

Lesson 2 Instructor Answer Key

Program Structure and Variables

Equivalent correct answers are acceptable when the code compiles, runs, and uses the required concepts.

Exercise 1 Sample Answers

Code	What Is It?
<code>string robotName = "PracticeBot";</code>	A string variable declaration and initialization.
<code>int motorCount = 4;</code>	An int variable declaration and initialization.
<code>double batteryVoltage = 12.6;</code>	A double variable declaration and initialization.
<code>// Robot profile variables.</code>	A comment.
<code>cout << "Robot name: " << robotName << endl;</code>	A cout statement that prints a label and variable value.

Exercise 2 Sample Answer

```
string driverName = "Alex";
cout << "Driver name: " << driverName << endl;
```

Exercise 3 Bug Fixes

Buggy Code	Corrected Code
<code>string robot name = "Bot";</code>	<code>string robotName = "Bot";</code>
<code>int teamNumber = "12345";</code>	<code>int teamNumber = 12345;</code>
<code>double batteryVoltage = 12.6</code>	<code>double batteryVoltage = 12.6;</code>
<code>cout << "Motor count: " motorCount << endl;</code>	<code>cout << "Motor count: " << motorCount << endl;</code>

Skill Check Sample Answer

```
#include <iostream>
#include <string>

using namespace std;

int main() {
```

```

// Robot profile variables.
string robotName = "PracticeBot";
int teamNumber = 12345;
double batteryVoltage = 12.6;
int motorCount = 4;
string driverName = "Alex";

cout << "Robot name: " << robotName << endl;
cout << "Team number: " << teamNumber << endl;
cout << "Battery voltage: " << batteryVoltage << " volts" << endl;
cout << "Motor count: " << motorCount << endl;
cout << "Driver name: " << driverName << endl;

return 0;
}

```

Suggested Rubric

Result	Description
Ready	Uses required variable types, prints clear labeled output, and can explain each variable.
Almost ready	Program works after small syntax or naming fixes.
Needs support	Student cannot yet create or print variables without direct support.