

Andela Bootcamp Prep Material

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1. Git and version control

Overview

Version control is a way of keeping track of changes to files over time so that you can recall previous versions when needed and also easily work with other teammates collaboratively

Learning Objectives

By the end of this module, you should be able to understand:

1. What version control is and why it is important
2. Know examples of version control systems
3. How to use common git commands

Resources

- [Command line basics](#)
- [What is version Control?](#)
- [Join Github](#)
- [Installing Git](#)
- [Getting started with Git and version control](#)
- [Introduction to git\(Video\)](#)
- [Git for beginners\(Video\)](#)
- [Common Git Commands](#)

Practice:

1. [Create a simple Repo and make your first commit](#)
2. [Introduce branching to your repo](#)

2. Test Driven Development

Overview

TDD is a software development process in which one writes tests before writing production code thus giving one an opportunity to think through a systems requirements.

Learning Objectives

By the end of this module, you should be able to understand:

1. What tests are
2. How to write tests
3. How TDD is beneficial to programming?
4. Debugging in Javascript and python

Resources

- [What is TDD](#)
- [Getting Started With TDD](#)
- [Getting Started With TDD in Javascript](#)
- [Getting Started With TDD in Python](#)
- [Debugging in Javascript](#)
- [Debugging javascript with chrome dev tools](#)
- [Debugging javascript with mozilla dev tools](#)
- [Debugging in python](#)
- [Debugging python with VS code](#)

3. Databases

Overview

Databases are a collection of data organized in such a way that the data can be easily fetched when needed.

Learning Objectives

By the end of this module, you should be able to understand:

1. The different types of databases
2. How to create a simple SQL database
3. How to query SQL databases

Resources:

- [Types of databases](#)
- [Basic SQL queries](#)
- [Installing postgresSQL](#)

Practice:

Using [SQL Fiddle](#) create a simple database for an application that allows you to create a list of activities you need to undertake by the end of the day and mark them as done or not.

4. Project Management Tools

Overview

Project management refers to directing and allocating available resources so as to be able to meet requirements of a project within a stipulated time.

Learning Objectives

By the end of this module, you should be able to understand:

1. Which project management tools are available.
2. How to create a pivotal tracker board.
3. How to create and update stories on pivotal tracker.
4. Link up your github repo to your pivotal tracker

Resources

- [Quick look into different project management tools](#)
- [Getting started with pivotal tracker \(Video\)](#)
- [Getting Started With Pivotal tracker \(PDF\)](#)
- [Writing pivotal tracker stories\(video\)](#)
- [Linking your pivotal tracker to github](#)

5. Web Programming

Overview

This module covers the fundamentals of web programming and the technologies used in building modern web applications.

Learning Objectives

By the end of this module, you should be able to understand:

1. Basics of HTTP Web Protocol
2. Use of HTML and CSS to create static web pages
3. Use JavaScript to create interactive web pages
4. Basics of MVC architecture
5. Basics of Web Services and API Design
6. Front-end Web Development Frameworks
7. Back-end Web Development Frameworks

Resources

- [Introduction to Web Services](#)
- [The Fundamentals of REST API Design](#)
- [API Design Guidelines](#)
- [Introduction to Front-end CSS frameworks](#)
- [General Front-end Web Dev Frameworks](#)
- [Modern JavaScript Front-end Frameworks](#)
- [Getting started with ReactJS](#)
- [Server-side web frameworks](#)
- [Getting Started with Flask](#)
- [Introduction to Express and Node](#)
- [Node and Express Fundamentals: A Beginner's Guide](#)

Practice

1. [Intro to HTML/CSS](#)
2. [Introduction to REACT.JS.](#)
3. [Introduction to FLASK WEB DEVELOPMENT.](#)
4. [NODE/EXPRESS WEB DEVELOPMENT](#)

6. Introduction to ES6

Overview

This module introduces the fundamental concepts and new features in ES6.

Learning Objectives

By the end of this module, you should be able to understand:

- Have a basic understanding of the structure of ES6
- Should be able to adhere to ES6 syntax conventions
- Should be able to write simple ES6 applications
- Should be familiar with the new JS features introduced in ES6

Resources

- [Introduction to ES6](#)
- [A First Look at ES6 New Features](#)

7. Communication

At Andela. We know that effective communication is required for use to succeed so we are willing to ask questions, seek and request feedback, write professionally, read to understand what message is being passed and speak to be understood.

A. Speaking to be understood

Overview: Andelans recognize how speaking is distinct from being understood. They can describe why speaking to be understood is a necessary skill for professional environments and regularly demonstrate an ability to be clear and audible when speaking.

Learning Objectives

By the end of this module, you should be able to understand:

- Principles of effective communication
- How the type of audience I'm addressing affects my delivery
- How the context in which I'm addressing my audience affects my delivery

Resources

- [7 Cs of communication](#)
- [Complete Lesson: Effective Communication](#)
- [7 Steps to communicating clearly](#)

B. Seeks Feedback

Overview: Andelans value receiving feedback and are able to apply feedback they receive to improve on their performance.

Learning Objectives

By the end of this module, you should be able to understand:

- Importance and benefits of seeking feedback
- Approaches for constructively and effectively receiving feedback

Resources

- [Seeks feedback](#)

C. Writing Professionally

Overview: Andelans understand that written communication is used in a workplace environment and allows professionals (e.g. Software engineers, businesspeople, professors, doctors, lawyers, etc.) to make informed decisions.

Learning Objectives

By the end of this module, you should be able to understand:

- Ways in which you can improve your writing
- Things to check when writing

Resources

- [16 Easy ways to improve your writing](#)
- [How to write like a pro](#)
- [Tools to help write professionally](#)

8. Integration

At Andela, we understand the power of relationship building, team dynamics, cultural awareness, adaptability, vision alignment, growth, Leadership and mentorship. This is embedded in our DNA.

A. Growth Mindset

Overview: Growth mindset refers to the ability to recognise that our shortcomings are actually opportunities to learn and leveraging resources around us to grow.

Learning Objectives

By the end of this module, you should be able to :

- Understand the differences between growth mindset and fixed mindset
- Leverage your environment to grow
- Take your shortcomings as an opportunity for growth
- Create a career plan

Resources

- [Growth Mindset](#)
- [What is growth mindset](#)
- [Beginners guide to career planning](#)
- [Growth mindset Vs Fixed mindset](#)

B. Relationship Building

Overview: The andela community knows, understands, and embodies the relationship building characteristics. These characteristics guide people to grow into new life approaches and ways of being; identities that help to unlock their potential, accelerate their transformation, and ultimately make us all #limitless through human interaction.

Learning Objectives

By the end of this module, you should be able to understand:

- Different types of relationships.
- What building relationships entails.
- Characteristics of good relationships.

Resources

- [Building relationships](#)
- [Building great work relationships](#)
- [The power of relationship building](#)

C. Adaptability

Overview: Aspiring Andelans need to know, understand, and embody a mindset of adapting to changes in their work environment. Through this mindset, we can be guided to grow into new life approaches, ways of being, and identities that help to unlock our potential, accelerate our transformation, and ultimately make all of us #limitless.

Learning Objectives

By the end of this module, you should be able to understand:

- Concept of change
- Causes, cycles and effects of change
- Managing and embracing change

Resources

- [Adaptability](#)

9. Professionalism

At Andela we act, react and communicate in a manner that demonstrates respect for our co workers, partners, ecosystem and show an acceptance of the organization's mission. We hold ourselves to the highest ethical standard.

A. Business Etiquettes

Overview: Andelans recognize there is a standard framework within which **business** people can operate as they communicate and collaborate. Attention to **etiquette** is a sign of professionalism and respect for others, and it can make positive first impressions while building trust among colleagues.

Learning Objectives

By the end of this module, you should be able to understand:

- What is Business Etiquette
- Vital rules of business etiquettes

Resources

- [Importance of Business Etiquette](#)

- 21 Vital Etiquette Rules
- 10 Key Business Etiquette every Professional should know
- Business Etiquette for Job Success
- 15 Professional Communication Etiquette Rules
- Communication Etiquette

B. Ethics

Overview: Andelans recognize that we are held to the highest ethical standards and we understand that with great power as technologist comes great ethical responsibilities

Learning Objectives

By the end of this module, you should be able to understand:

- What Ethics is
- Difference between Ethics and the Law
- What are the different types of ethical issues

Resources

- [The Ethics of Business Business Ethics](#)
- [Ethics Case Studies](#)
- [Ethical Decision Making](#)
- [Should Software developers have a code of conduct?](#)
- [Programming Ethics](#)
- [Ethics Case Studies](#)