STEP computer ACADEMY

for kids ages 12-14

C PROGRAMMING / ALGORITHMS ASSEMBLER CURRICULUM

1st YEAR

- IT-Math, IT-Physics
- Data types and arithmetic operations
- Programming foundation (conditions, loops, functions)
- Logical operations
- File I/O
- Strings and string operations
- Arrays, structures, indexing
- Sorting algorithms (selection, insertion, bubble, merge, counting)
- Searching algorithms

2nd YEAR

- Bit operations
- Compound data types
- Pointer and Iterator
- Vectors and lists
- Abstract data types: stack, queue
- Sorting algorithms (quick sort)

3rd YEAR

- Trees and Graphs
- Debugging techniques
- Assembler language intro
- Optimization

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