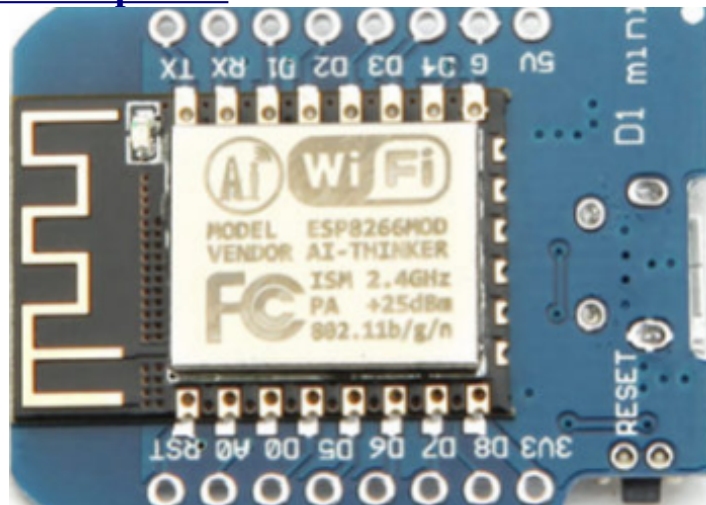


## Start med ESP8266

I dette tilfælde en D1Mini NodeMcu 4 Mbytes Lua WIFI Development Board. Det blev købt hos et internetfirma og kostede 55.00 Kroner. Desuden skal Du have et USB kabel med en micro USB i den anden ende. Igennem dette kabel får enheden strøm. Jeg måtte købe det hos et telefonfirma i Ballerup. Du starter med at hente opstartprogrammerne igennem nettet. Da jeg lige nu kører Windows 10 starter jeg Arduino exe filen som indeholder alt til enhederne.

Enheden ses på adressen

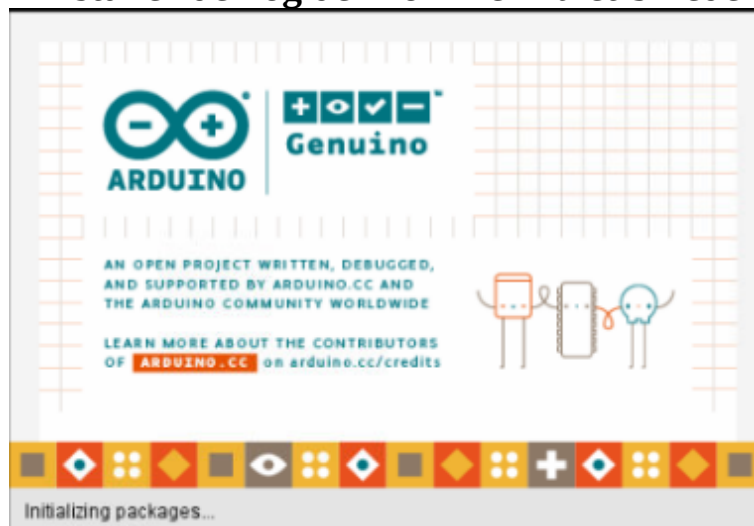
<https://arduinotech.dk/shop/d1-mini-nodemcu-4m-bytes-lua-wifi-development-boards-esp8266/>



Den tilslutter jeg så min usb port Så downloader jeg Arduino 1.8.5

<https://arduino.cc/en/main/software>

Installer den og der kommer nu et billede



Her startes så systemet og hos mig endte den med et blink program

Her drejer det sig om en lille blå led der kan bringes til at blinke med forskellig hastighed. I startprogrammet met et sekund lys og et sekund pause.

Programmet ser sådan ud.

```
/*
```

```
Blink
```

```
Turns an LED on for one second, then off for one second, repeatedly.
```

```
Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
```

```
it is attached to digital pin 13, on MKR1000 on pin 6. LED_BUILTIN is set to
```

```
the correct LED pin independent of which board is used.
```

```
If you want to know what pin the on-board LED is connected to on your Arduino
```

```
model, check the Technical Specs of your board at:
```

```
https://www.arduino.cc/en/Main/Products
```

```
modified 8 May 2014
```

```
by Scott Fitzgerald
```

```
modified 2 Sep 2016
```

```
by Arturo Guadalupi
```

```
modified 8 Sep 2016
```

```
by Colby Newman
```

```
This example code is in the public domain.
```

```
http://www.arduino.cc/en/Tutorial/Blink
```

```
*/
```

```
// the setup function runs once when you press reset or power the board
```

```
void setup() {
```

```
  // initialize digital pin LED_BUILTIN as an output.
```

```
  pinMode(LED_BUILTIN, OUTPUT);
```

```
}
```

```
// the loop function runs over and over again forever
```

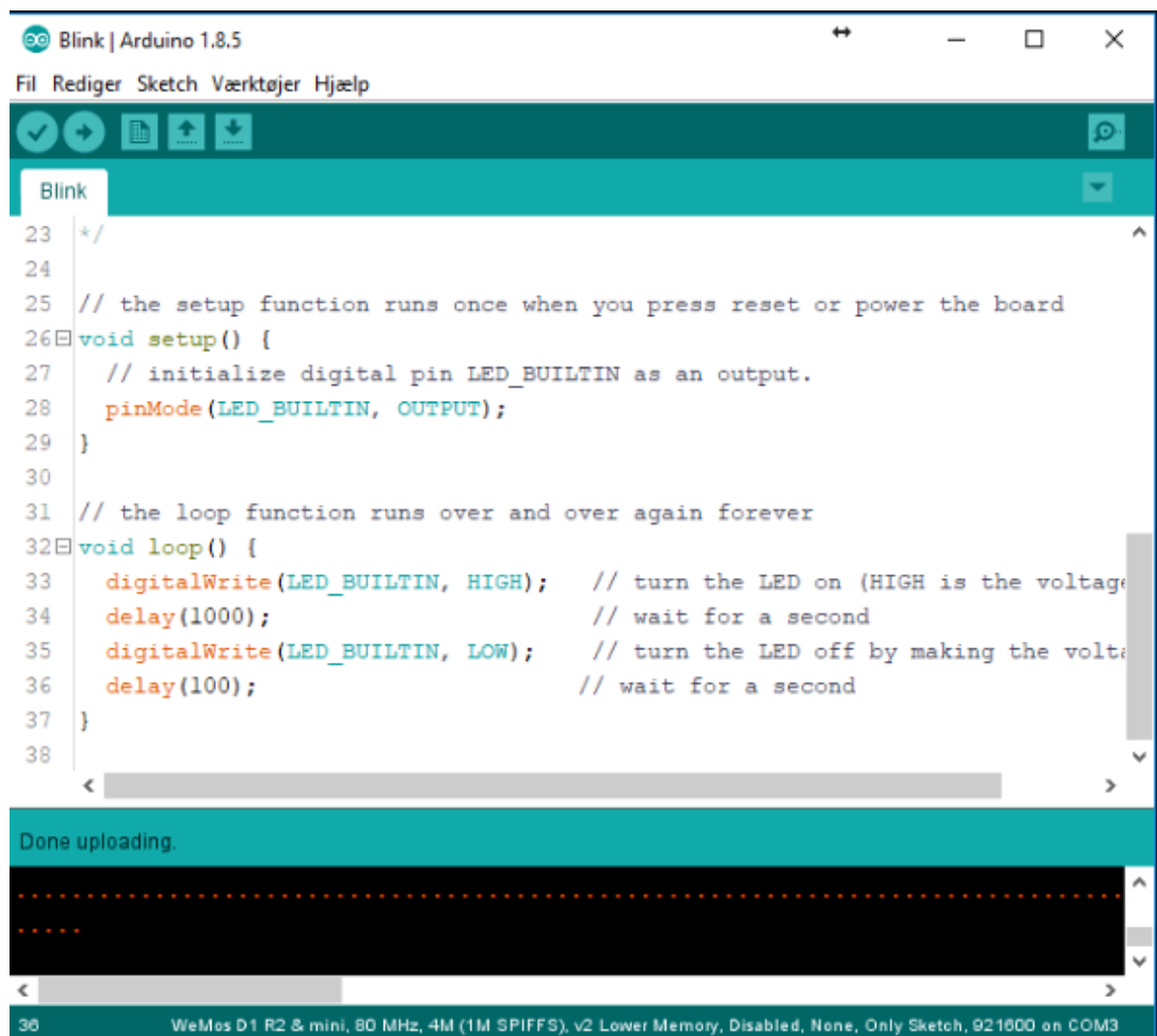
```
void loop() {
```

```
digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the
voltage level)
delay(1000); // wait for a second
digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the
voltage LOW
delay(1000); // wait for a second
}
```

Du ændre det med rødt, og compilerer det med ctrl r

<https://learn.sparkfun.com/tutorials/esp8266-thing-hookup-guide/installing-the-esp8266-arduino-addon>

Boardet jeg skal bruge ved compiling skal hedde WeMos D1 R2 & mini



```
Blink | Arduino 1.8.5
Fil Rediger Sketch Værktøjer Hjælp
Blink
23 */
24
25 // the setup function runs once when you press reset or power the board
26 void setup() {
27   // initialize digital pin LED_BUILTIN as an output.
28   pinMode(LED_BUILTIN, OUTPUT);
29 }
30
31 // the loop function runs over and over again forever
32 void loop() {
33   digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage
34   delay(1000); // wait for a second
35   digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the volta
36   delay(100); // wait for a second
37 }
38
Done uploading.
WeMos D1 R2 & mini, 80 MHz, 4M (1M SPIFFS), v2 Lower Memory, Disabled, None, Only Sketch, 921000 on COM3
```

Det er som jeg ser blink programmet på min windows 10 maskine

