alx

Software Engineering Programme Curriculum

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Software Engineering Programme Curriculum

Foundations

Sprint 1

Git & Command Line Editors	Introduction to Bash	C - First Statements
C - Pointers	C - Recursion	C - Static Library
C - Memory Allocation	C - Preprocessor	C - Variadic Functions
C - Bit Manipulation	C - File I/O	Singly Linked Lists
Create your own Printf	Create your own Shell	

Sprint 2

Python - First Statements	Python - Import & Modules	Python - Data Structures
Python - Exceptions	Python - Classes	Python - Inheritance
Python - File I/O	Python - JSON Serialization/ Deserialization	HTML/CSS Introduction
SQL - Basic Queries	SQL - Join Queries	C - Dynamic Libraries
C - Makefiles	Doubly Linked Lists	Stack and Queues
Hash Tables	Sorting Algorithms	Binary Trees
Bash - Scripting	Unix Processes and Signals	Regex
Network Introduction		

Sprint 3

Python - Object-Relational Mapping	Python - Web Framework	Python - RESTful API
Python - Web Scraping	Javascript - First Statements	Javascript - Objects
Javascript - Scopes and Closures	Javascript - Web Scraping	Search Algorithms
SSH	SSL Certificate	Web Server

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Sprint 3

Load balancer	Firewall	MySQL Primary-replica
Server Monitoring	Code Deployment	Postmortem
Webstack Debugging	Portfolio Project	

Specialization 1 Front-End

Sprint 4

ES6 Introduction/Promise	ES6 Classes/Data Manipulation	TypeScript
HTML / CSS Advanced	Developer Tools	Responsive Design
Webpack	React Introduction/Props	React Component
React Inline-Styling	React State/Immutable	React Redux - Action Creator/Normalizr
React Redux - Reducer Selector	React Redux - Connector/ Provider	

or

Specialization 2 Back-End

Sprint 4

ES6 Introduction/Promise	ES6 Classes/Data Manipulation	TypeScript
Python	Async	MySQL Advanced
NoSQL Introduction	Redis Introduction	API Pagination
Caching Algorithms	Unit & Integration Tests	i18n
Personal Data	User Authentications	Node JS Introduction
Queuing System	GraphQL API	Async File API