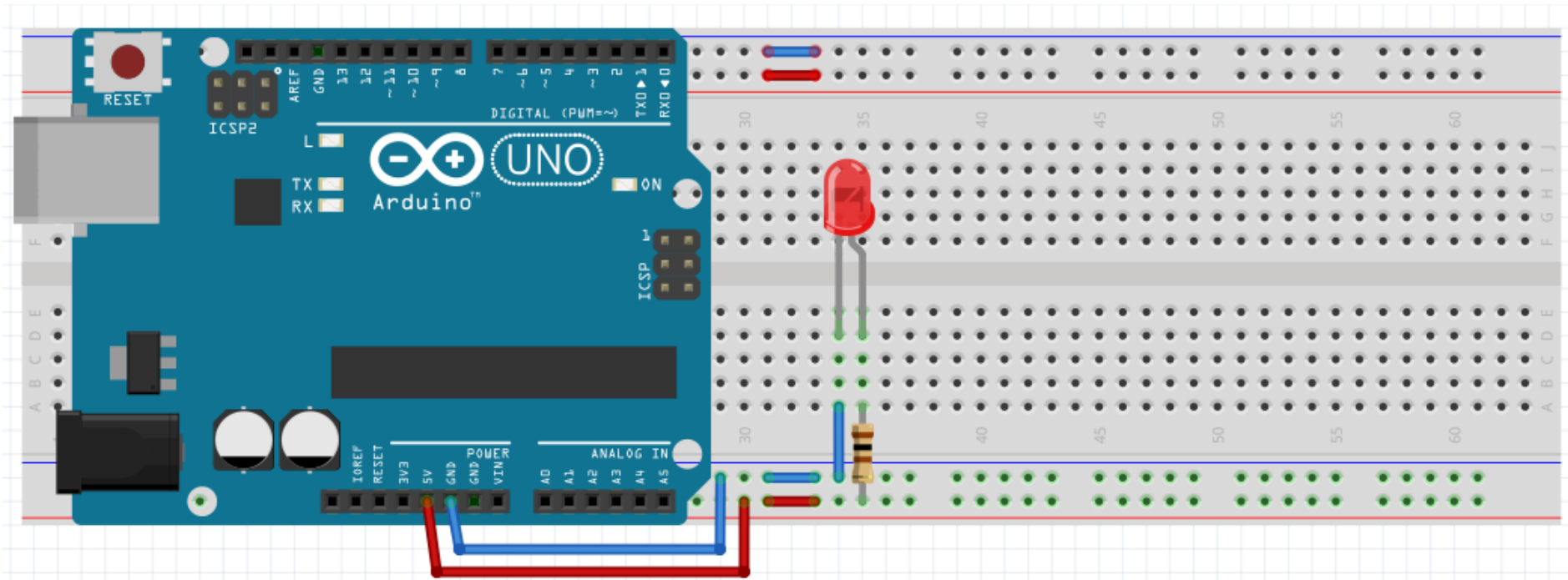
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tasks

- Hardware serial echo
- Hardware serial input monitor and output control

Hardware serial echo



```
int ch=' ';
void setup() {
  // put your setup code here, to run once:

  Serial.begin(9600);

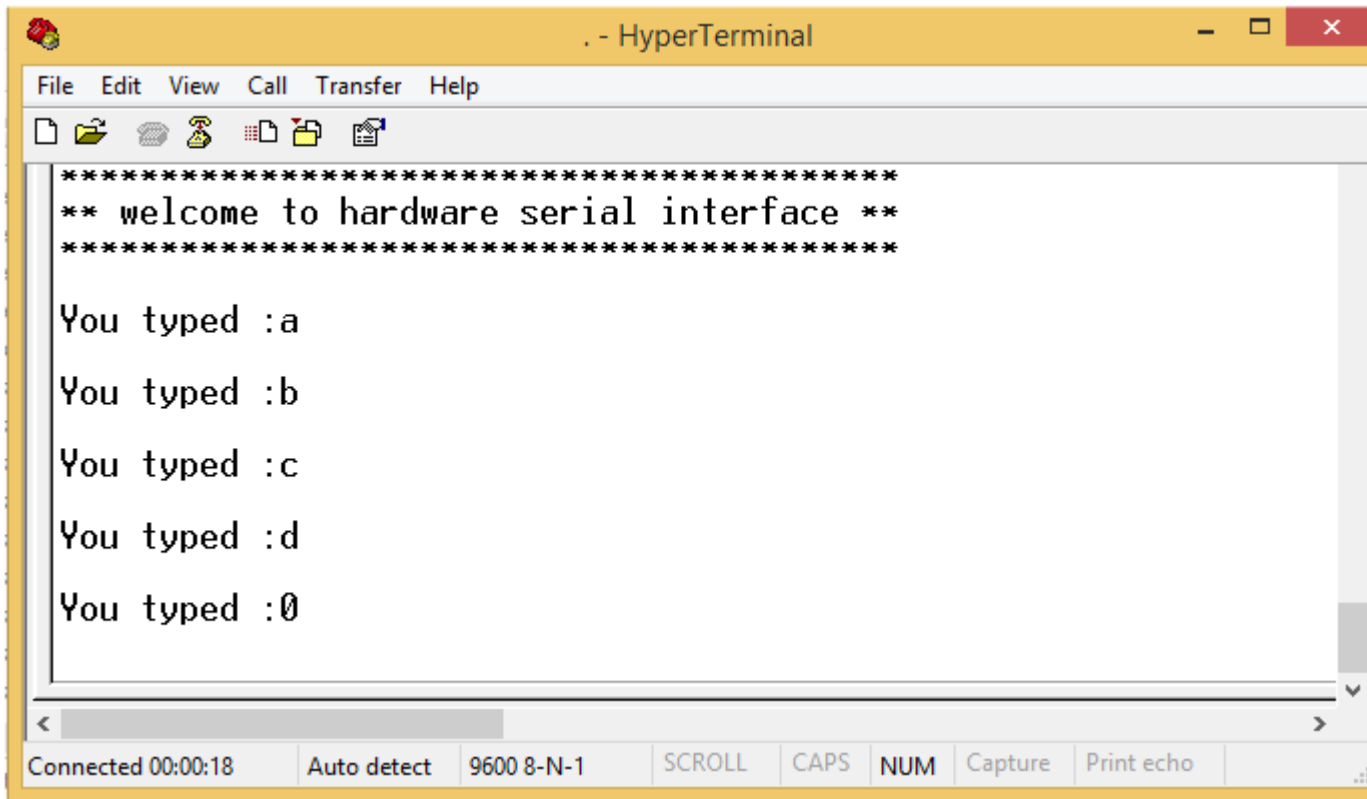
  Serial.println("*****");
  Serial.println("*** welcome to hardware serial interface ***");
  Serial.println("*****");
}

void loop() {
  // put your main code here, to run repeatedly:
  int ch1=' ';

  if(Serial.available())
  {
    ch1=(int)Serial.read();
    if(ch1!=ch)
    {
      ch=ch1;
      Serial.print("\n\rYou typed :");
      Serial.println((char)ch);
    }

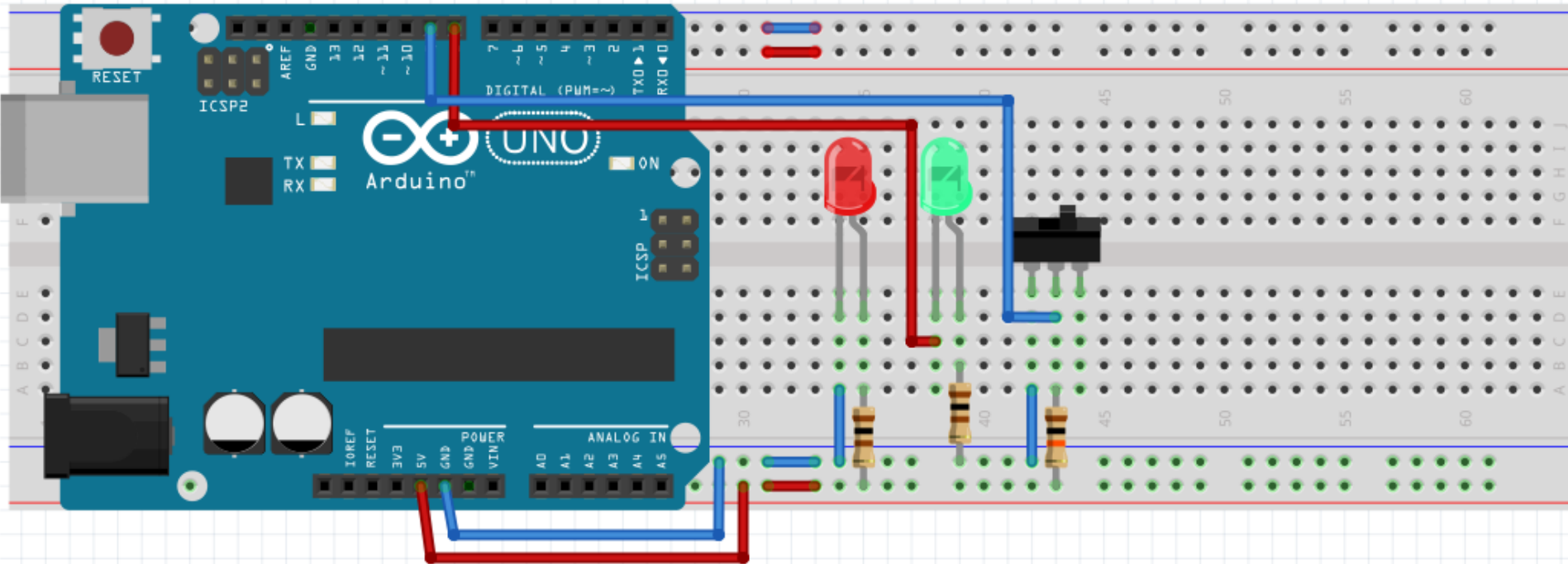
  }

}
```



Hardware serial input monitor and output control

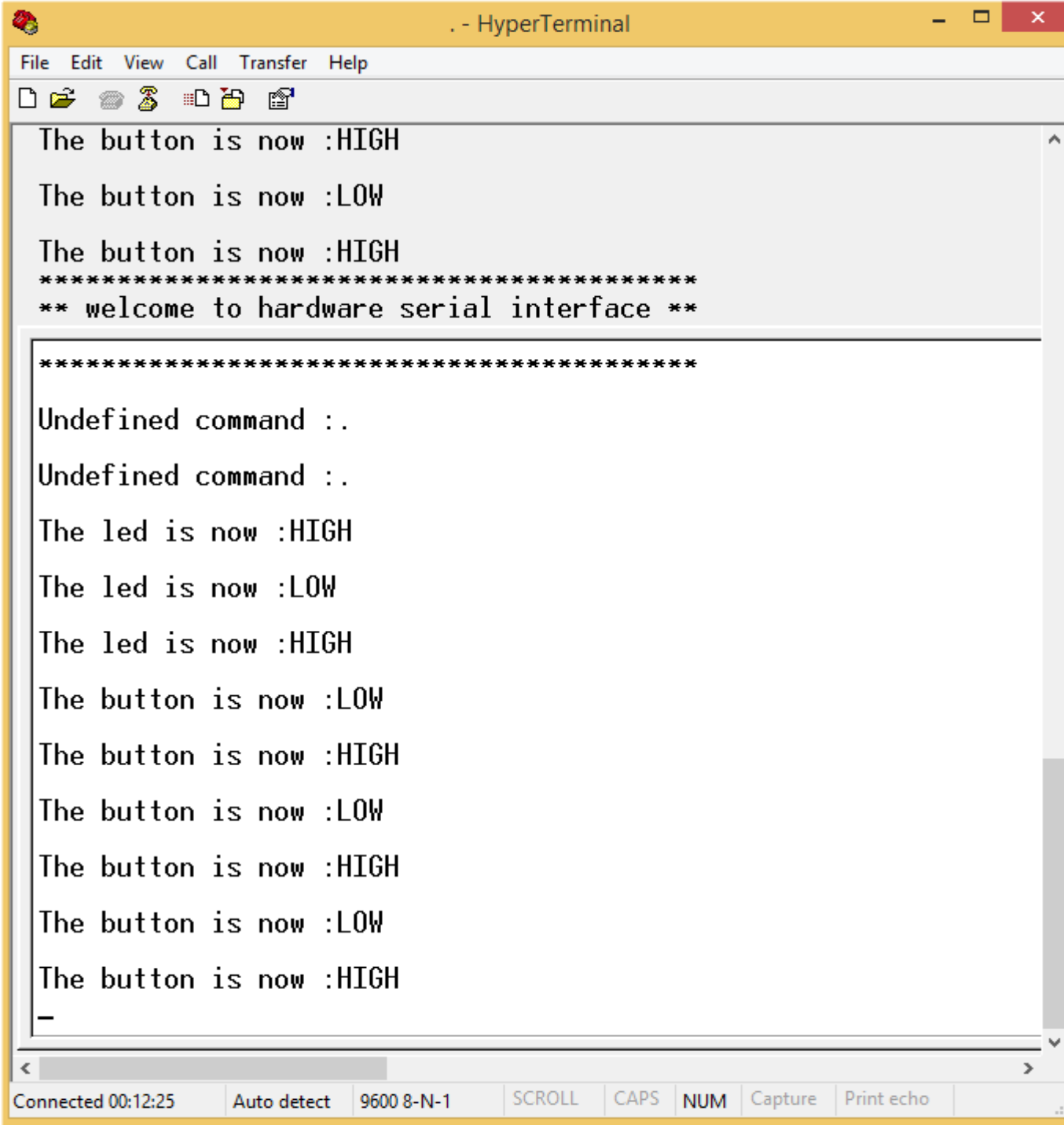
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program

```
// * 8 led
// * 9 button
#define led 8
#define button 9
int led_status=LOW;
int button_status=LOW;
void setup() {
    // put your setup code here, to run once:
    pinMode(button, INPUT);
    pinMode(led,OUTPUT);
    Serial.begin(9600);
    digitalWrite(led,led_status);
    button_status=digitalRead(button);
    Serial.println("*****");
    Serial.println("** welcome to hardware serial interface **");
    Serial.println("*****");
}
```

```
void loop() {
  // put your main code here, to run repeatedly:
  int ch;
  if(Serial.available())
  {
    ch=(int)Serial.read();
    switch(ch)
    {
      case 's': //set led
        if(led_status==LOW) led_status=HIGH;
        else led_status=LOW;
        Serial.print("\n\rThe led is now :");
        if(led_status==LOW)
          Serial.println("LOW");
        else
          Serial.println("HIGH");
        digitalWrite(led,led_status);
        break;
      default:
        Serial.print("\n\rUndefined command :");
        Serial.println((char)ch);
    }
  }
  int val=digitalRead(button);
  if(val!=button_status)
  {
    button_status=val;
    Serial.print("\n\rThe button is now :");
    if(button_status==LOW)
      Serial.println("LOW");
    else
      Serial.println("HIGH");
  }
}
```



Thanks,..
See you next week (ISA),...