

Cyber Academy

Welcome & Introduction
Taught by Michelle Sheppard

October 2021

Welcome



TTA |

Tech Talent Academy

Cyber Academy

Course Start Date:
Wednesday 27 October 2021

Duration:
16 Weeks

Trainers:
Michelle Sheppard

Checklist - today

Go through Admin

Introduction to course

Employability

Safe guarding

You will have:

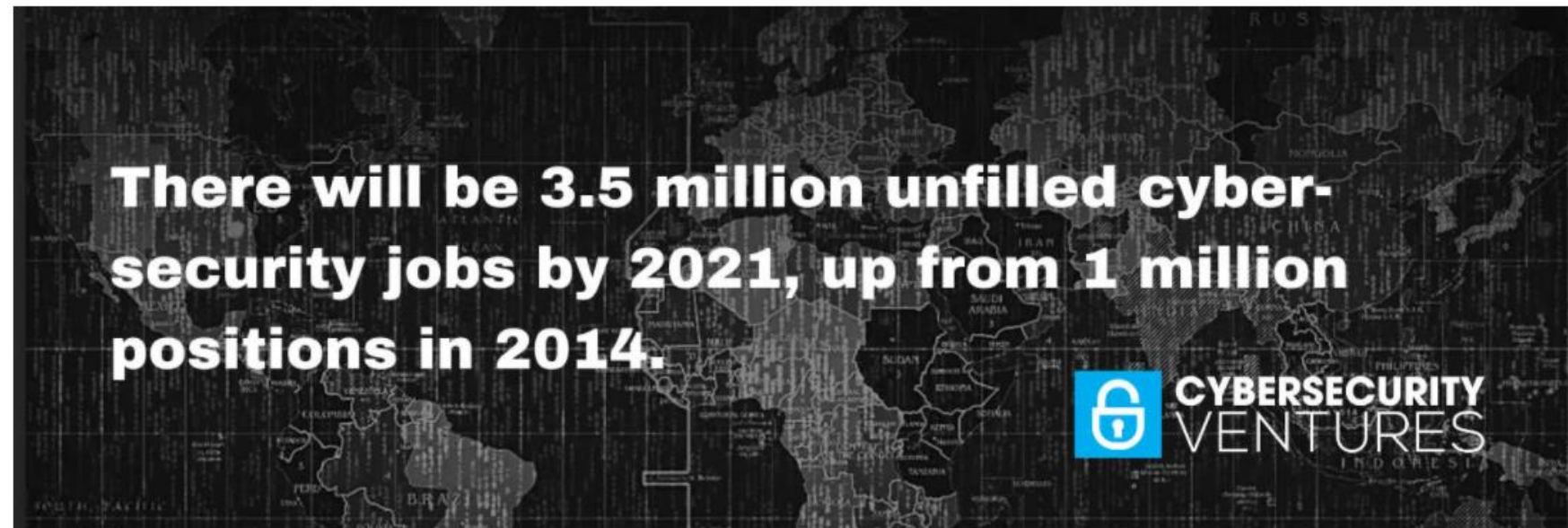
- ☐ Installed MS Teams and activated your Teams account (email sent to you)
- ☐ Complete the pre-course survey <https://forms.office.com/r/Y1DXYmnde2>
- ☐ Created a repl.it account.
- ☐ Created a GitHub account.
- ☐ Installed Microsoft VS Code.
- ☐ Installed JDK 8
- ☐ Installed Netbeans.

Introduction

- Why join a Cyber Academy?
- Shortage of Cyber professionals across the world!



**3.12 million
cybersecurity
jobs are unfilled⁶**



Cyber Industry

NEWS

[Home](#) | [Coronavirus](#) | [Climate](#) | [UK](#) | [World](#) | [Business](#) | [Politics](#) | [Tech](#) | [Science](#) | [Health](#) | [Family & Education](#)

[England](#) | [Local News](#) | [Regions](#) | [Lancashire](#)

National Cyber Force to be based in Samlesbury

🕒 3 October



Samlesbury - home to a BAE Systems site - will also host the National Cyber Force

REUTERS

The government has announced that its cyber-attack agency, known as the National Cyber Force, will be based in Lancashire.

NEWS

[Home](#) | [Coronavirus](#) | [Climate](#) | [UK](#) | [World](#) | [Business](#) | [Politics](#) | [Tech](#) | [Science](#) | [Health](#) | [Family & Education](#)

[World](#) | [Africa](#) | [Asia](#) | [Australia](#) | [Europe](#) | [Latin America](#) | [Middle East](#) | [US & Canada](#)

Facebook to hire 10,000 in EU to work on metaverse

🕒 18 October | 💬 Comments



AFP VIA GETTY IMAGES

Mark Zuckerberg has been a leading voice on the metaverse

Facebook is planning to hire 10,000 people in the European Union to develop a so-called metaverse.

Introduction

- Michelle@techtalent.academy
- Computer Science teacher
- Background in IT support/management/training
- Degree in Computer Science
- Cyber Centurion team leader
- Cyber Security Challenge trainer
- Cyber EPQ
- Cyber Discovery

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Introduction –support@TTA

Employment support

- Paul@techtalent.academy

Well being and welfare support

- Satinder@techtalent.academy

General course support

- Use the teams support channel
- Trainer

Format of Course

- Each week: training days on **Wednesday**.
- Each training day: sessions at **4.30 – 6.30**
- Other days are for independent completion of practice activities and Home Learning Tasks (HLT), and for self-study.
- *IF there are students here who would prefer a daytime **11-1** session please let me know – if numbers are enough this can be arranged*

Format of Course - Home Learning

- There will be 1 lesson every **Wednesday consisting of a two hour online session from 4.30 pm**
- Other days are for independent completion of activities and tasks.
- Monday is your submission day: This is practical work with an evaluation (not a pass or fail). Each week you will be advised of the format of submission (group demo, group discussion, sending files via Slack, etc).
- Please note that I am usually only available for support from 9:30am to 4.30pm, Monday to Thursday and until 12 pm on Fridays.
- Please use Teams for informal quick messages
- Please use email for more 'formal' communications.
- You can email and message out of hours and I will reply back to you between 9:30am and 5.00pm.
- There will be extra Zoom calls dependent on group tasks – please keep me informed about any commitments that you might have so there are no clashes in timings.



Trainer Availability

- Please note that I will only be available for support from:
 - 9:30am to 4:30pm, Monday to Thursday.
 - 9:30am to 3:30pm, Friday.
- You can email and message at any time and I will reply back as soon as possible.

Communication

Communication during remote learning will include:

- Class webinars (Zoom)
- Emails
- Individual calls (Zoom)
- Course materials (Teams)

Queries: Send a Direct message to me via email me with your query and I will get back to you.

Email address: Michelle@techtalent.academy

Any complaints or welfare issues contact satinder@techtalent.academy



Format of Course – HLTs

- HLTs are practical work that form the evidence of your participation on the course and that give me an opportunity to give you feedback.
- Submission day: **Monday**.
- Submission time: **Midday**.
Each week I will advise you of the format of submission (GitHub, group demo, group discussion, sending files via Teams etc).
- Where HLTs consist of code, then the submission must contain working code.

Format of Course

- There may be extra Team meetings, for example for ad hoc workshops, guest speakers, etc.
- Please keep me informed about any commitments that might mean you are unable to attend. Please be aware that if you fall behind in the work, it is very difficult to catch back up.

Attendance

- 100 % is desirable
 - Attendance – aiming for 90%
 - HLT – 80% completion to pass the module
 - Certification at end of course with completed modules
-
- If you are unable to attend please let me know and we can arrange a catchup session – via teams



Remote Learning

1. Stick to a schedule.
2. Make learning a habit.
3. Use our supportive community.
4. Set reasonable and simple goals.
5. Take breaks and shut off from technology, when possible.
6. Organise your workspace and your systems of working.
7. Share your thoughts, attempts, results and progress.
(Links with point 3.)

MS Form – Cyber pre course survey

Cyber Academy - Pre course survey

This will help our trainer tailor the course to your needs. Please provide as much information that you feel would help.
Thanks

...

1. What type of computer will you be using? eg PC, Mac etc

Enter your answer

2. What type of operating system do you expect to use on the course

☐ Mac OS

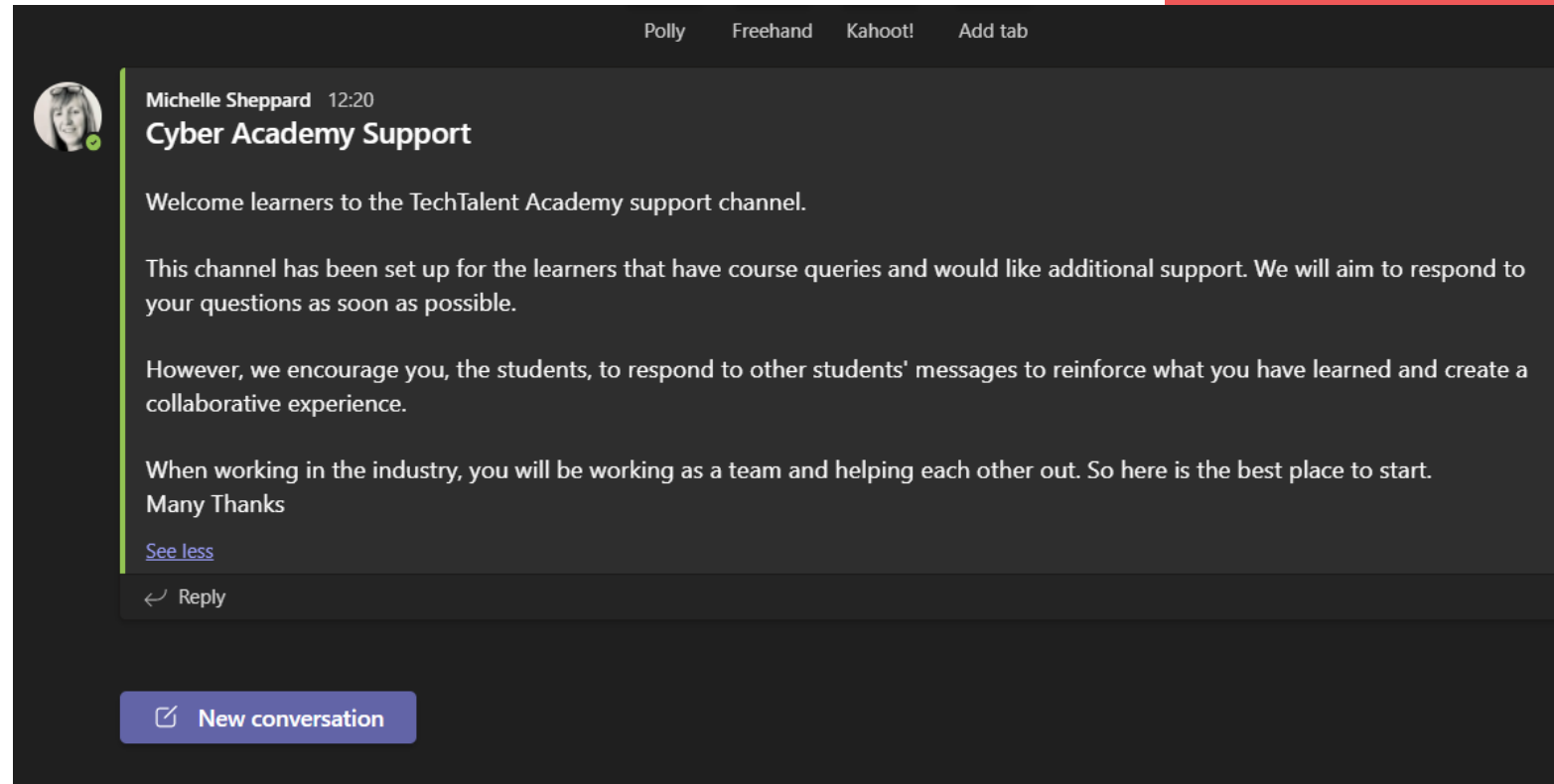
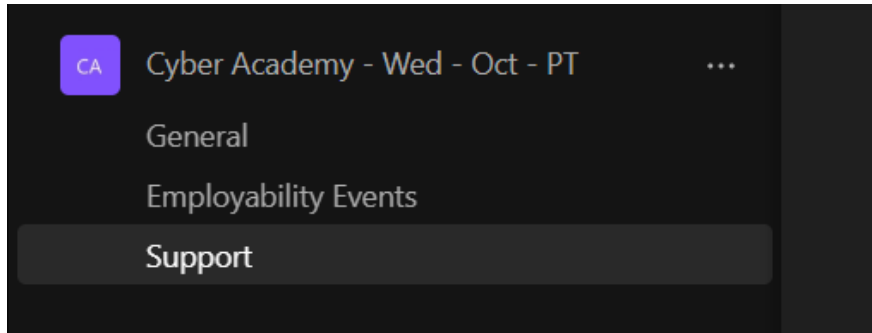
☐ PC OS

☐ Other

Teams

- All 'non formal' communication will be through Teams Chat
- You have access to post on the support section – this will be seen by all members of the course
- General information will be posted in the 'general' area
- Files will be uploaded in the files section by session

Teams - Cyber



Your teams

TA

TechTalent Academy

...

General

AWS Stuff

Social Media

Student Engagement

Student Gained Jobs

Trainer Files

1 hidden channel

SA

Software Academy - Wed - Oct - PT

...

CA

Cyber Academy - Tues -Sept - PT

...

General

Employability

Support

CA

Cyber Academy - Wed - Oct - PT

...

+ New

↑ Upload

↻ Sync












🔗 Copy link

↓ Download

+ Add cloud storage

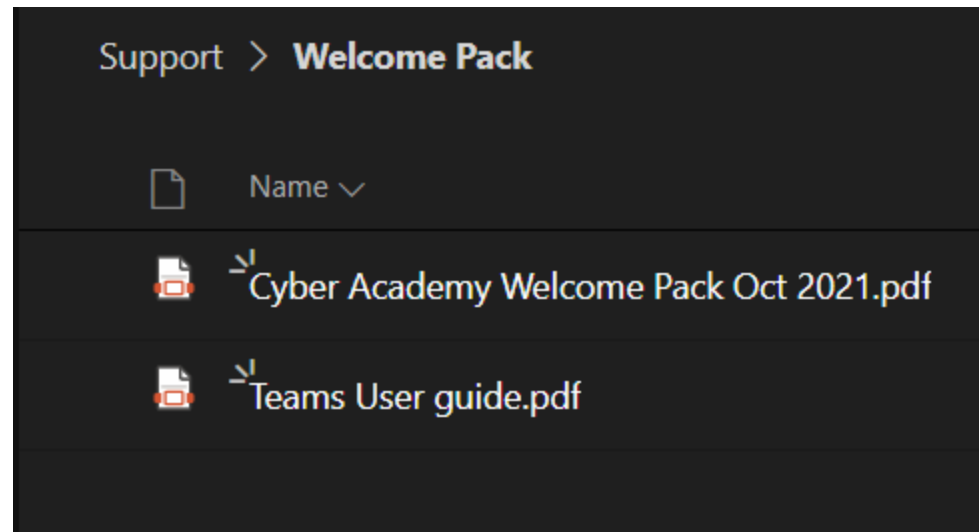
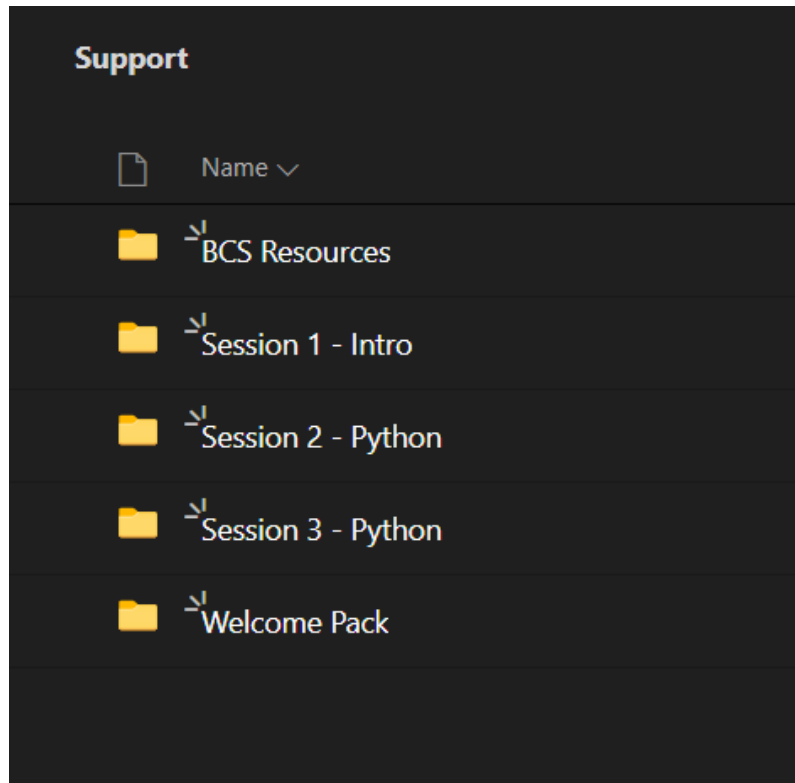
⚙

Support

	Name	Modified	Modified By
	BCS exam resources	4 days ago	Michelle Sheppard
	Home Learning Tasks	4 days ago	Michelle Sheppard
	Session 1 - Python	4 days ago	Michelle Sheppard
	Session 2 - Python	4 days ago	Michelle Sheppard
	Session 3 - HTML	4 days ago	Michelle Sheppard
	Session 4 - HTML	4 days ago	Michelle Sheppard
	Session 5 - CSS	4 days ago	Michelle Sheppard
	Session 6 - Javascript	4 days ago	Michelle Sheppard
	Session 7 - Cyber 101	4 days ago	Michelle Sheppard
	Welcome Pack	4 days ago	Michelle Sheppard

Welcome Pack

- In Teams
- Navigate to the files section and download the welcome pack



Cyber Academy Welcome Pack 2021

COMPUTER REQUIREMENTS

You will need access to a laptop or desktop from day one of the course. The course materials are based on Windows/Mac applications, so please advise your technical trainer or the person who on-boarded you, if you do not have access to a Windows/Mac device.

At a minimum, a laptop with a current operating system, such as Windows 8/10 or MacOS 10.15 (Catalina), should be sufficient to carry out your course.

Some suggested system requirements are as follows: • Intel i5 CPU, with an i7 recommended. • 8GB RAM, with 16GB recommended. • 1920 x 1080 resolution monitor display.

Please note that tablets and mobile devices are not suitable for the course.

You will need to download the following free software applications to your laptop prior to the course (your trainer will help you during day one if you encounter any issues, suggesting alternatives that may be available).

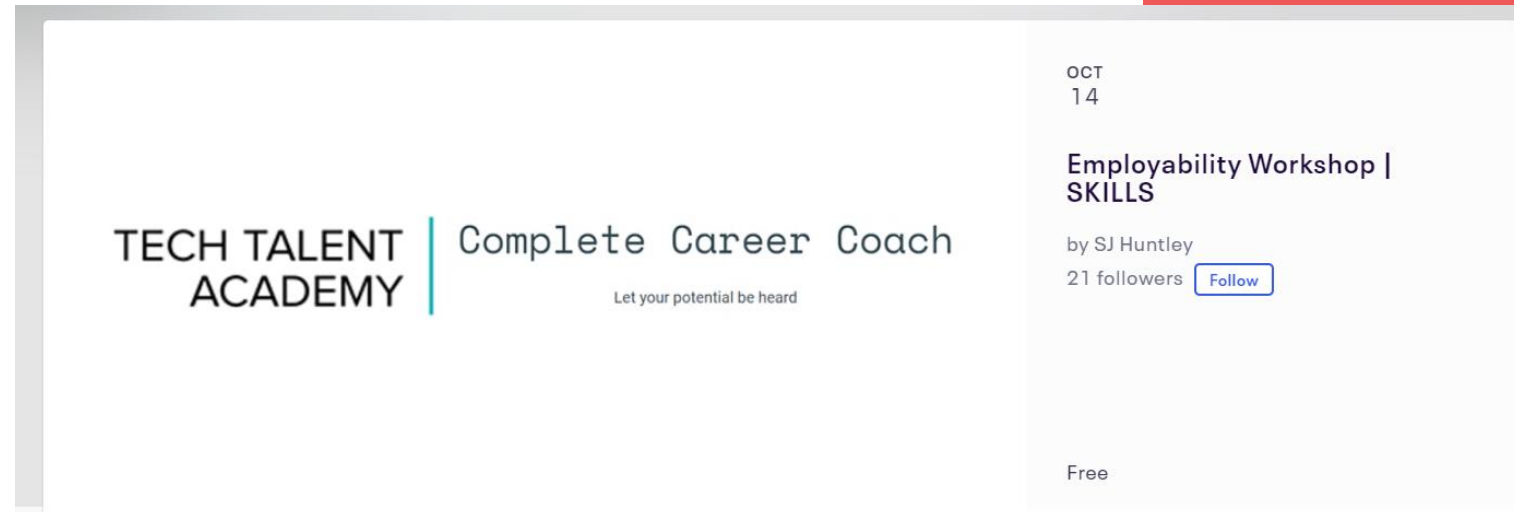
- [Teams](#)
- [Python 3](#)
- [C++ for Windows](#)
- [C++ for Macs](#)
- [Java](#)
- [IntelliJ](#)
- [Visual Studio Code](#)

If you haven't already signed up for Zoom and repl.it, then please do so.

Employability

- AWS opportunities at end of course
- Employability workshops
- **CV workshops**
- Employer connections

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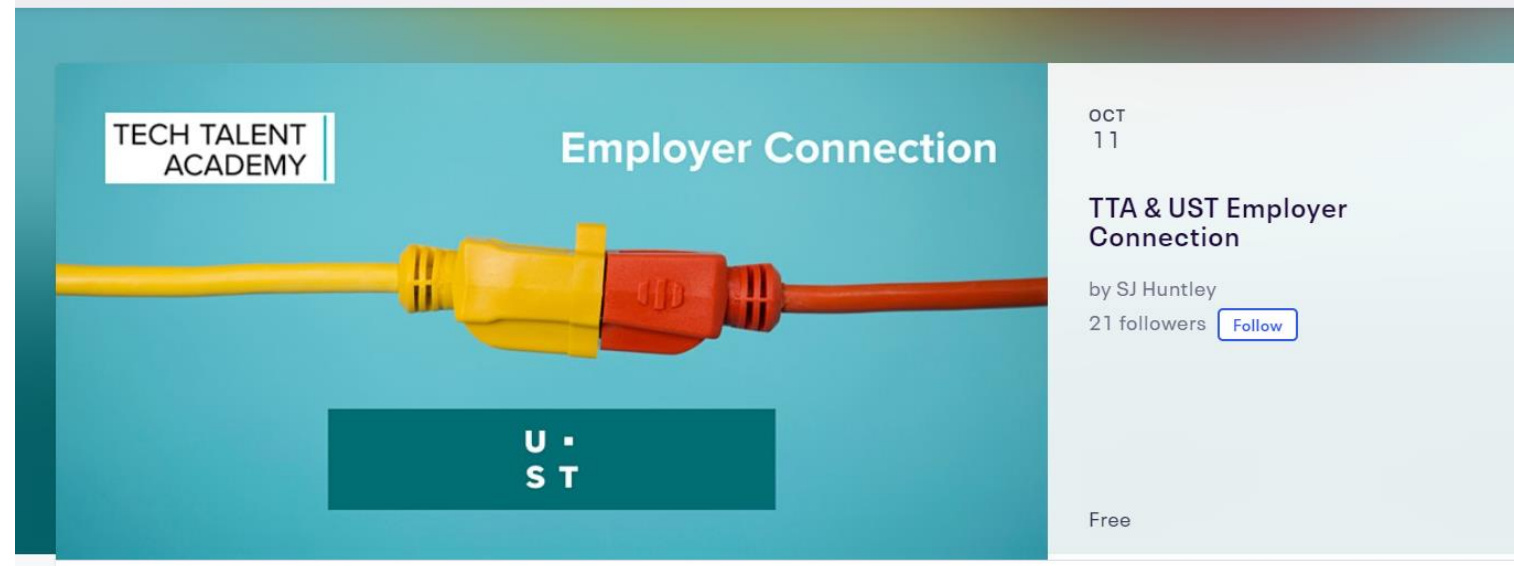
TECH TALENT ACADEMY | Complete Career Coach
Let your potential be heard

OCT 14

Employability Workshop | SKILLS

by SJ Huntley
21 followers [Follow](#)

Free



TECH TALENT ACADEMY | Employer Connection

U · S · T

OCT 11

TTA & UST Employer Connection

by SJ Huntley
21 followers [Follow](#)

Free

Course Overview

Week	Topic
1	Welcome
2	Python Fundamentals
3	Python Fundamentals
4	HTML Fundamentals
5	HTML /CSS Fundamentals
6	CSS /Javascript Fundamentals
7	JavaScript Fundamentals
8	Cyber 101 Fundamentals
9	Cyber 101 Fundamentals
10	Coding Fundamentals (C++)
11	Coding Fundamentals (C++) & Linux
12	Linux
13	Linux & Java Fundamentals
14	Java Fundamentals
15	Network Security
16	Exam Prep
17	Exam

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There might be times when we swap over parts of the course when we have client talks or company engagement days. You will be given at least a weeks' notice before we swap topics.

Software Requirements

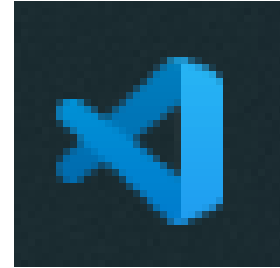
In your welcome pack it highlighted what software is suitable for the course:

- Visual Studio Code, follow this link:

<https://code.visualstudio.com/>

- To install IntelliJ, follow this link:

<https://www.jetbrains.com/idea/>



Other useful tools:

- Repl.it <https://repl.it/>
- Notepad++ (Windows) (<https://notepad.plus/>)
- Notepad Brackets (Mac) <http://brackets.io/>

You don't need all of these! They're just tools to do a job (write code), so pick the tool you prefer. If you're not sure then have a play and find one you like.



Software requirements – repl.it

The screenshot shows the Replit website interface. At the top, there's a browser address bar with the URL `https://replit.com/~`. Below the browser, the Replit logo is on the left, and a search bar with the text "Search & run commands" is in the center. To the right of the search bar is a keyboard shortcut indicator "Ctrl .".

The main content area is titled "Get started" with a progress indicator "1/3". Below this, there's a section "See what you can accomplish on Replit" with three cards:

- "Explore programming tutorials on Learn" with a checkmark and a red "Incomplete" label.
- "See what people are building on Apps" with a checkmark and a red "Incomplete" label.
- "Create your first Repl" with a checkmark and a green "Complete" label.

Below the "Get started" section is a "Create" section with a row of buttons: a "+" button, a button with a Replit logo and "HTML, CSS, JS", another button with a Replit logo and "HTML, CSS, JS", and a button with a Python logo and "Python". Below these buttons is a link "See all languages".

Below the "Create" section is a "Recent" section with three cards:

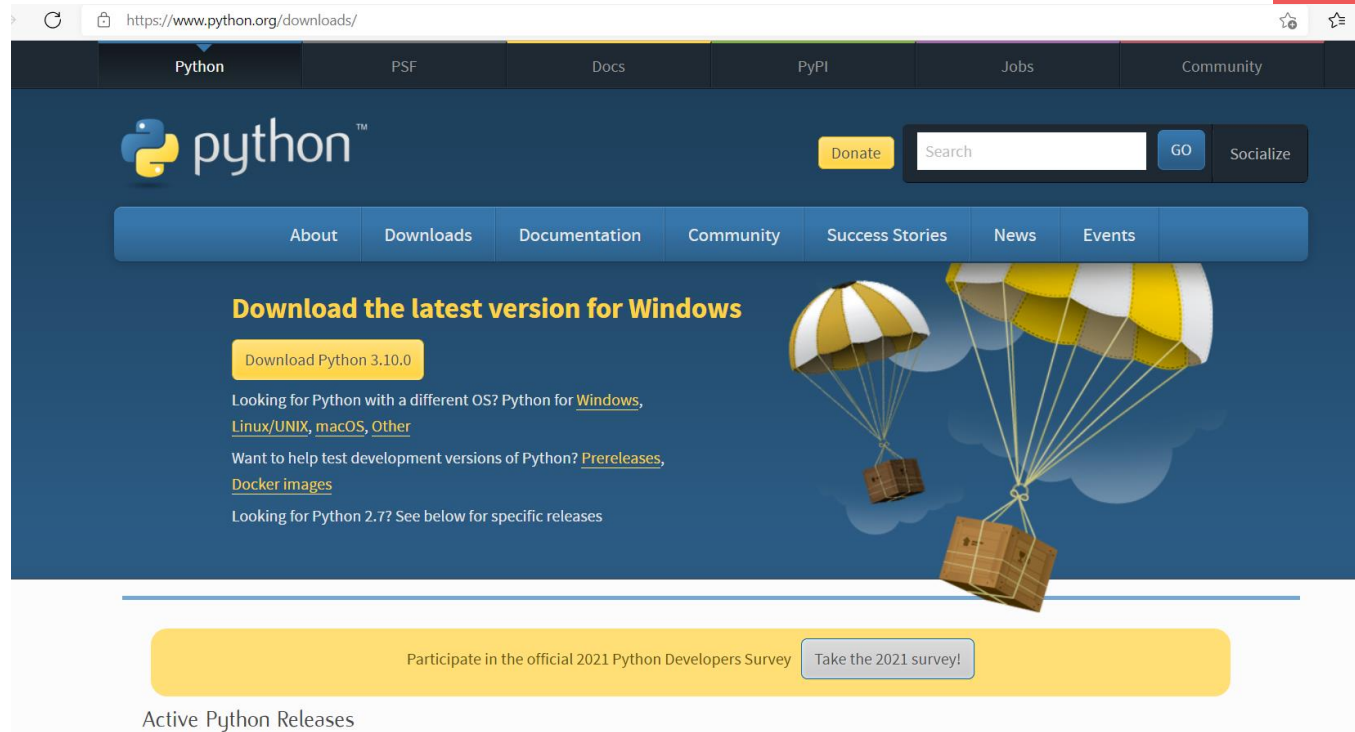
- "RGBselect" with a Replit logo, "HTML, CSS, JS", and "6 days ago".
- "Input" with a Replit logo, "HTML, CSS, JS", and "1 week ago".
- "JS Event" with a Replit logo, "HTML, CSS, JS", and "1 week ago".

Below the "Recent" section is a link "See all repls".

Below the "See all repls" link is a "GitHub repos" section with the text "Run your GitHub repos on Replit" and a blue button with a GitHub logo and "Connect GitHub".

Python

- Download or
- Repl.it



```
*IDLE Shell 3.9.5*
File Edit Shell Debug Options Window Help
Python 3.9.5 (tags/v3.9.5:0a7dcbd, May 3 2021, 17:27:52) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\MichelleSheppard\OneDrive - TechTalent Academy\Documents\Cyber course\01 Python\guess the number.py
Hello and welcome to the Guess your number game

Hello! What is your name?

guess the number.py - C:\Users\MichelleSheppard\OneDrive - TechTalent Academy\Documents\Cyber course\01 Python\
File Edit Format Run Options Window Help
#MShep TTA
#Sept 2021
#random guess
import random # imports the random library

print ("\n\tHello and welcome to the Guess your number game \n\n")

myName = input("Hello! What is your name? ")
number = random.randint(1,10) # random generation between 1 and 10

print("Well, " + myName + " I am thinking of a number between 1 and 10")

guess = int(input("Take a guess:"))

if guess == number:
    print("Good job, " + myName + " You guessed my number")
else:
    print("Wrong, better luck next time")

#How can we improve this?
#think about using iteration ie a loop
#how about any validation - is it a number is it 10 or less
```

BCS - Exam

- The exam you will be entered for is
- **BCS Foundation Certificate in Information Security Management Principles**
 - Knowledge of the concepts relating to information security management.
 - Understanding of current national legislation and regulations which impact upon information security management.
 - Awareness of current national and international standards, frameworks and organisations which facilitate the management of information security.
 - Understanding of the current business and common technical environments in which information security management must operate.
 - Knowledge of the categorisation, operation and effectiveness of controls of different types and characteristics.

BCS

- You are entered for the course as part of the Cyber academy – we will have a session nearer the exam date.
- Two hour 'closed book' with 100 multiple choice questions
- Pass mark is 65% (65/100)
- Resources
 - Book title: Information Security Management Principles, Author [David Alexander](#), [Amanda Finch](#), [David Sutton](#)





> ... > Certifications for professionals > Information security and CCP assured service certifications >

BCS Foundation Certificate in Information Security Management Principles

BCS Foundation Certificate in Information Security Management Principles

Gain a clear understanding of IS management issues including risk management, security standards, legislation and business continuity.



Who is it for?

Anyone with an interest in information security, whether as a career or for general business knowledge.



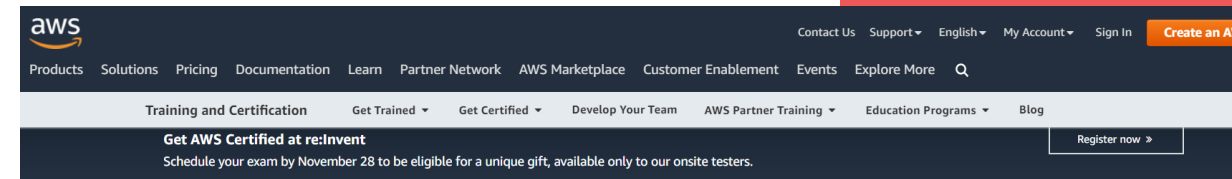
Entry requirements

There are no formal entry requirements however, the candidate should have basic working IT knowledge and an awareness of the issues involved with the security control activities.

It's recommended that candidates read the BCS course approved reference book [Information Security Management Principles](#), as well as attend training with a BCS accredited training course.

Amazon Web Services (AWS)

- AWS Cloud
- Free AWS Cloud Practitioner qualification on successful completion of the Cyber course
- Optional 'bolt on'
- More details to follow!



This credential helps organizations identify and develop talent with critical knowledge related to implementing cloud initiatives. Earning AWS Certified Cloud Practitioner validates cloud fluency and foundational AWS knowledge.

Who should take this exam?

AWS Certified Cloud Practitioner is intended for anyone who has basic knowledge of the AWS platform. Before taking this exam, we recommend you have:

- Six months of exposure to the AWS Cloud
- Basic understanding of IT services and their uses in the AWS Cloud platform

Exam overview

Level: Foundational
Length: 90 minutes to complete the exam
Cost: 100 USD (Practice exam: 20 USD)
Format: 65 questions; either multiple choice or multiple response

Remote Learning

“The person doing the work
is
the person doing the learning.”

How to Learn Programming

“The only way
to learn to program
is
to write code.”

How to Learn Programming

- See good code and adapt it
- Practice exercises and HLTs
- Websites
 - w3schools
 - SoloLearn
 - Codecademy
 - freeCodeCamp
- YouTube
 - Giraffe Academy (Mike Dane)
 - Programming with Mosh

Coding why?

- Bootcamp – first steps

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Why coders love the AI that could put them out of a job

By Padraig Belton
Technology of Business reporter

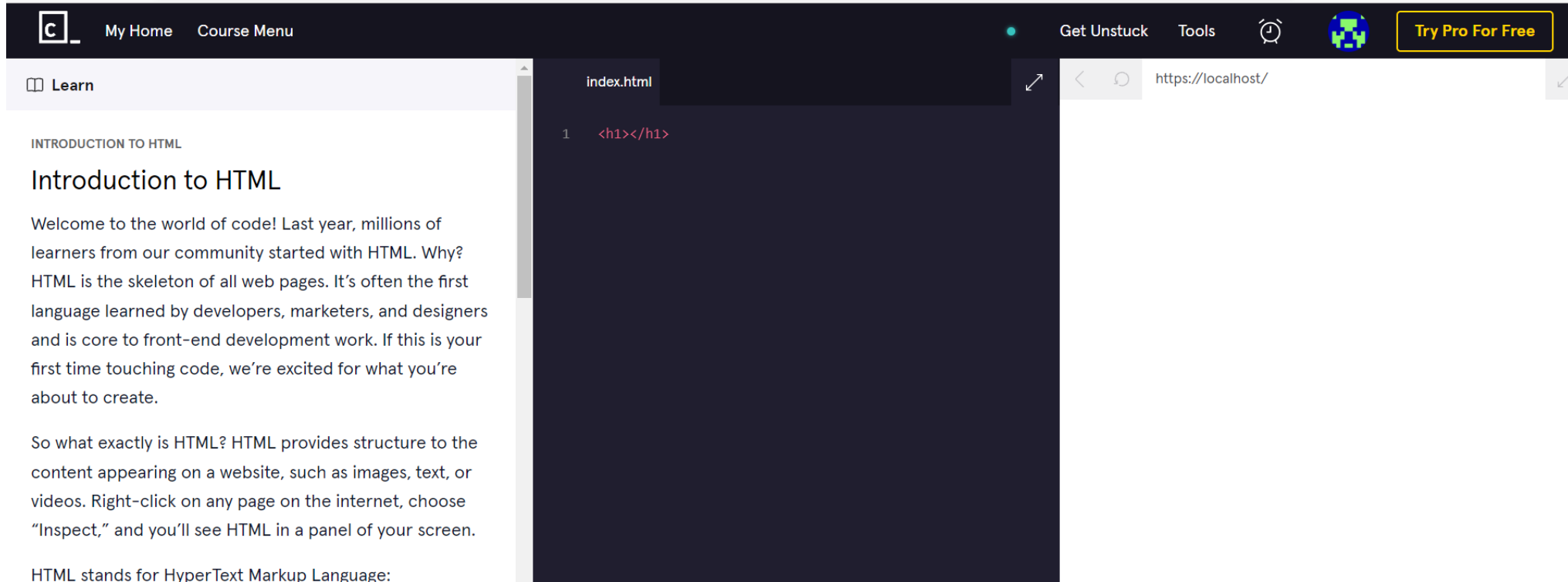
🕒 7 September



Learning to code was Janine Luk's "best ever" decision

"When you start coding, it makes you feel smart in itself, like you're in the Matrix [film]," says Janine Luk, a 26 year-old software engineer who works in London.

Codecademy



The screenshot shows the Codecademy website interface. At the top, there is a dark navigation bar with the Codecademy logo, 'My Home', 'Course Menu', and links for 'Get Unstuck', 'Tools', and a 'Try Pro For Free' button. Below the navigation bar, the left sidebar displays the course title 'Introduction to HTML' under the 'Learn' tab. The main content area is divided into two sections: a text-based introduction to HTML and a live code editor. The code editor shows a file named 'index.html' with the following HTML code:

```
1 <h1></h1>
```

To the right of the code editor is a browser preview window showing the URL 'https://localhost/'.

Immersive Labs

← → ↻ 🔒 https://immersivelabs.online/browse/categories 🔍 ⭐

IL Browse ▾ Objectives My Progress ▾ MITRE ATT&CK News 🔍

Bro

By C

Filter

Status

Category

Difficulty Range

Leaderboard
Can you climb to the top of your organisation's leaderboard?

Achievements
Keep track of your badges for completing skill paths, series and roles.

Fundamentals (12)

- ☐ Not Started (59)
- ☐ In Progress (3)
- ☐ Completed (0)


Fundamentals (12)

- Offensive (20)
- Defensive (12)
- Tools (8)
- Cyber Threat Intelligence (6)
- Malware & Reverse Engineering (6)
- Challenges & Scenarios (8)
- Application Security (2)
- Cloud Security (3)

Beginner (9) ●●●


Intermediate (23) ●●●●

Expert (30) ●●●●●




Cyber Safety
Get to grips with all things cyber! Everything you need to know about the cyber world is covered here.

Series ●●● 150 2h 30m




Staying Safe Online
A company is only as secure as its people! In this skill series, you'll learn everything required to keep both you and your...

Series ●●● 160 2h 40m




Introduction to Networking
This series focuses on core networking concepts and the basics. You'll be introduced to the basics of networking...

Series ●●● 220 1h 30m




Cyber 101
This skill series provides a strong cybersecurity knowledge base to anyone starting out in the industry. We'll take you...


Series ●●● 150 2h 23m




Skill Path ●●● 1300 4h 19m



Skill Path ●●● 2120 4h 54m



Skill Path ●●● 2400 5h 33m



Series ●●● 1940 3h 26m

T

W3schools

[Tutorials](#)[References](#)[Exercises](#)[Videos](#)

NEW

[Website](#)

NEW

[Paid Courses](#)

HTML

The language for building web pages

[Learn HTML](#)

NEW

[Video Tutorial](#)[HTML Reference](#)

HTML Example:

```
<!DOCTYPE html>
<html>
<title>HTML Tutorial</title>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

[Try it Yourself](#)

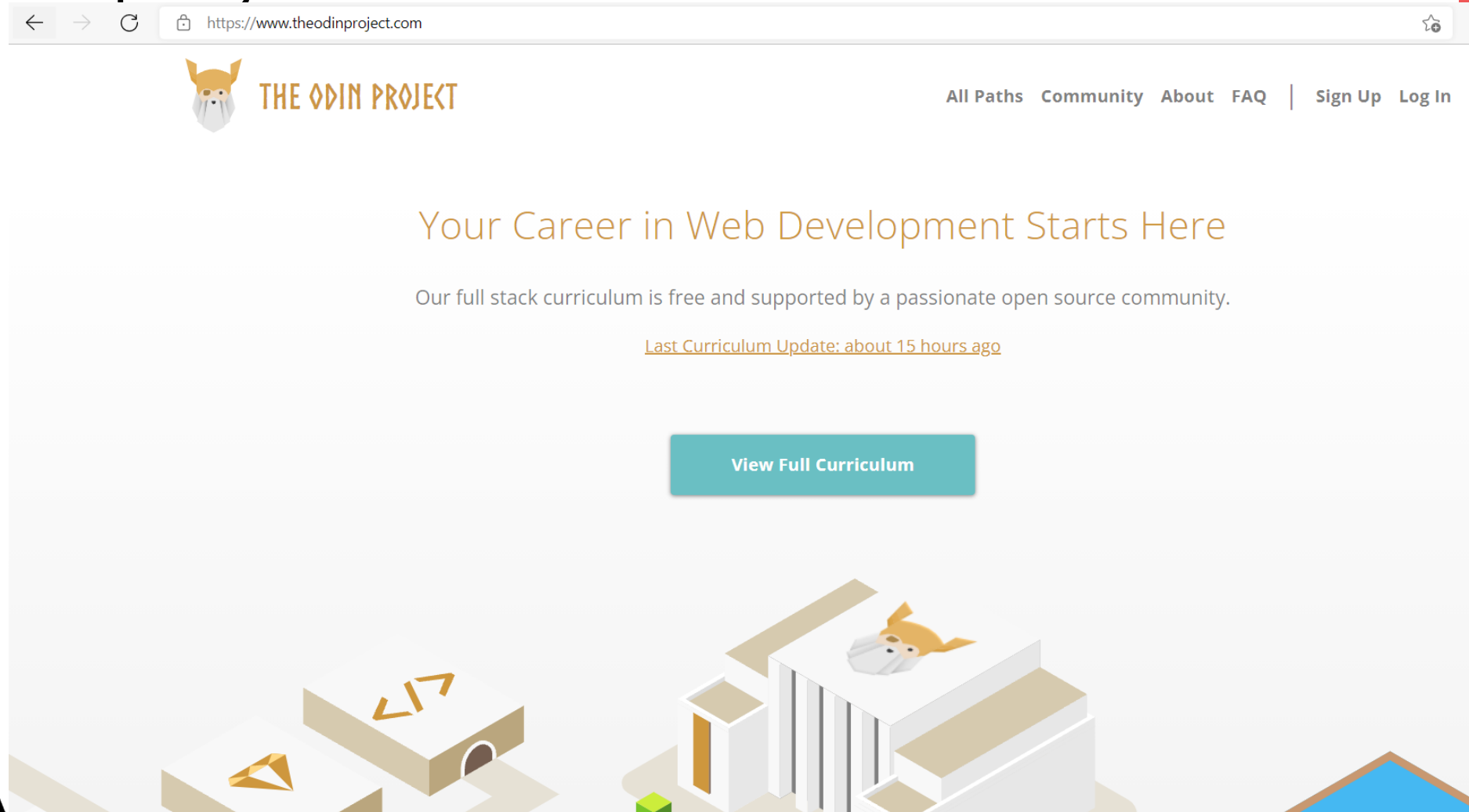
CSS

CSS Example:

```
body {
  background-color: lightblue;
}
```

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Odin project



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What to Do When You Get Stuck

- Ask other trainees – Teams
- Talk to the duck
 - https://en.wikipedia.org/wiki/Rubber_duck_debugging
- Take a break
- Google it
 - Do you recognise the website? (E.g. w3schools)
 - StackOverflow – make sure code is recent and you understand it
- Ask friends who know stuff
- Ask trainer
- Look at official docs

Cyber Academy

Respect

Safeguarding

- Respect
- TTA has an ethos of inclusivity
- Giving everyone the opportunity to excel

Respecting Yourself

- To respect ourselves we initially think of healthy attitudes, like eating the right foods. However, mental health is just as important.
- Think positively and remind yourself that you are capable of learning new things- especially through TechTalent!
- Have self- respect and do not try to be better than your peers (or brag about it).
- Affirm who you are, your strengths and your values.

Respecting Others

- Positive, respectful interaction like being courteous, patient or helpful is usually received with better results.
- You normally get back what you give.
- Be aware of your body language, the tone of voice, and your demeanour and expression in all of your interactions. People hear what you're really saying in addition to listening to your words.
- Smile and be friendly. You never know what is going on in someone else's life and a positive interaction could make their day!

Respecting Differences

- Seeing differences for what they are is important. We have different ethnicities, religions, family backgrounds, cultures, appearances, interests and abilities.
- But we all have similar thoughts, feelings, wants and dreams (like developing and learning through TechTalent!) We need to be appreciated for who we are and to feel connected.
- Sometimes it can be difficult to get beyond our differences. Rather than dealing with those uncomfortable feelings with teasing or taunting, we need to seek advice and talk to someone at TechTalent. We are here to unite, not to divide!

Respecting Differences

- As part of learning how to respect ourselves and others, we need to be willing to knock down these artificial and destructive barriers.
- This can be as simple as engaging in pleasant conversation, playing a game or aiding someone with their learning.
- Here at TechTalent, we ask you to have an open mind and an open heart and you will learn more about yourself and expand your circle of friends.

GIVE

RESPECT



RECEIVE

RESPECT

Treat others the way you wish to be treated. Nothing less than a respectful and safe environment is acceptable. This is in person **and** online.

EFFORT



**GOOD LEVEL OF
UNDERSTANDING AND
DEVELOPMENT**

Come to class prepared to participate, following TechTalent guidance. This is at the TechTalent classroom or their online learning platform.

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GIVE

ATTENTION



RECEIVE

A CHANCE TO SPEAK

Here at TechTalent we expect all learners to contribute to discussions, but to also give other speakers, including the teachers, their attention and respectful responses.



Respect

Through developing your respect for others, your self esteem will improve and you will be a very successful learner during your time with us.



Any questions?

- Next week
 - Python
 - Using Python IDLE or Repl.it

TECH TALENT
ACADEMY

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Resources mentioned in session

- [Course | Introduction to Computer Science and Programming Using Python | edX](#)
- <https://replit.com/>
- <https://codepen.io/>
- [Apparently, it's the next big thing. What is the metaverse? - BBC News](#)
- [Facebook to hire 10,000 in EU to work on metaverse - BBC News](#)
- [National Cyber Force to be based in Samlesbury - BBC News](#)