Talent Acceleration Program

WORKBOOK

Week 1

TAP Week 1

Nothing is impossible. The word itself says "I'm possible".

Welcome to week 1 of the Talent Acceleration Program! You're about to embark on an exciting journey towards becoming a professional web developer.

It is divided into several sections:

1. Technical Skills
2. Social Skills
3. Self Assessment 1
4. Career Design 1

Good luck and enjoy this week's content!

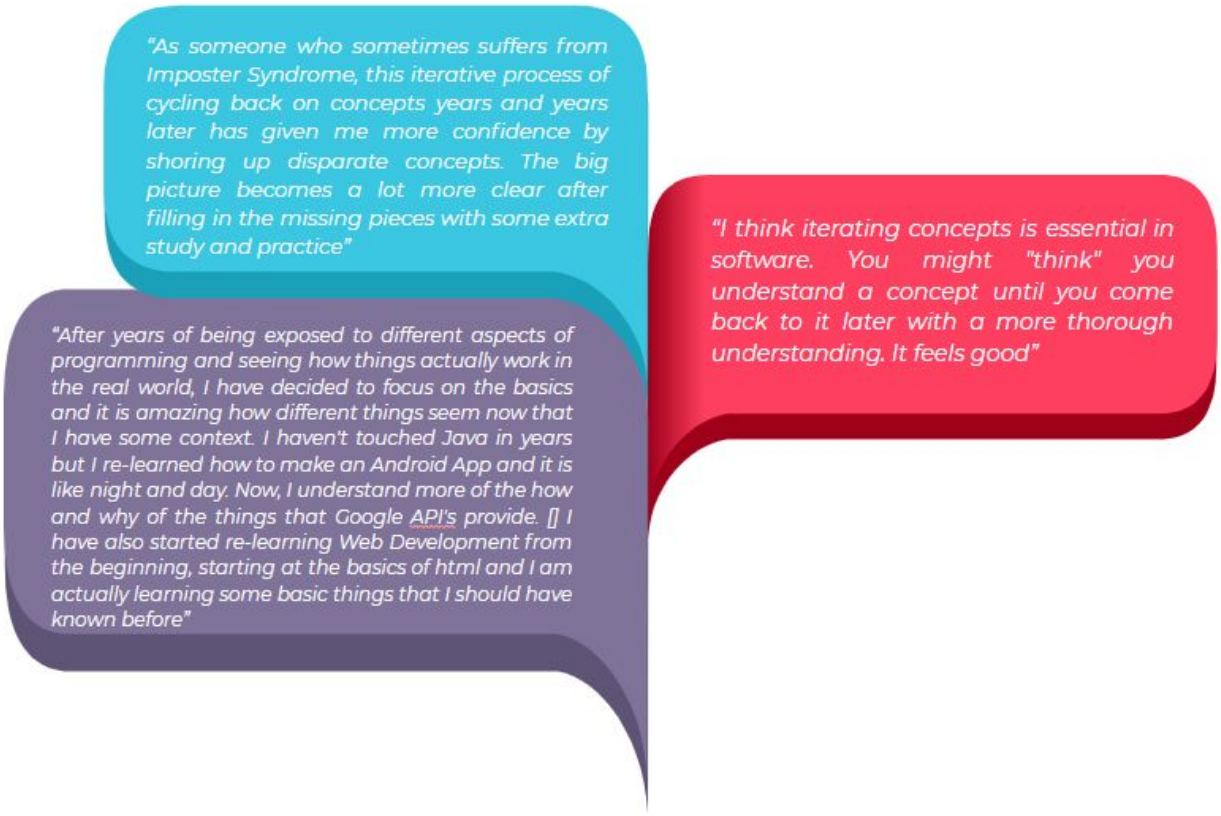
Part 1: Technical Skills

Week	Topics
1	Frontend Fundamentals
2	Backend Fundamentals
3	Agile Fundamentals
4	Project Management Fundamentals

Having strong technical fundamentals is an absolute must for you to qualify for a role as a professional web developer. As such, the first month of the program you'll work to refresh your understanding.

In week 1 you'll start by refreshing **Frontend Fundamentals**.

So, you may already have a degree, training, and perhaps some work experience. This begs the question, *why do you have to review the fundamentals?* Brilliant developers are dedicated to learning, re-learning, and applying their knowledge to solve complex problems. This is only possible if you have a good base to start with.



Therefore, this week you'll learn about:

- **Software Development Fundamentals**, including using a Code Editor (Visual Studio Code) and Version Control (using GIT)
- **Frontend Fundamentals**, including HTML5 (SEO and ARIA) and CSS3
- **JavaScript**, including fundamentals and best practices

Software development fundamentals

1. CODE EDITOR

First, let's set up a proper development environment. Having a quality code editor will help you streamline your work. This tool ensures you are able to write code easier and faster through various features such as autocomplete, formatting and debugging tools.

Here is a link to download Visual Studio Code. The following video will give you *some examples* of useful extensions for VSCode:

- Extensions (15 minutes)

2. VERSION CONTROL

GIT is the industry standard for version control. Using an online platform such as BitBucket allows you to back up your work, safeguarding your progress and ease the process of collaborative work.

Here's a link to download GIT.

Learning Materials

- GIT & BitBucket Basics
- A Typical GIT Workflow
- Pull Requests
- Pull Requests on BitBucket

Exercises:

- Play Git game

Frontend fundamentals

There are a large number of JavaScript frameworks and libraries out there that can be used for Frontend Development. Some of these you could have heard of such as React, Angular or Vue.

However, before diving into those it's important to know the foundation of

the web: HTML and CSS.

1. HTML5

In order to build for the web you need to know the foundational building block: HTML5. It gives us the power to add text, images and videos, thereby providing the structure of any webpage in existence.

As professional web developers we should know the internal logic, most commonly used elements and best practices in order to be effective.

In a business environment, this also includes an awareness of things like accessibility (ARIA) and Search Engine Optimization (SEO).

Learning Materials

- Learn HTML5 in 1 Hour
- Web Accessibility Guidelines
- What is ARIA & Why it's Important to Use
- SEO for Developers

2. CSS3

While HTML by itself could do the job in providing an interface, it doesn't provide the best user experience. Therefore, CSS was invented. With CSS3 the potential of a developer to organize and style interfaces became even bigger.

Features like media queries, flexbox and keyframes made it possible to make the web even more accessible to many different users on many different devices!

In the evolution of CSS, some developers thought about reducing repeated CSS rules by creating frameworks to be used in the frontend. These CSS frameworks (i.e. Bootstrap or TailwindCSS) have gained popularity in business since. Why? It reduces the amount of time it takes to build a digital product!

Learning Materials

- Most Important CSS Properties with Example
- The Box Model
- Complete guide to flexbox
- A Complete guide to CSS Grid
- Responsive Design
- CSS Animation in 100 Seconds
- Vanilla CSS vs. Bootstrap vs. TailwindCSS

Exercises:

- Play Flexbox Froggy
- Play CSS Grid Garden

3. JAVASCRIPT

JavaScript began as a browser scripting language. What started as a 10 day experiment has now evolved into one of the most popular languages in the world.

The main use for JavaScript is to make your webpage interactive: for example, if you click a button it will open a popup. Or if you scroll over an image, it changes its color. This is called DOM manipulation.

Learning Materials

- Fundamentals
  - Introduction to JavaScript
  - JavaScript and the DOM
- Tools
  - ESLint
  - Browser DevTools
- Best practices
  - KISS, YAGNI, DRY, SOLID
  - JavaScript Best Practices and Naming Conventions
- Package managers
  - What is NPM?
  - NPM vs Yarn

Technical Assignment

In order to give you a soft landing into TAP, you are not required to work on a client project just yet. Instead, you are tasked to make an assignment to solidify what you have learned. Take a look at the following:

ASSIGNMENT: The Pokédex App

Description

Build a Pokédex that allows a user to view many different Pokémon, view their details and record whether or not they've seen/caught them. It should be possible to search by name and the data should be persistent after refreshing the page

Feature list

- Search by name
- List Pokemon alphabetically
- Records if the Pokemon has been seen/caught (store data in LocalStorage)
- Popup when clicked on Pokemon to show details

Acceptance criteria

- Use the following public API: PokéAPI
- Use vanilla JavaScript and CSS framework MaterializeCSS
- Handle edge cases like validation, errors and placeholders
- Include a header and footer (it should look like a landing page!)
- Always lists 5 (randomized) Pokemon by default at every refresh
- No other libraries are allowed
- No HTML templates are allowed
- Add documentation on how to setup the project for viewing locally

How to submit

Submit your application to the TAP-Cohort-1 repository, on BitBucket. Make sure to:

- Create a branch (i.e. "noer-week1-coursework"
- Make a pull request to "master"
- Add your mentor (in this case Noer) as a reviewer

The deadline is **Saturday February 20, 23.59**.

PART 2: Soft skills

Week	Topic
1	Growth mindset
2	Time management
3	Professional communication I
4	Customer centricity I

Where technical or hard skills are the basic minimum requirements to do a job, the development of your soft skills will be what defines your career success.

This week you'll begin Module 1: Foundations. Each week you'll work on cultivating a foundational skill. They start out quite abstract, but gradually become more concrete as the Program progresses.

Foundations Module: Week 1

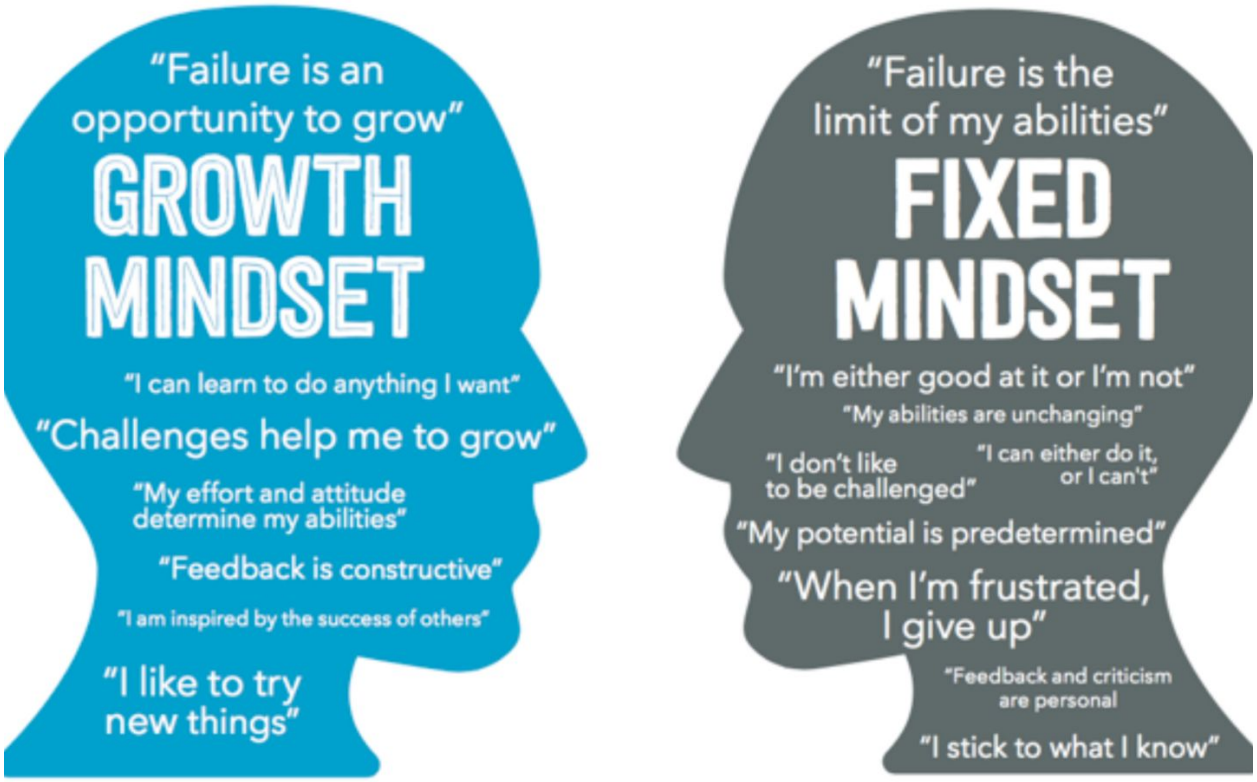
How do you talk to yourself? If you've ever caught yourself judging yourself harshly, you might be suffering from negative mental habits. Obviously, this will not serve you in your life (whether it's personal or professional).

How do you change this? There are many theories about this topic; how to change yourself. In actuality, it's not that difficult because we do it all the time!

If you've ever moved to a new house, learned a new language or made new friends you had to adapt to learn how to deal with these unfamiliar situations.

So the question shouldn't be *how* do you change yourself, but *what's the best way* to change yourself on a fundamental level (i.e. from pessimist to optimist, or from fearful to courageous). This is where we enter the realm of human psychology and identity.

Many theories have been proposed to solve this, but this week we'll focus on one: the growth mindset.



Growth vs. Fixed Mindset

Think of a recent example of when you failed. This could be a test at university or an unexpected outcome from a conversation with a friend or family member.

Now, *be as honest with yourself as possible* and ask yourself these questions:

1. What happened?
2. What was the result?
3. What was I thinking at the time? / What do I think the other person / people were thinking at the time?
4. *Why was it a "failure"?*

Somehow, as we grow older we start to slip into this mindset of good/bad, right/wrong and "that's just the way it is". In the field of psychology this would be termed a "fixed mindset".

Learning Materials

- Growth vs. Fixed Mindset

When we slip into a fixed mindset, we tend to react negatively when things don't go our way. For example, many people's immediate response to an undesirable social situation is to become defensive.

Research shows us, however, that defensiveness can reduce a person's IQ by up to 20 points! In addition, we tend to go into our "fight or flight" mode: rational thinking gets shut down and you'll have a hard time managing your emotions in a healthy way.

Learning Materials

- How Stress Affects Your Brain

But there is hope! It's called adopting a "growth mindset".

A growth mindset is marked by the belief that you can improve qualities like drive, intelligence and self-confidence. This is done by believing it to be possible that you can change for the better, and then proactively working on developing yourself.

Exercise: Spot the growth mindset

Look at this list of traits:

- ➔ Avoiding challenges because you are afraid of looking stupid.
- ➔ Seeing problems as interesting challenges.
- ➔ Believing that basic abilities are just a starting point and that new abilities can be developed through practice.
- ➔ Thinking that personal qualities like intelligence or talent are fixed traits.
- ➔ Documenting past achievements rather than working to improve them.
- ➔ Acknowledging that failing is a part of learning.
- ➔ Realizing that effort has an effect on your success.
- ➔ Believing that talent alone leads to success.
- ➔ Able to listen to constructive criticism and recognizing that it is not you being assessed but the result of your work.
- ➔ Avoiding feedback and taking any feedback personally.

Some traits describe a growth mindset, while others describe a fixed mindset. Which statements would you place under which type of mindset?

You are encouraged to further research this topic for yourself. To help you along the way, look at the following:

Learning Materials

- Positive Self-Talk
- You Are Not Your Thoughts
- How To Change Beliefs
- Growth Strategy: Life Is a Game

Note: In order to make these abstract soft skills topics more concrete, there will be a Group Exercise done every Thursday. Together with the rest of the cohort we'll bring the concepts to life!

Self-Assessment Form

In this form you will find various questions that will challenge you to reflect on your learning process. Learning new skills takes time, and a good way to make the most out of it is to think actively about what you're doing and why.

How to answer the questions:

BAD EXAMPLE

- *This week I learned about Conflict Resolution. It's difficult.*

GOOD EXAMPLE

- *This week I learned about Conflict Resolution, which was easy for me to understand. It's an important concept, because it helps mitigate tension in our (business) relationships. An example of this is one argument I had with a colleague. We disagreed on something, but I could quickly recognize that it was just a simple misunderstanding.*

1. Technical Skills
    a. Could you describe which technical topic you had most trouble with?
    b. What's your plan for improving your understanding of it?
2. Soft Skills
    a. How can this week's concept (*Growth Mindset*) help you be a better professional?
    b. What is 1 practical way of practicing this concept to improve yourself?
3. Business Awareness
    a. How would you describe Kiitos' company culture?
    b. How does Kiitos make money?

Career Design 1: Vision & Ambitions

"The future belongs to those who believe in the beauty of their dreams."

- Eleanor Roosevelt

In the Career Design module of the Program, you'll spend time reflecting on yourself, your career and your life. How does everything you're learning about fit into the bigger picture?

In this first session you'll set the stage by thinking big about your life: your vision and ambitions for the future.

Exercise:
Answer the following questions:

- *What made you decide to pursue a career in tech?*
- *Professionally, what do you want to be?*
- *Professionally, what would you love to do?*
- *Professionally, what would you love to have?*
- *Why would you love to be, do & have that?*
- *How will this program help you be, do and have those things?*
- *Professionally, who are your biggest role models/people you admire? Shortly explain why.*
- *Briefly identify what are the common threads of the teachers/ mentors you are inspired by?*
- *What is your concise definition of business success (achievement)?*