

# Lesson 2 Video Series Script and Artwork Brief

## Program Structure and Variables

This video set should match the Lesson 1 whiteboard-tech style while introducing variables through a robot profile program.

## Recommended Video Set

| Video                          | Length      | Purpose                                                                       |
|--------------------------------|-------------|-------------------------------------------------------------------------------|
| 1 Program Structure            | 5 to 7 min  | Show include lines, main, braces, indentation, comments, and readable layout. |
| 2 Variables in a Robot Profile | 8 to 10 min | Create string, int, and double variables and print them.                      |
| 3 Fixing Variable Errors       | 3 to 5 min  | Fix spaces in names, missing semicolons, wrong types, and missing <<.         |
| 4 Lesson 2 Skill Check         | 5 to 8 min  | Build a five-line robot profile program.                                      |

## Master Artwork Prompt

Clean high-resolution educational whiteboard illustration for a beginner robotics C++ course, bright white background, bold black marker lines, teal and electric blue accents, small orange highlights, laptop showing abstract C++ variable code, robot profile checklist, simple robot controller board, gears and wires, polished hand-drawn classroom style, spacious 16 by 9 composition, no readable text, no logos.

## Scene Plan

| Time | On Screen                                   | Narration                                                                                    |
|------|---------------------------------------------|----------------------------------------------------------------------------------------------|
| 0:00 | Title card: Program Structure and Variables | In Lesson 1, you ran a program. Now we make programs easier to read and easier to change.    |
| 0:20 | Whiteboard layout of include, main, braces  | C++ programs have structure. Braces and indentation show which instructions belong together. |
| 0:45 | Robot profile variables                     | A variable is a named value. Today our values describe a practice robot.                     |

|      |                              |                                                                                       |
|------|------------------------------|---------------------------------------------------------------------------------------|
| 1:15 | string, int, double examples | A string stores text. An int stores a whole number. A double stores a decimal number. |
| 1:45 | cout output labels           | Clear output uses labels and values together so another person can read it.           |
| 2:10 | Skill check                  | Your task is to build a robot profile with at least five labeled lines.               |

## Prompt Bank

| Use             | Prompt                                                                                                                                                        |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title card      | Whiteboard-tech C++ robotics classroom title card, laptop with variable code shapes, robot profile checklist, teal and blue accents, no readable text, 16:9.  |
| Variable types  | Whiteboard diagram showing three labeled-looking but unreadable blocks for text, whole number, and decimal value, robot parts nearby, no readable text, 16:9. |
| Troubleshooting | Friendly C++ variable error scene with highlighted missing semicolon and invalid name area, magnifying glass, orange highlight, no readable text, 16:9.       |

## Video Status

**Lesson 2 video:** available on this lesson's website page with synchronized captions.

**Downloadable transcript:** available beside the video on the lesson page.

**Classroom use:** Play the lesson video, pause for discussion, and then begin the guided student activity.