# 1-Month Project Roadmap for Landing an Internship at Silicon Valley

This roadmap is designed to help you, as a beginner with OOP (Java), Data Structures (String, Array, Hash, Sorting), achieve practical experience and build projects that showcase your skills to impress Silicon Valley recruiters. The projects are arranged in logical order, starting from foundational concepts to more advanced topics, ensuring steady knowledge growth.

## Project 1: To-Do List App (Java + File I/O)

\*\*Objectives:\*\* Build a small application in Java focusing on OOP and managing data through File I/O.

\*\*Requirements:\*\* Develop a To-Do List app with features to add, delete, edit, and save tasks to a file.

\*\*Knowledge Required:\*\* OOP (Class, Object, Encapsulation), File I/O, Control Flow (If-Else, Loop), Basic Exception Handling (Try-Catch).

\*\*Resources:\*\* [Java Project: To-Do List App](https://www.youtube.com/watch?v=hcMzwMrr1tE).

\*\*Estimated Completion Time:\*\* 5-7 days

\*\*Importance Score:\*\* 7/10

## Project 2: Inventory Management System (Java + OOP + Collections)

\*\*Objectives:\*\* Enhance OOP knowledge and work with Java's Collections Framework.

\*\*Requirements:\*\* Create an inventory management app to add, delete, edit, and search products, using ArrayList or HashMap for data storage.

\*\*Knowledge Required:\*\* Advanced OOP (Inheritance, Polymorphism), Java Collections (ArrayList, HashMap), Searching and Sorting.

\*\*Resources:\*\* [Java Collections Framework](https://www.javatpoint.com/java-collections).

\*\*Estimated Completion Time:\*\* 7-10 days

\*\*Importance Score:\*\* 8/10

## Project 3: RESTful API for Task Management (Java + Spring Boot)

\*\*Objectives:\*\* Learn Spring Boot to build RESTful APIs for backend development.

\*\*Requirements:\*\* Build a REST API for task management with endpoints for GET, POST, PUT, DELETE tasks.

\*\*Knowledge Required:\*\* HTTP Methods (GET, POST, PUT, DELETE), Spring Boot (Controller, Service, Repository), JSON handling, Postman testing.

\*\*Resources:\*\* [Spring Boot REST API Tutorial](https://www.youtube.com/watch?v=msSrUEzjaeU).

\*\*Estimated Completion Time:\*\* 7-10 days

\*\*Importance Score:\*\* 9.5/10

## Project 4: E-Commerce Data Analysis (Java + SQL)

\*\*Objectives:\*\* Integrate Java with SQL to analyze data from an e-commerce database.

\*\*Requirements:\*\* Create a SQL database for products and write queries for best-selling products, total revenue, and product filtering.

\*\*Knowledge Required:\*\* SQL (SELECT, INSERT, UPDATE, DELETE, JOIN), JDBC (Java Database Connectivity), Data Aggregation and Filtering.

\*\*Resources:\*\* [SQL with Java Tutorial](https://www.youtube.com/watch?v=y5BX3gGqiDM).

\*\*Estimated Completion Time:\*\* 5-7 days

\*\*Importance Score:\*\* 8.5/10

## Project 5: Personal Portfolio Website (React or HTML/CSS + JavaScript)

\*\*Objectives:\*\* Build a personal portfolio website to showcase your projects.

\*\*Requirements:\*\* Create a portfolio with sections for About Me, Projects, and Contact. Use React for dynamic UI or HTML/CSS for simplicity.

\*\*Knowledge Required:\*\* HTML/CSS basics, JavaScript or React, GitHub Pages or Netlify for deployment.

\*\*Resources:\*\* [React Portfolio Website Tutorial](https://www.youtube.com/watch?v=0YFrGy\_mzjE).

\*\*Estimated Completion Time:\*\* 5-7 days

\*\*Importance Score:\*\* 9/10

By following this roadmap, you will gain practical skills in Java, Spring Boot, SQL, and web development. Completing these 4-5 projects will provide you with substantial material to showcase in your resume and portfolio, increasing your chances of landing an internship at Silicon Valley.