

## Writing a MASM program

## Demonstration

# Example problem definition

Write a MASM program to perform the following tasks:

1. Introduce yourself to the user.
2. Get the user's name and age.
3. Greet the user, and report the user's age in dog years.
4. Say good-bye to the user.

Requirements:

1. The user's name and age must be entered by the user, and must be stored and accessed as data segment variables.
2. The "dog-years factor" (7) must be defined as a constant.

# Program Design

- Decide what the program should do
- Define algorithm(s)
- Decide what the output should show
- Determine what variables/constants are required

# Implementing a MASM program

- Open project
- Start with template, “save as” < .asm file in the program directory>
  - This is the source code file.
- Fill in identification block information
- Create comment outline for algorithms
- Define constants
  - `Test*/fix` (syntax check, nothing happens)
- Declare variables (.data section)
  - `Test*/fix` (syntax check, nothing happens)
- Enter the output code
  - `Test*/fix` (no calculations, usually everything shows 0)
- Enter the input code
  - `Test*/fix` (no calculations, echo input)
- Enter the calculation code
  - `Test*/fix` (logic check, verify)

\* First try **Debug, Start Without Debugging**

... more later on using the debug system

# Implementation

- Watch the Lecture #5 demo
- See program00.asm
  - On the course website