ENSF 692: Programming Fundamentals for Data Engineers

Welcome to Lab 3!

Today we'll explore user input methods, while loops, and preview Assignment 2.

S **by Sarah Shah**

Assignment 2 Overview

Due Date

Tuesday, May 20th at 11:59 pm

Main Task

Terminal application for processing car vision detection sensor changes

Submission

Submit HTTPS link via D2L. Last push before deadline will be graded.

Required Materials

Course Content

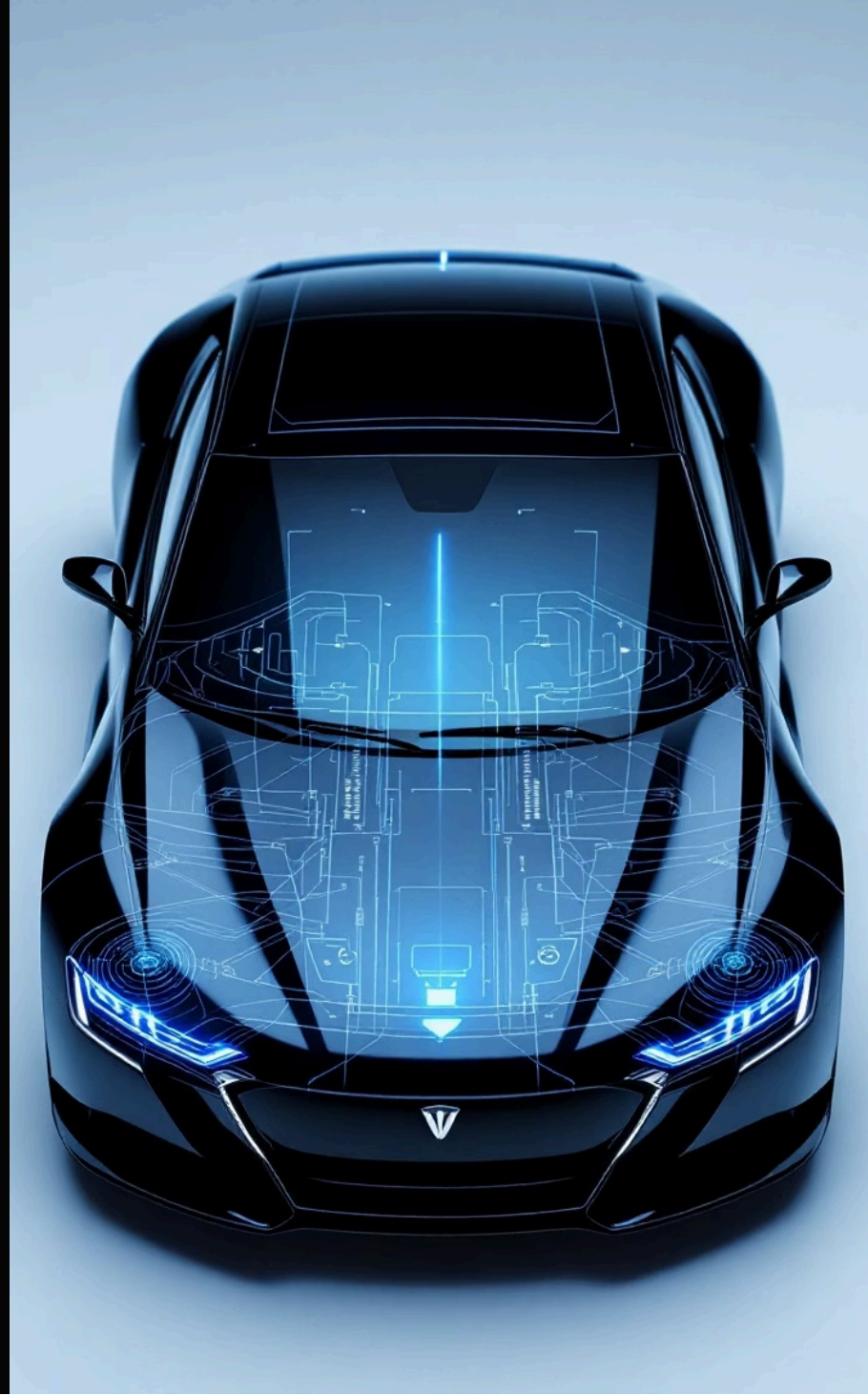
All lesson material to date plus upcoming class (May 14) and lab (May 15).

Lab Resources

Check D2L folder for updates before each lab. Solutions and examples added after sessions.

Tools

Download lab files and edit them in VSCode or a notebook during lab sessions.



Today's Exercises

Download Code

Get the Lab 3 code from D2L to begin our exercises.

while Loops

Learn how to run code repeatedly using a `while` loop and how to get out of the loop using a `break`

Group Analysis

Work together to add comments explaining program functionality.

Compare Methods

Analyze differences between input methods and control flow statements.

Key Analysis Questions

1

Method Differences

How is Method 3 different from the first two input methods?

2

Control Flow

How are the control flow statements used in each example?

3

Input Considerations

What kinds of situations would need you to prompt a user for input and what possible ways can you process that input?

Input Best Practices

User Understanding

Ensure users know how to provide proper input.

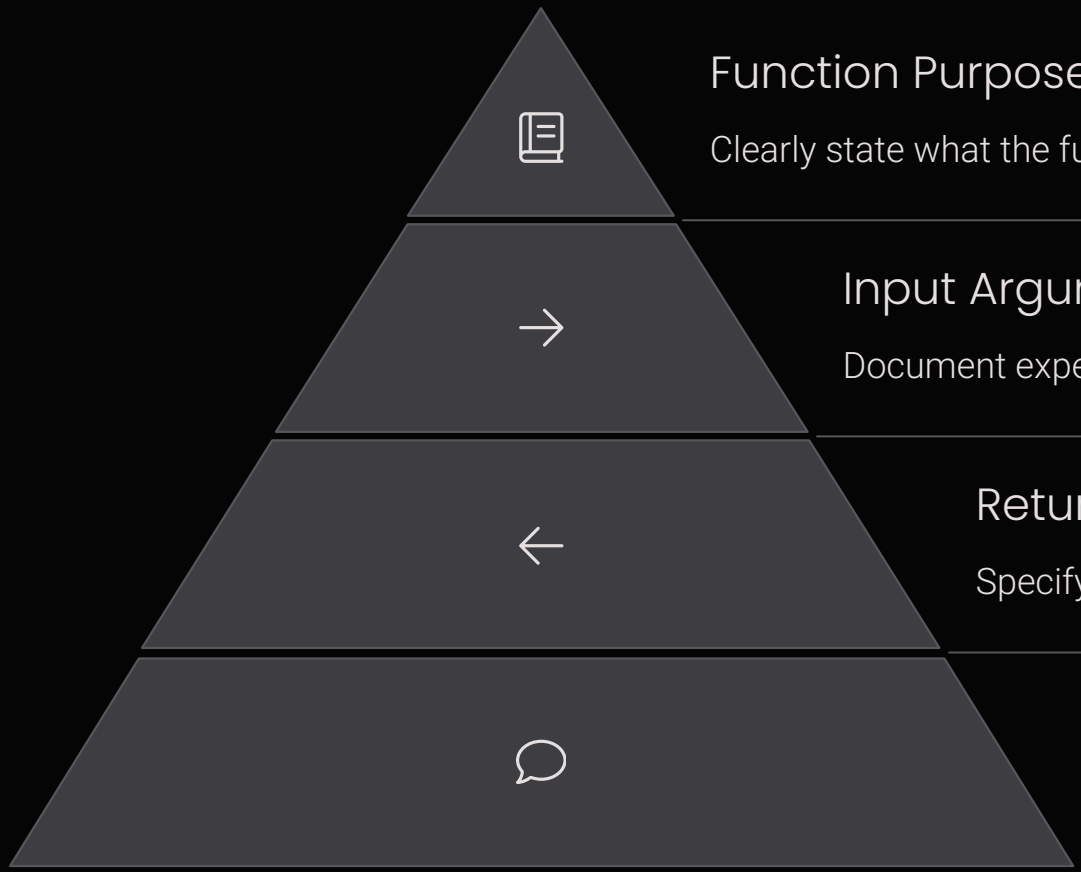
Immediate Validation

Evaluate input validity right away rather than at the end.

Type Casting

Remember input defaults to string. Cast when needed.

Documentation Essentials



Function Purpose

Clearly state what the function does

Input Arguments

Document expected inputs

Return Values

Specify what the function returns

Inline Comments

Add throughout your code

Coming Up Next

Class Tomorrow

More on while loops and user-defined functions

Office Hours

Get help with any questions

Lab Thursday

Additional practice with Assignment 2 concepts

Assignment Work

Begin planning your terminal application