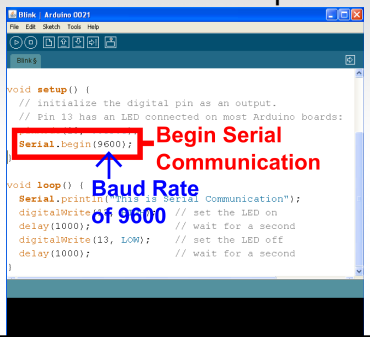
Programming, Serial and Virtual Prototyping

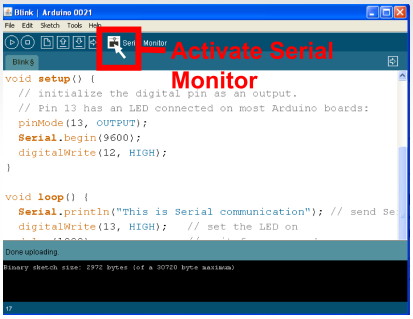
Serial Communication

Serial Communication is the transferring and receiving of information between two machines, the Arduino dedicates pin # 0 to receiving information and pin 1 to transferring information

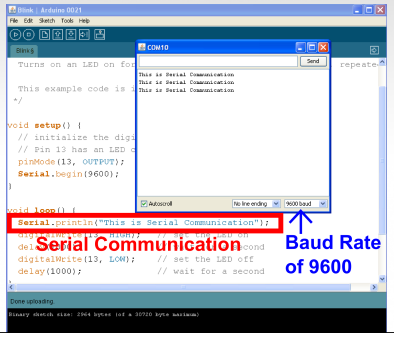
Serial in Setup

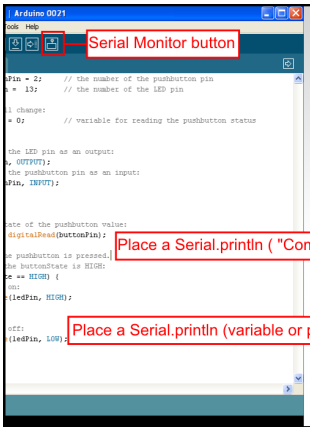


Serial Monitor



Serial Communication





Serial Activity with Circuit 7

- Communication
- Troubleshooting circuits
- Debugging Code

Serial Communication: Serial Setup

```
void setup ( ) {
Serial.begin ( 9600 ) ;
}
```

In this case the number 9600 is the baudrate at which the computer and Arduino communicate

Serial Communication: Sending a Message

```
void loop ( ) {
Serial.print ( “Constructivism & “ ) ;

Serial.println ( “Mechatronics” ) ;
}
```

Serial Communication: Serial Debugging

```
void loop ( ) {
int xVar = 10 ;
Serial.print ( “Variable xVar is “ ) ;
Serial.println ( xVar ) ;
}
```

Serial Communication: Serial Troubleshooting

```
void loop ( ) {
Serial.print ( “Digital pin 9 reads “ ) ;
Serial.println ( digitalRead ( 9 ) ) ;
}
```

Serial Communication: Circuit 7 code

```
void loop ( ) {
buttonState = digitalRead(inputPin);
if (buttonState== HIGH){
        digitalWrite (ledPin, LOW)
        }
        else      {
        digitalWrite(ledPin, HIGH);
        Serial.print (“button state is “);
        Serial.println ( buttonState );
        }
}
```

Questions?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