



hogeschool

Overzicht

- 4x dagdeel dinsdag
 - Week 46 – dinsdag 13 november
 - Week 47 – dinsdag 20 november
 - Week 48 – dinsdag 27 november
 - **Week 49 – dinsdag 4 december**
- 10:00 uur – 13:00 uur
- Theorie gedeelte
- Praktisch gedeelte zelf/samen aan de slag

25 jaar internet in Nederland - een kwestie van goed 'netwerken'

✍ Niels Posthumus 🕒 17 november 2013



Mensen op een Duitse computerbeurs in 2005. Foto EPA / Matthias Schrader

Piet Beertema was op 17 november 1988 de allereerste Nederlander die toegang kreeg tot internet. Of eigenlijk tot het NSFnet, zoals het toen nog heette. Vanmiddag om half drie was dat dus precies 25 jaar geleden. Nederland was wereldwijd, na de Verenigde Staten, het tweede land dat werd aangesloten op het internet.

Beertema was systeembeheerder van het [Centrum Wiskunde & Informatica](#) in Amsterdam. Vandaag een kwart eeuw geleden ontving hij een bericht van Stephen Wolff uit de VS. Om 14.28 uur om precies te zijn.

Daarmee lukte het Beertema en zijn collega's, na jarenlange voorbereiding, toegang te krijgen tot het tot dan toe uitsluitend Amerikaanse internet. Het was overigens niet zozeer een technologische voorsprong van Nederland die maakte dat wij alle andere Europese landen voorgingen, maar slechts een kwestie van de juiste contacten binnen de wetenschappelijke netwerkwereld.

Wetenschappers makkelijker laten communiceren



'Tientallen Nederlandse bedrijven getroffen door gijzelsoftware SamSam'

02 december 2018 09:31

Laatste update: 4 uur geleden

263



Tientallen Nederlandse bedrijven zijn de afgelopen maanden getroffen door gijzelsoftware. Het gaat om een uitbraak van SamSam, een geraffineerde vorm van ransomware. Het gevraagde losgeld kan oplopen tot enkele tonnen.

Tientallen ondernemingen zijn daardoor getroffen, zegt cyberbeveiliging Fox-IT tegen persbureau ANP, maar dat is waarschijnlijk nog maar het topje van de ijsberg. Het bedrijf weet namelijk niet hoeveel mensen de gijzeling op een andere manier hebben opgelost, bijvoorbeeld door losgeld te betalen of door de besmetting zelf op te lossen.

Het is niet bekend hoeveel financiële schade SamSam in Nederland heeft aangericht. Fox-IT mag geen namen van getroffen bedrijven noemen, maar zegt dat het gaat om zowel ondernemingen in het midden- en kleinbedrijf als om grotere bedrijven.

Fox-IT weet ook niet hoeveel bedrijven al besmet zijn maar dat zelf nog niet weten. In tegenstelling tot eerdere aanvallen met gijzelsoftware, zoals WannaCry and GandCrab, slaan de hackers niet meteen toe. Ze doen eerst goed onderzoek naar het slachtoffer. Pas daarna vergrendelen ze bestanden en eisen ze losgeld.

Marriott hack hits 500 million Starwood guests

🕒 30 November 2018



Sheraton is one of Marriott's brands

The records of 500 million customers of the hotel group Marriott International have been involved in a data breach.

The hotel chain said the guest reservation database of its Starwood division had been compromised by an unauthorised party.

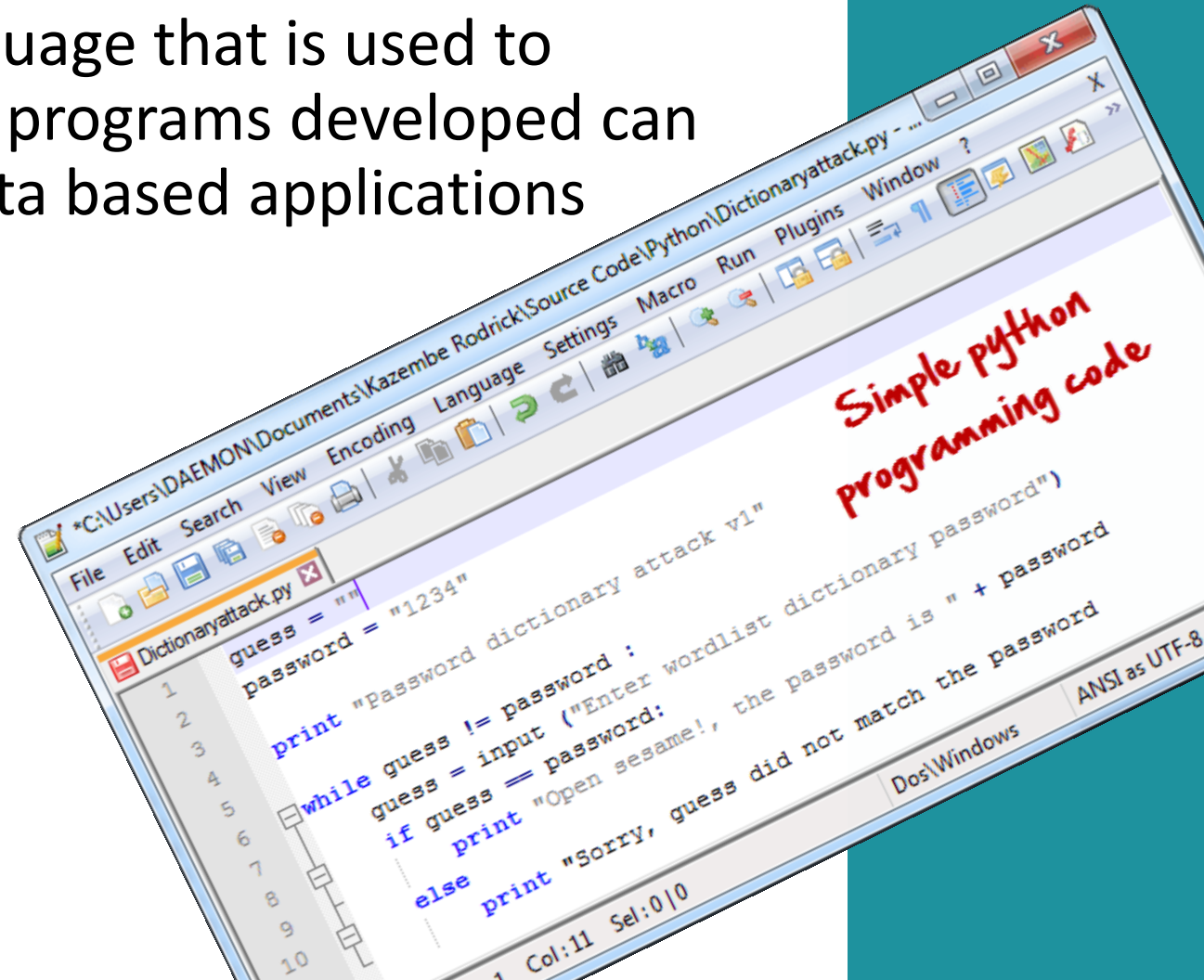
It said an internal investigation found an attacker had been able to access the Starwood network since 2014.

As a hacker, you will need to develop skills that will help you get the job done.

These skills include learning how to program, use the internet, good at solving problems, and taking advantage of existing security tools.

What is a programming language?

- A programming language is a language that is used to develop computer programs. The programs developed can range from operating systems; data based applications through to networking solutions.

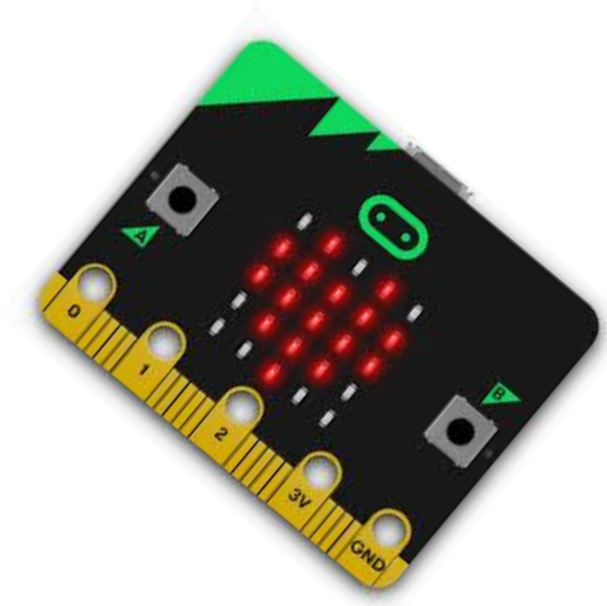


Why should you learn how to program?

Simple programming

- Start with a MicroBit
- HTML with CSS

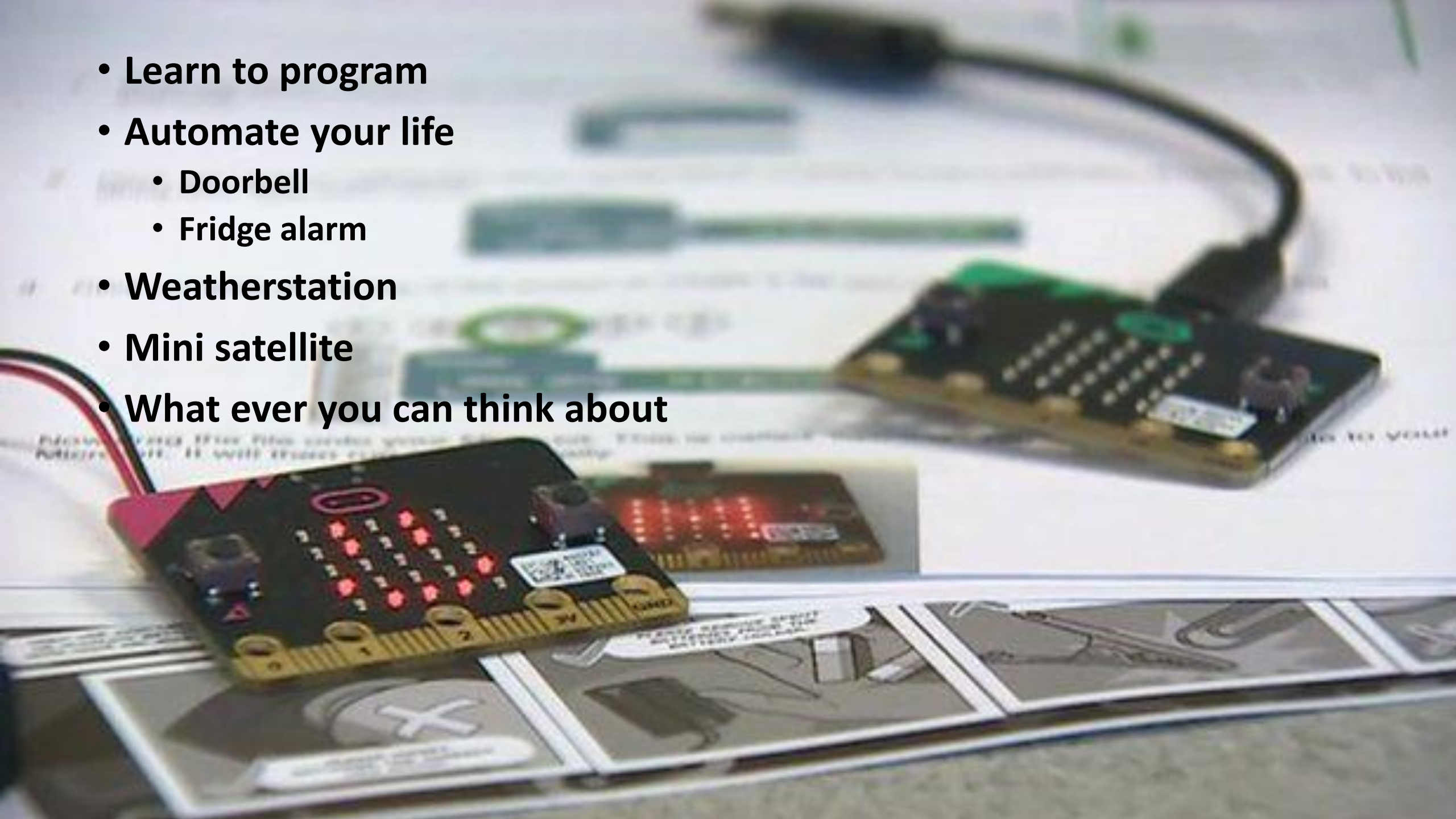
- micro:bit is a tiny programmable computer, designed to make learning and teaching easy and fun!

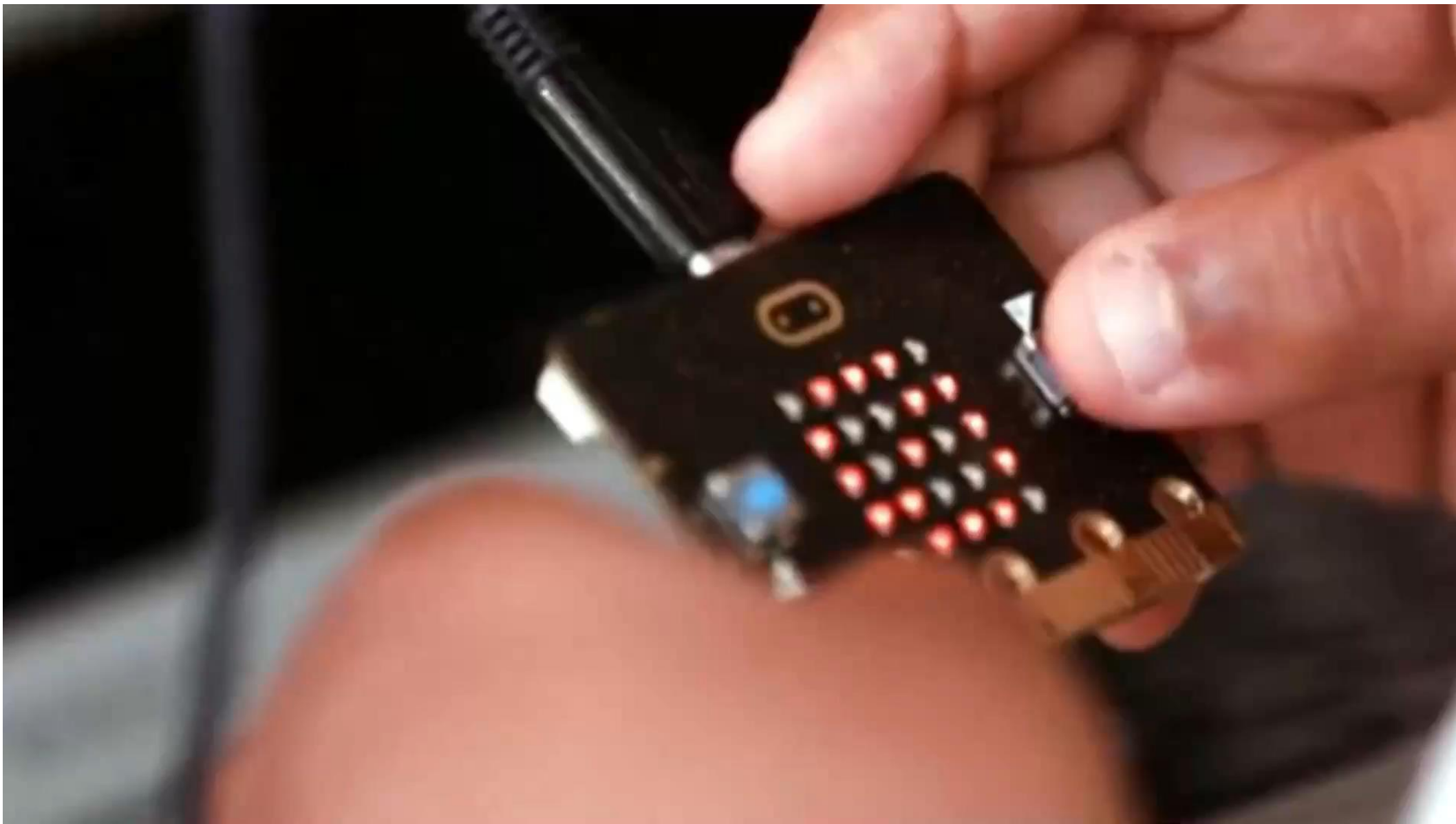


What is a Micro:bit

- Small computer
- Developed by the BBC
- 5x5 Led array
- Buttons
- Bluetooth
- Sensors
 - Light
 - Temperature
 - Motion (3 axis)
 - Compass

- Learn to program
- Automate your life
 - Doorbell
 - Fridge alarm
- Weatherstation
- Mini satellite
- What ever you can think about





How to program the Micro:bit

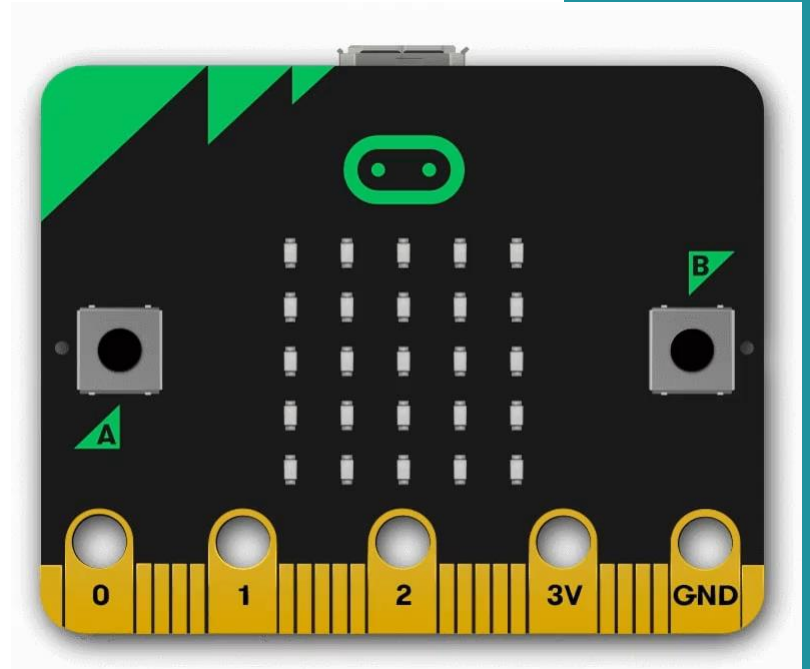
- Online
 - MakeCode Editor
 - Python Editor
- Offline
 - Different apps (also for Phone)



Demonstration

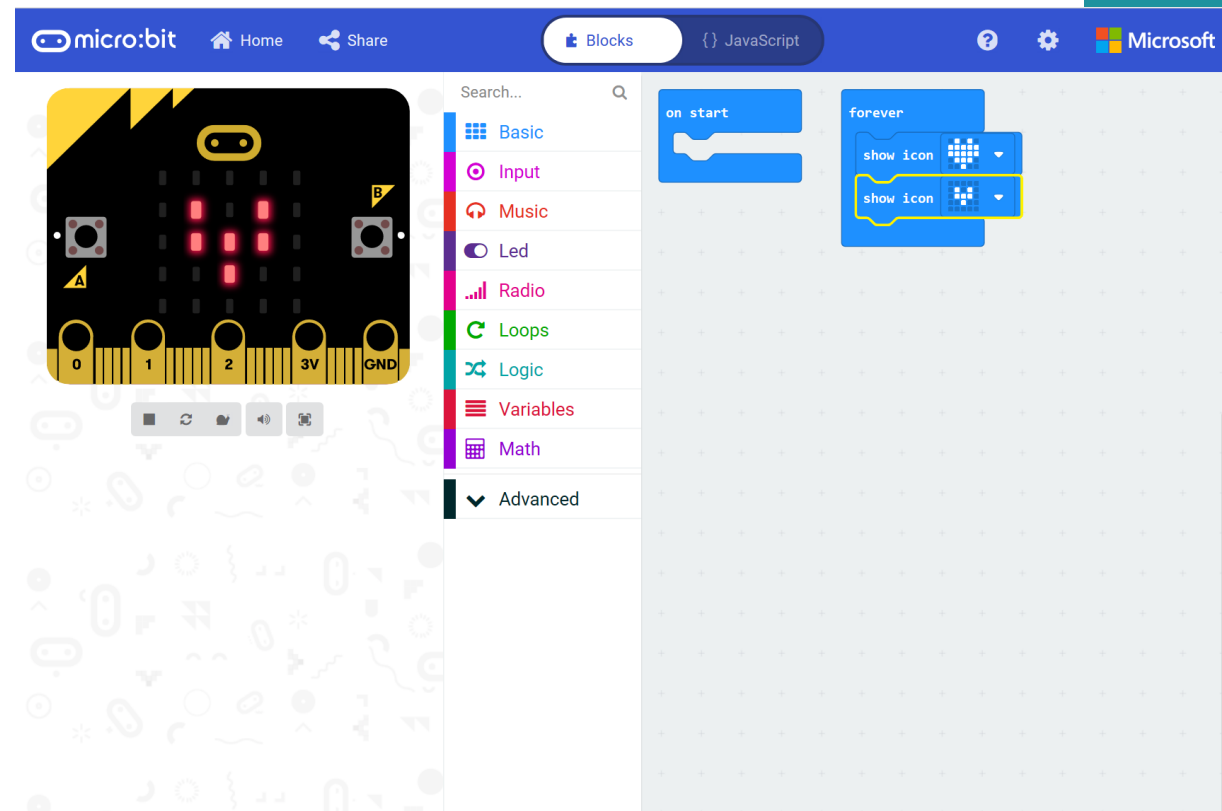
Step 1: Connect IT

- Connect the micro:bit to your computer via a micro USB cable. (Macs, PCs, Chromebooks and Linux systems (including Raspberry Pi) are all supported. It comes with a fun application, give it a try!)
- Your micro:bit will show up on your computer as a drive called 'MICROBIT'. Watch out though, it's not a normal USB disk!



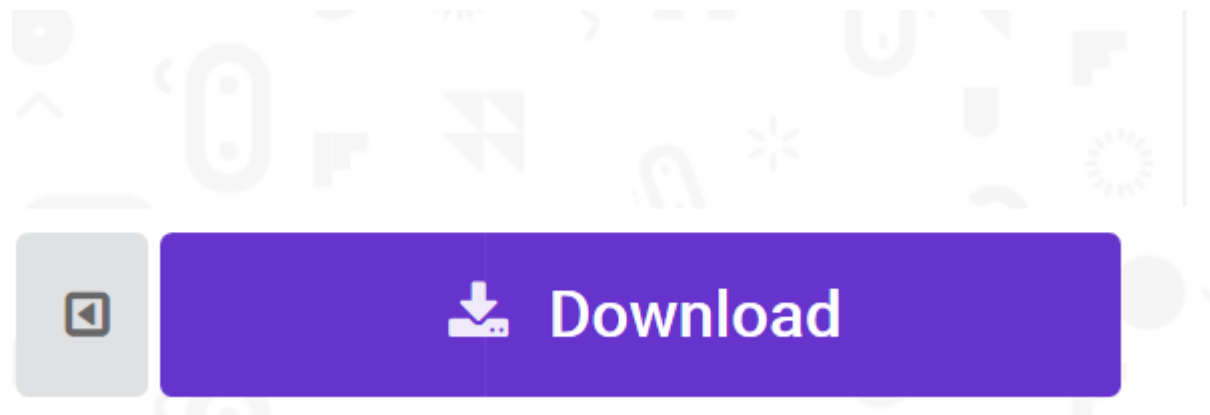
Step 2: Program It

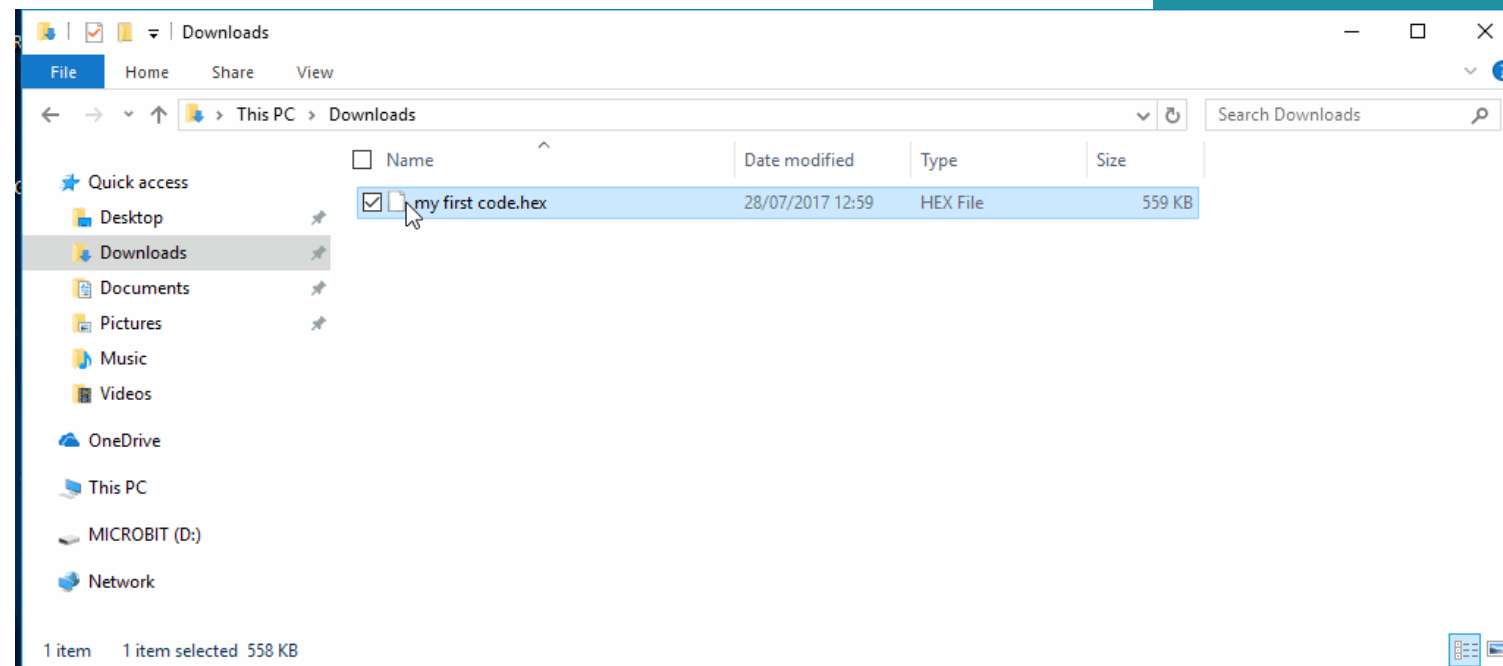
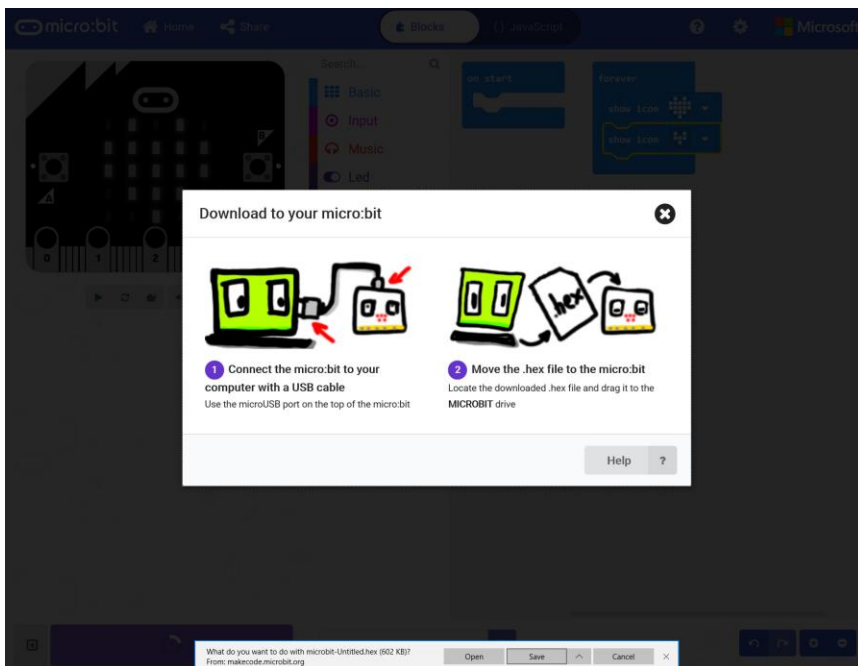
- We are going to use the Micro:bit code editor.
<https://makecode.microbit.org/#editor>
- For example drag and drop some blocks and try your program on the Simulator in the MakeCode Editor, like in the image below that shows how to program a Flashing Heart.



Step 3: Download It

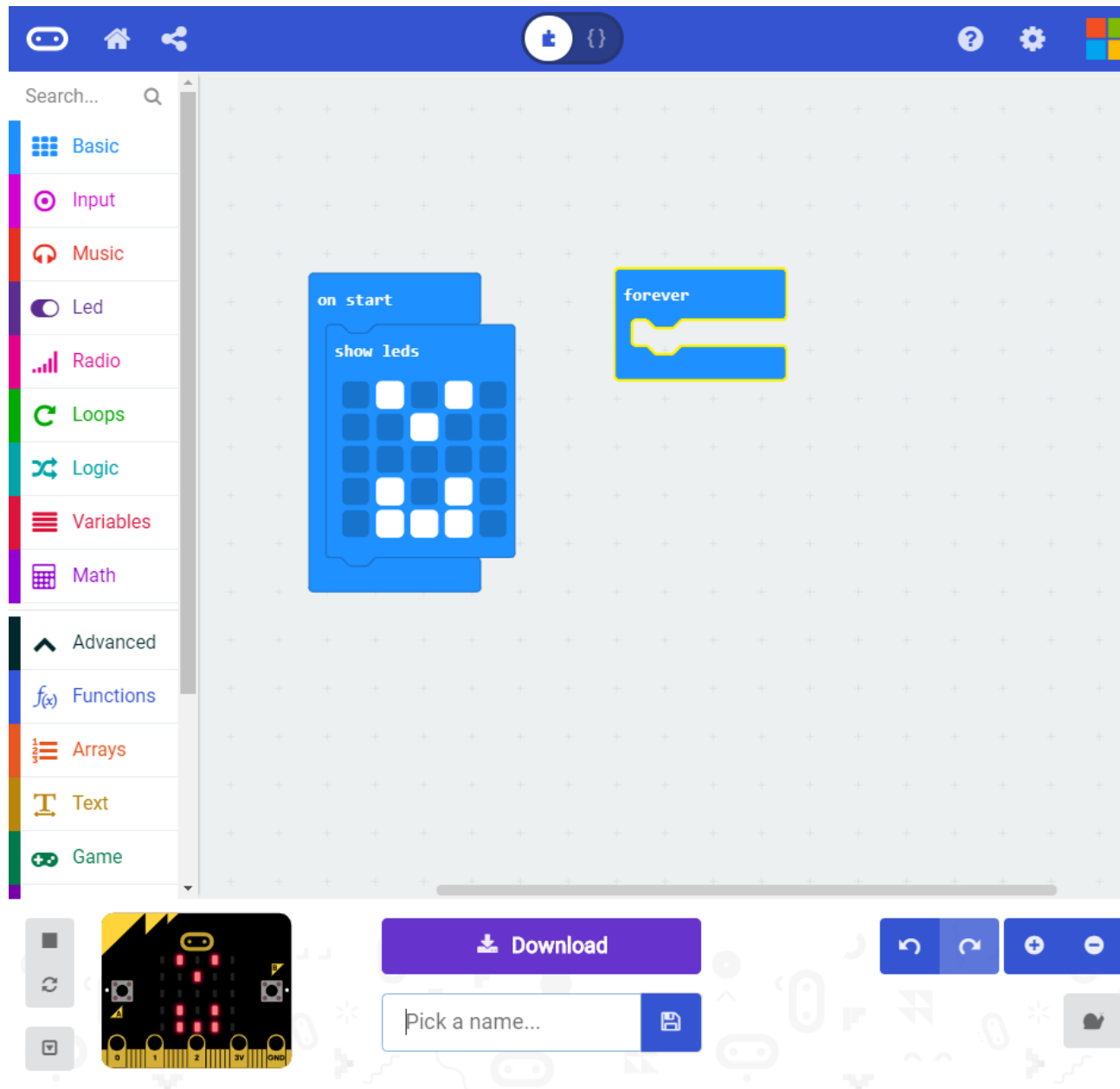
- Click the Download button in the editor. This will download a 'hex' file, which is a compact format of your program that your micro:bit can read. Once the hex file has downloaded, copy it to your micro:bit just like copying a file to a USB drive. On Windows you can right click and choose "Send To→MICROBIT."





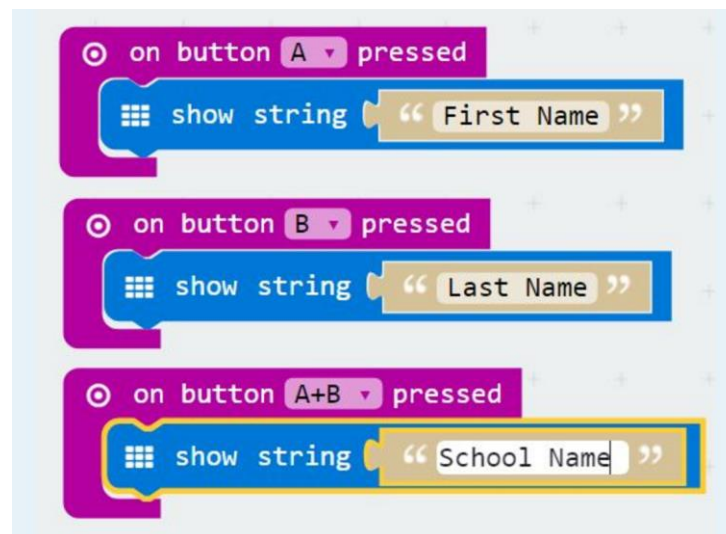
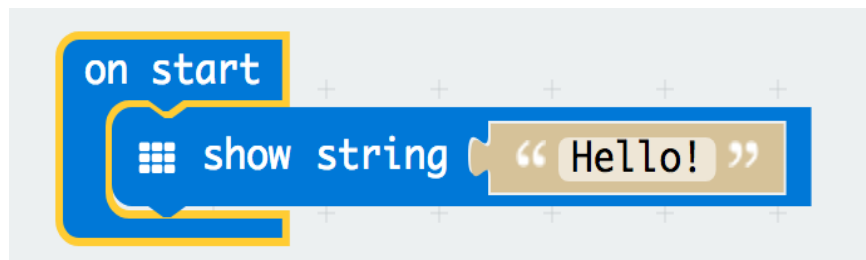
Emulator – Getting to know the Micro:Bit (Basic commands)

- Smiley face
- **Task:** Make a smiling face, then run it on the emulator. What other shapes, pictures can you get it to display?



Input Commands

- Activity 3: Scrolling name badge
- **Task:** Make yourself a scrolling name badge! How about using a different command (e.g. 'on shake').



Try some of the online lessons

- https://microbit.org/en/2017-03-07-javascript-block-resources/#lessons_a

Next step: real coding in Python

- MicroPython is a lean and efficient implementation of the [Python 3](#) programming language that includes a small subset of the Python standard library and is optimised to run on microcontrollers and in constrained environments.

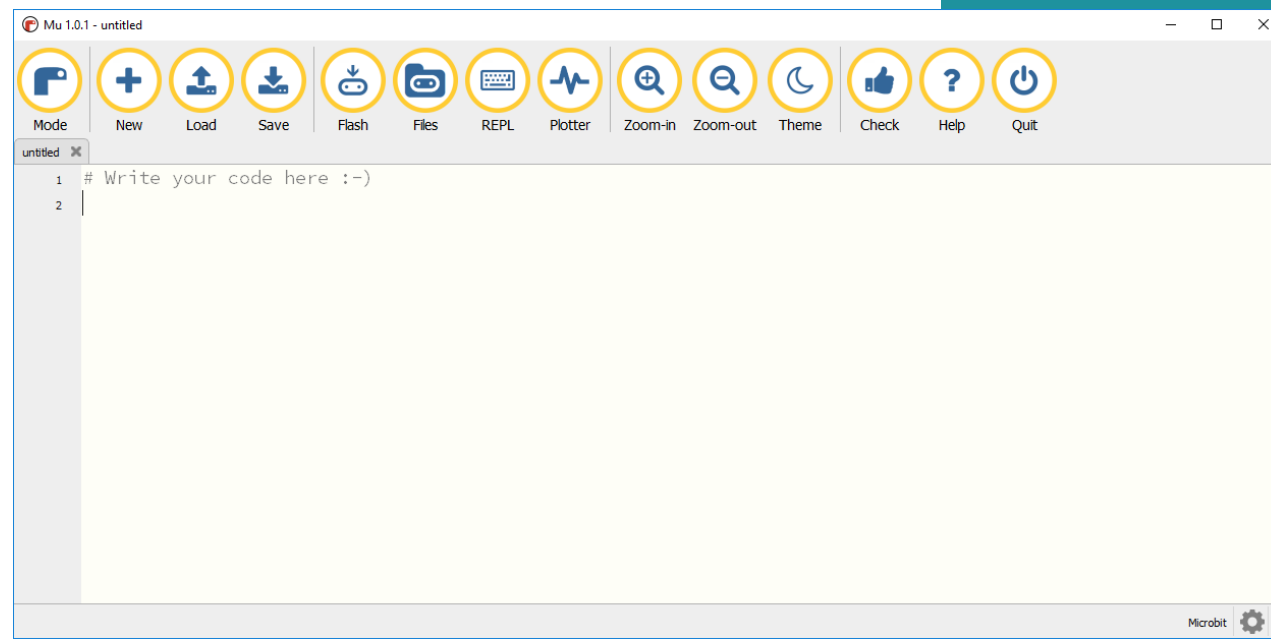


- Workshop MicroPython

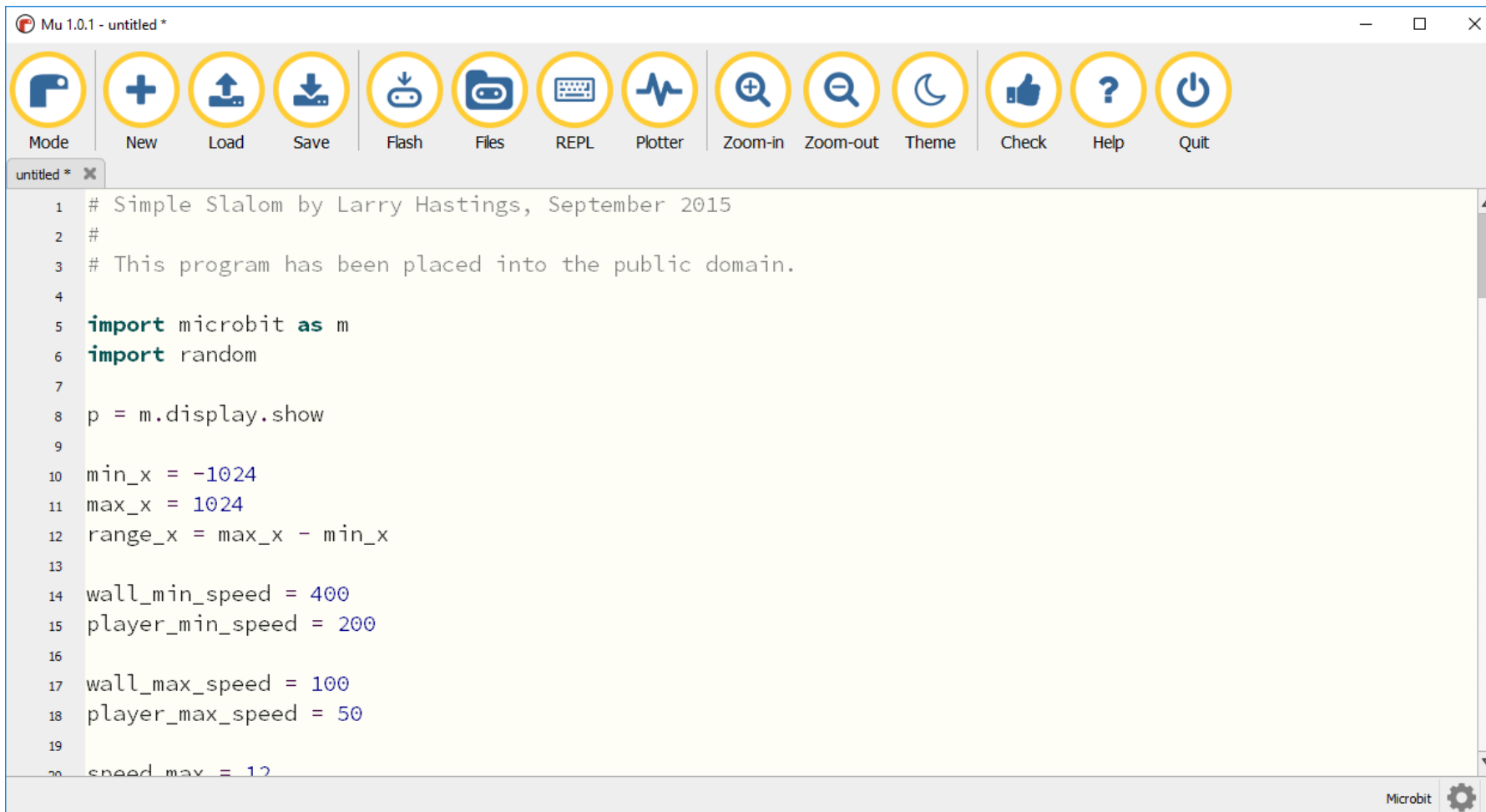
<https://microbit-micropython.readthedocs.io/en/latest/tutorials/introduction.html>

- Need to install Mu editor to write python code

<https://codewith.mu/en/download>



Example 😊



The screenshot shows the Mu Python IDE window titled "Mu 1.0.1 - untitled *". The interface includes a toolbar with icons for Mode, New, Load, Save, Flash, Files, REPL, Plotter, Zoom-in, Zoom-out, Theme, Check, Help, and Quit. Below the toolbar is a tab labeled "untitled *". The code editor contains the following Python code:

```
1 # Simple Slalom by Larry Hastings, September 2015
2 #
3 # This program has been placed into the public domain.
4
5 import microbit as m
6 import random
7
8 p = m.display.show
9
10 min_x = -1024
11 max_x = 1024
12 range_x = max_x - min_x
13
14 wall_min_speed = 400
15 player_min_speed = 200
16
17 wall_max_speed = 100
18 player_max_speed = 50
19
20 speed_max = 12
```

At the bottom right of the window, there is a "Microbit" button and a settings gear icon.

Website

HyperText Markup Language

- HyperText Markup Language is een op SGML gebaseerde opmaaktaal voor de specificatie van documenten, voornamelijk bedoeld voor het wereldwijde web. Het is de standaard opmaaktaal voor webpagina's. Documenten in HTML kunnen geopend en gelezen worden door een webbrowser om vervolgens als webpagina weergegeven te worden. Bron [Wikipedia](#)



```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD HTML
2 <html>
3   <head>
4     <title>Example</title>
5     <link href="screen.css" rel="sty
6   </head>
7   <body>
8     <h1>
9       <a href="/">Header</a>
10    </h1>
11    <ul id="nav">
12      <li>
13        <a href="one/">One</a>
14      </li>
15      <li>
16        <a href="two/">Two</a>
17      </li>
```

Versions of HTML

- HTML 1.0 (1989-1994)
 - The first public version of HTML supported images and text controls.
- HTML 2.0 (1995)
 - The first version supported by all graphical browsers.
- HTML 3.0 (1997)
 - better tables, better form options.
- HTML 4.01 (1999)
 - Added support for style sheets.
 - New features for tables and forms.
 - Expanded HTML's scripting capability.
 - Increased support for multimedia.
- HTML 5 (started in 2004), Candidate Recommendation (2013)
 - APIs.
 - Video, audio playback.
 - Drag-and-drop.
 - consideration for other devices (smartphones, tablets, etc.).

The reason behind the development of HTML is computers to communicate with each other across distances, But you maybe wondering how computers can communicate with each other using HTML? when you enter `www.facebook.com` in the browser address bar the browser first resolve(convert) `www.facebook.com` into something that it knows which is ip address "`173.252.110.27`", then browser communicate to the server that serves "Facebook" and displays the website in front of a user.

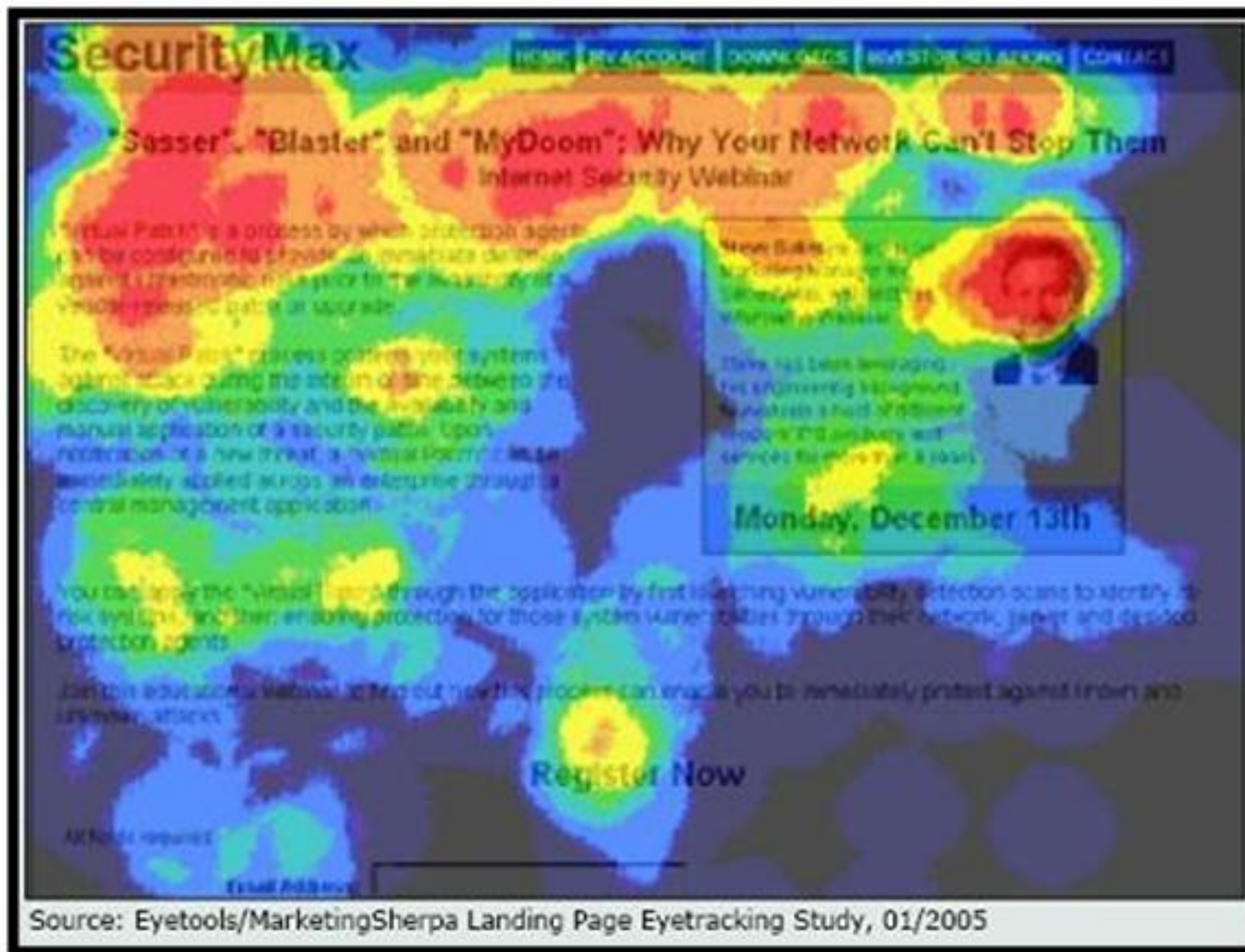
Website

- A Web page is stored on a Web server also called an HTTP server.
- To view a Web page, the user runs a software called a **Web browser**.
- Folder with collection of files
- Possible files:
 - Web pages: htm / html
 - Stylesheets: css files
 - Images: jpg, png
 - Media files: movies, sound
 - Scripts: java, ajax scripts

Web Browsers

- Microsoft Edge
- Firefox
- Chrome
- Safari
- ...

Webpage – usability / eye-tracking



Source: Eyetools/MarketingSherpa Landing Page Eyetracking Study, 01/2005

SPORT FOOTBALL

Sport Homepage

- Football
- Home
- World Cup
- Tickets
- My Club
- Score
- Premier League
- Championship
- League One
- League Two
- National League
- F.A. Cup
- League Cup
- Scottish Premier
- Scottish League
- Scottish Cup
- Welsh
- Irish
- Rugby

Page last updated at 11:09 GMT, Thursday, 17 February 2011

ARSENAL

We can finish like Barca - Wenger



Arsenal manager Arsene Wenger says Barcelona remain favourites in their last 16 Champions League tie but says his side have the belief to beat the La Liga leaders.

BOLTON
Ricketts suffers Achilles injury

CHAMPIONSHIP Scunthorpe 1-0 World Cup to remain free to go

The screenshot shows the Irish Times website with a network graph overlay. The graph consists of numerous purple circular nodes, each containing a number, connected by a web of purple lines. The nodes are distributed across the page, with a high concentration on the left side and around the main article. The website content includes the header with navigation links (Mobile, Follow Us, Make Homepage, RSS Feeds, Site Map), the main title 'THE IRISH TIMES Crossword Club', and the date 'Friday, February 20, 2011'. The main article is titled 'Uefa charge Gattuso over headbutt' and features a photo of a soccer player. Other visible headlines include 'Dead Rubber', 'THE IRISH TIMES SPORTSWOMAN OF THE YEAR', and 'Soccer labbies'.

```
<!DOCTYPE html
PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
  <head>
    <title> document's title </title>
    <meta http-equiv="Content-Type"
      content="text/html; charset=UTF-8">
  </head>
  <body>
    your document's content goes here
  </body>
</html>
```

- Spend some time looking for a good tutorial...

- Found it:

<https://internetingishard.com/html-and-css/basic-web-pages/>

[https://developer.mozilla.org/en-US/docs/Learn/Getting started with the web](https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web)

<https://www.khanacademy.org/computing/hour-of-code/hour-of-html/v/making-webpages-intro>

Getting started with the Web

Jump to: [The story of your first website](#) [See also](#)

[Learn web development](#) ▸
[Getting started with the Web](#)

Related Topics

Complete beginners start here!

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[What will your website look like?](#)

[Dealing with files](#)

[HTML basics](#)

[CSS basics](#)

[JavaScript basics](#)

Getting started with the Web is a concise series introducing you to the practicalities of web development. You'll set up the tools you need to construct a simple webpage and publish your own simple code.

The story of your first website [🔗](#)

It's a lot of work to create a professional website, so if you're new to web development, we encourage you to start small. You won't build another Facebook right away, but it's not hard to get your own simple website online, so we'll start there.

By working through the articles listed below in order, you will go from nothing to getting your first webpage online. Let's go!

[Installing basic software](#) [🔗](#)

- Questions