

100 Days of C and Java Projects

100 Days of Simple C Projects

Purpose: Strengthen your logic, memory management, and syntax mastery. Each project should be terminal-based and doable in under a day.

Phase 1: Basics (Days 1–20)

1. Hello World
2. Simple Calculator
3. Even or Odd Checker
4. Prime Number Checker
5. Factorial Calculator
6. Sum of N Numbers
7. Temperature Converter
8. Simple Interest Calculator
9. Area of Circle, Rectangle, Triangle
10. Reverse a Number
11. Palindrome Checker
12. Fibonacci Sequence Generator
13. Armstrong Number Checker
14. GCD and LCM Calculator
15. Leap Year Checker
16. ASCII Value Finder
17. Swap Two Numbers (temp and no-temp methods)
18. Character Case Converter
19. Simple Login System (hardcoded username/password)
20. Counting Vowels and Consonants in a String

Phase 2: Arrays & Strings (Days 21–40)

1. Find Largest and Smallest in an Array
2. Sort Array (Bubble Sort)
3. Search Array (Linear and Binary Search)
4. Reverse Array
5. Merge Two Arrays
6. Matrix Addition
7. Matrix Multiplication
8. Transpose of a Matrix
9. Count Frequency of Each Element
10. Remove Duplicates from Array
11. String Reversal
12. String Comparison
13. String Concatenation
14. Substring Finder
15. Word Counter in String
16. String Encryption (Caesar Cipher)
17. Anagram Checker
18. Count Words, Digits, and Spaces
19. String to Integer Converter
20. Integer to String Converter

Phase 3: Functions & Pointers (Days 41–60)

1. Factorial using Recursion
2. Fibonacci using Recursion
3. Recursive Binary Search
4. Swap Numbers using Pointers
5. Find Maximum using Functions
6. String Length using Pointer
7. Array Sum using Pointer
8. Pointer Arithmetic Demo
9. Dynamic Memory Allocation Example
10. Mini Calculator using Function Pointers
11. Passing Structures to Functions
12. Inline Function Simulation
13. Recursive Power Function
14. Recursive String Reversal
15. Simple Menu System
16. Structure for Student Information
17. Array of Structures
18. Structure Sorting by Name
19. Union Example
20. Enumerations Example

Phase 4: File Handling & Small Utilities (Days 61–80)

1. File Writer
2. File Reader
3. Copy File Contents
4. Count Words and Lines in File
5. Append Data to File
6. Merge Two Files
7. Student Record System (save to file)
8. Contact Book
9. Mini To-Do List
10. Expense Tracker
11. Simple Quiz Program (from file)
12. Bank Account Manager
13. Simple Voting System
14. Inventory Manager (text file)
15. Library Book Tracker
16. Simple Text Encryption
17. File Compression (run-length encoding)
18. Log File Analyzer
19. Temperature Logger (append daily readings)
20. Simple File Search Tool

Phase 5: Mini Systems (Days 81–100)

1. Tic-Tac-Toe
2. Snake Game (terminal-based)
3. Hangman
4. Guess the Number Game
5. ATM Simulation
6. Simple Calendar
7. Hotel Reservation System

8. School Grading System
9. Payroll Calculator
10. Currency Converter
11. Basic Password Generator
12. Quiz Leaderboard System
13. Mini E-commerce CLI
14. Simple Hospital Record System
15. Library Management System
16. Student Management System
17. Parking Lot Billing System
18. Bus Reservation System
19. Airline Ticket Booking (console version)
20. File-based Banking System (CRUD operations)

100 Days of Useful Java Projects

Purpose: Build real, usable systems with clean architecture and OOP design. Use JavaFX, JDBC, and Spring Boot after fundamentals.

Phase 1: Foundation (Days 1–20)

1. Calculator (GUI)
2. Temperature Converter (GUI)
3. Unit Converter
4. Simple Interest Calculator
5. Password Strength Checker
6. To-Do List (console)
7. Grade Calculator
8. BMI Calculator
9. Quiz App (console)
10. File Encryption Tool
11. Random Password Generator
12. Text File Analyzer
13. Banking CLI App
14. Expense Tracker (console)
15. Mini Contact Book (ArrayList)
16. Email Validator
17. Note-Taking App (console)
18. Tic-Tac-Toe (Swing)
19. Stopwatch (GUI)
20. Guess Number Game (GUI)

Phase 2: Database-Connected Systems (Days 21–50)

1. Student Information System (MySQL + JDBC)
2. Library Management System
3. Inventory Management System
4. Payroll Management System
5. Employee Attendance Tracker
6. Hotel Booking System
7. Simple Banking System
8. Vehicle Rental System
9. Expense Tracker with Database
10. Product Billing System
11. Grade Management System
12. Point-of-Sale System
13. Bus Ticket Reservation
14. Railway Reservation
15. School Management System
16. Pharmacy Inventory
17. Car Showroom Manager
18. Supermarket Billing System
19. Courier Tracking System
20. Restaurant Order Management
21. Exam Registration System
22. Hospital Management System
23. Apartment Rental Manager
24. Event Registration App

25. E-commerce Backend (console)
26. Donation Management System
27. Warehouse Stock Manager
28. Gym Member Tracker
29. Alumni Record System
30. Banking Ledger System

Phase 3: GUI-Based Systems (Days 51–80)

1. Library Management (JavaFX GUI)
2. Student System (JavaFX GUI + CRUD)
3. Inventory System (JavaFX GUI + DB)
4. To-Do List App (JavaFX GUI + SQLite)
5. Expense Tracker GUI
6. E-commerce Dashboard
7. Customer Support Ticket System
8. Course Enrollment System
9. School Attendance Tracker
10. Portfolio Manager (JavaFX)
11. Event Planner
12. Hospital Appointment Scheduler
13. Product Catalog Browser
14. Restaurant POS System (JavaFX)
15. Rental Management System
16. Invoice Generator
17. Loan Management Tool
18. Banking Dashboard
19. HR Management System
20. Job Application Tracker
21. Medical Prescription Manager
22. Complaint Management System
23. Inventory Monitor with Charts
24. File Backup GUI
25. Travel Booking Interface
26. Delivery Tracking System
27. Online Quiz GUI
28. Credit Score Estimator
29. Student Result Analyzer
30. File Organizer GUI

Phase 4: Web Systems & Large Portfolio Projects (Days 81–100)

1. Online Banking System (Spring Boot + MySQL)
2. Inventory System (Spring Boot REST API)
3. Task Management Web App
4. E-commerce Website Backend
5. Online Library Portal
6. Hotel Booking Website
7. Expense Tracker Web App
8. Online Learning Management System
9. Student Portal System
10. Employee Management Web App
11. Online Food Ordering System
12. Vehicle Rental Website
13. Blog Management System

14. Appointment Booking Portal
15. Real Estate Listing Site
16. Job Recruitment Platform
17. Donation and Charity Portal
18. E-wallet System
19. Clinic Management Portal
20. Full-stack Portfolio Website (Spring Boot backend + HTML/CSS frontend)