## 2-Week C++ Learning Plan for Hammad

## Week 1 - Brush-Up & Fixing Weak Spots

- Day 1: Pointers Basics declaration, dereferencing, pointer to int, pointer to array
- Day 2: Practice Pointers pointer arithmetic, passing pointers to functions
- Day 3: Classes & Objects defining a class, constructors, member functions
- Day 4: More OOP constructor overloading, access specifiers, object creation
- Day 5: File I/O reading/writing text files, student data records
- Day 6: Practice File Handling append mode, line-by-line reading
- Day 7: Mini Project: Student Record System (add, view, search using classes & file handling)

## Week 2 - Object-Oriented Programming + Dynamic Memory

- Day 1: Inheritance base & derived classes, access modes
- Day 2: Practice Inheritance constructor chaining, function overriding
- Day 3: Encapsulation getters/setters, private data members
- Day 4: Mini OOP Project: Bank Management System using classes
- Day 5: Dynamic Memory using new/delete, arrays on heap
- Day 6: Structures & Classes compare and practice using structs
- Day 7: Final Practice + Optional: Polymorphism or Templates