

Final Project
Programming Fundamentals
Project Name: Bingo Game
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Final Lab project Report

“Bingo Game”

Introduction

- This C++ program implements a simple two-player Bingo game played on 5×5 boards. Each player inputs a 5×5 grid of integers (their board).
- Players then take turns calling numbers, which are marked as X on both boards.
- The program counts completed lines (rows, columns, diagonals).
- The first player reaches **5 complete lines** wins.

Objectives

- Create a playable console-based 2-player Bingo game.
- Allow players to enter their own boards.
- Mark called numbers on both boards simultaneously.
- Correctly detect and count completed lines (rows, columns, diagonals).
- Declare a winner as soon as a player has five complete lines.
- Display the updated boards and line counts after each number is called.

Requirements/System Requirements Software

C++ compiler supporting **C++98** or later (any modern compiler will work). o Examples: g++ (GNU), MSVC (Visual Studio).

- Console/terminal to provide standard input and view output.

Hardware

Any modern desktop, or laptop capable of running a C++ compiler.

How to Play

- Complete User Guidelines Setup
- Start the program.
- Read the instructions printed at the top explaining the rules and win conditions. Entering Boards
- Player 1 enters 25 integers row by row for their board.
- Player 2 enters 25 integers similarly.

During the Game

- After both boards are entered the game enters a loop where you repeatedly enter an integer.
- Each called number will:
- Be searched on both boards.
- If found, position(s) will be marked (X) on that board.
- Both boards are printed after each call.
- The program prints the number of completed lines for each player.
- Continue inputting called numbers until either player reaches 5

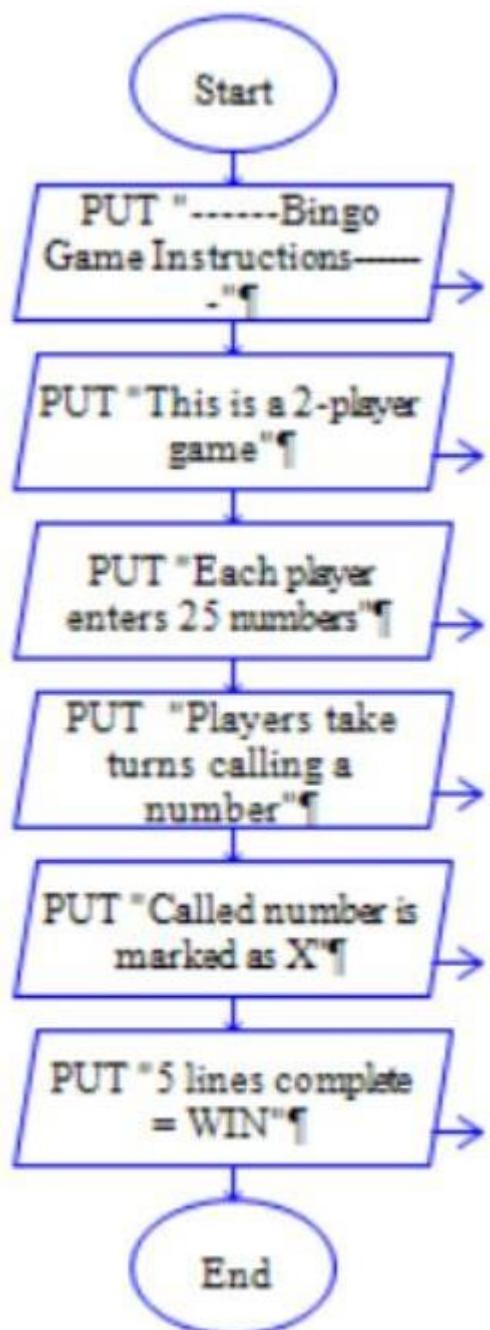
complete lines.

Winning

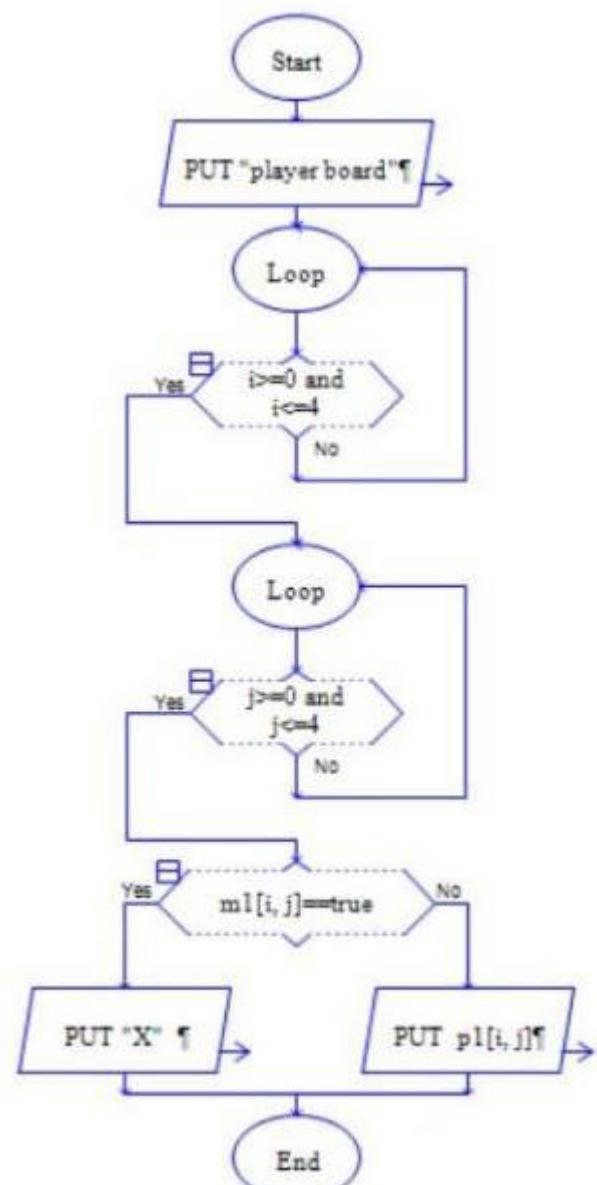
First player to have 5 completed lines (rows, columns, diagonals) is declared the winner and the program ends.

Flowchart of Bingo Game

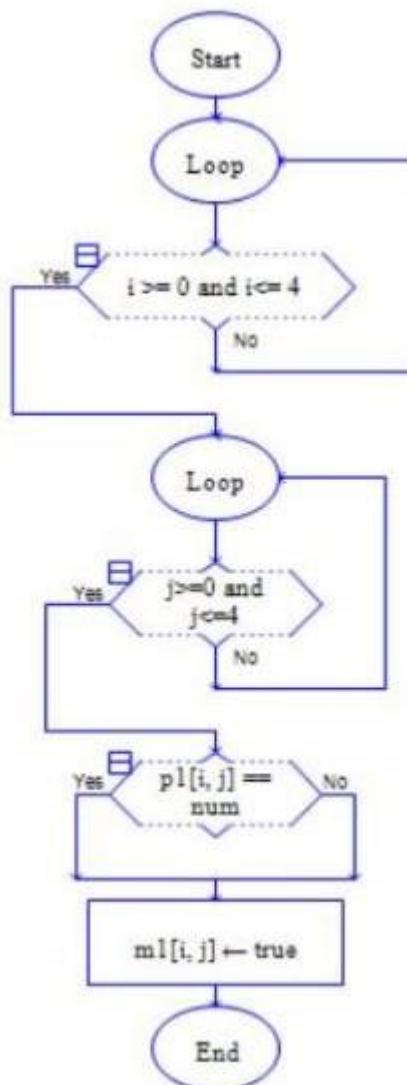
Flowchart of showinstructions function:



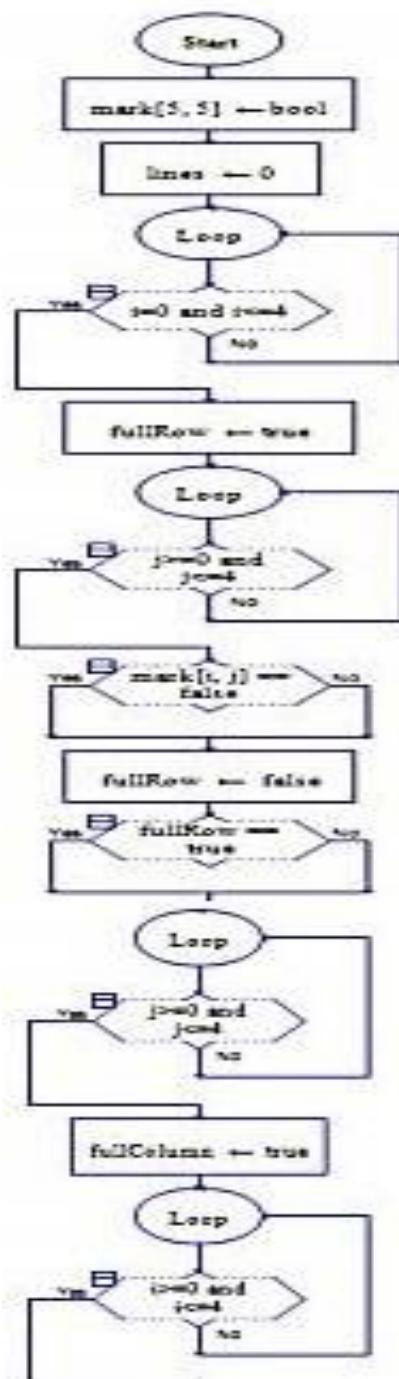
Flow chart of print board function:

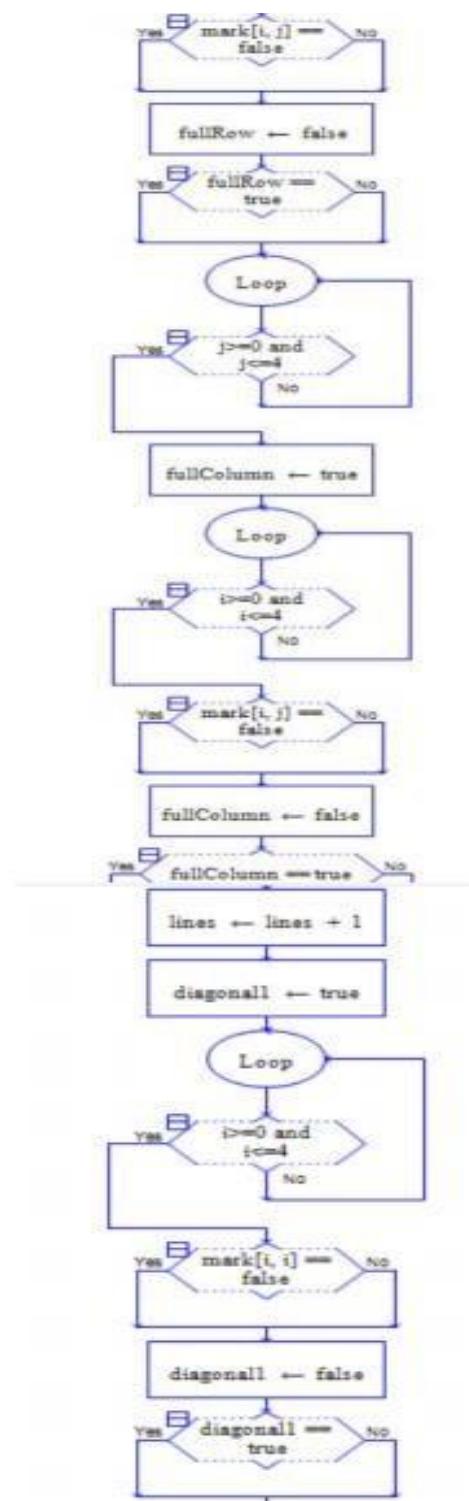


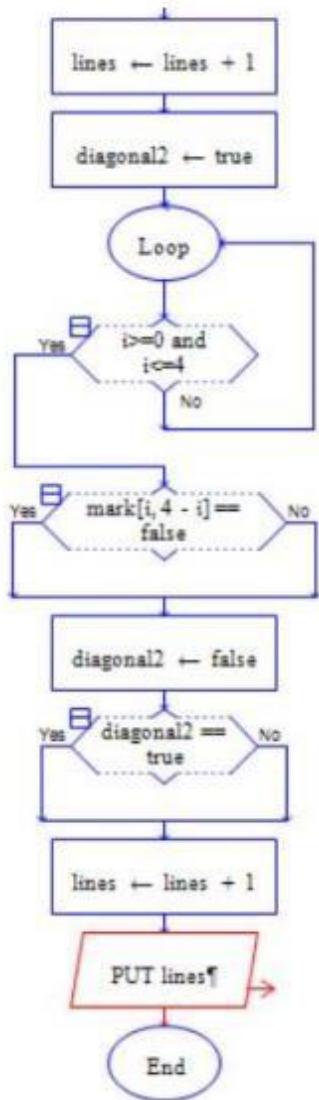
Flow chart of marknumber function:



Flowchart countlines function:







Flowchart main:

