## DEV234

## Individual Project 1

# **ACME Anvils Order Taking Version 1**

# The Application

The Acme Anvil Corporation has been the premier supplier of anvils to cartoon villains since the 1940’s. For this assignment, you’ll build phase 1 of an application that will enable a clerk to take an order. You’ll need to collect the following information:

* The customer’s shipping information,
* The number of anvils they wish to purchase.

With that information in hand, you’ll produce an invoice that tells the client the cost of their purchase.

Each program execution will deal with exactly one order. To take the second and subsequent orders, the clerk will need to restart the program.

# Specification

**Behavior**

Ask for the clerk’s name when the application is launched. Then proceed.

* Display a nicely formatted “Welcome” message that includes:
  + The name of the company: **Acme Anvils Corporation,**
  + On a separate line, the company motto: **Supporting the animation industry for 50 years and counting!**
  + Match the example on the last page exactly.
* Collect data from the user one line at a time as follows (and in this order). Both the prompt and the user-supplied response must be on the same line. Match the example on the last page exactly.
  + Number of anvils
  + Customer’s name
  + Street address
  + City
  + State
  + Zip (as text, not numeric)
* Calculate the total cost of the order as follows:
  + Calculate the order subtotal by multiplying the number of anvils by the price per anvil. The per-anvil price depends on quantity as follows:
    - 1 – 9 anvils: $88.50 per anvil.
    - 10 -19 anvils: $70.00 per anvil.
    - 20 or more anvils: $68.25 per anvil.
  + Calculate the order total by adding tax. **The tax rate is 9.5%.**
* We charge $112 per anvil for shipping. The shipping charge is added to the total.
  + For addresses in California and Oregon, customers who order fewer than 5 anvils get free shipping, in which case you must print a message at the end of the invoice to indicate that the customer has qualified for FREE SHIPPING!
* Pause execution and display a message that reads “Press any key to display invoice…”
* Display an invoice that includes all this information – including the input data from the user – in a nicely formatted document. There’s an example at the end of the document. Match the example on the last page exactly.
* Thank the user for shopping with Acme and add a promotional slogan. You may create your own or use the one in the example at the end of the document.
* After the invoice is displayed, display the message “Press any key to end the program…” and pause execution.

## General requirements

* The program must behave as described above.
* The program must execute without any warnings or exceptions (i.e., run-time errors) unless the user enters invalid data. Don’t worry about data validation this version. (Bonus if you do validate all user input.)
* The output must be complete. That is, it must display:
  + A Welcome message with a slogan.
  + Customer name and address.
  + Number of anvils ordered.
  + Subtotal (number of anvils ordered multiplied by price per anvil)
  + Tax
  + Total (Subtotal plus tax)
  + Shipping amount or message
  + A closing (“goodbye”) message.
* The code must conform to the course Software Development Standards in all other respects, including comments.

## Usability

* Input prompts must appear on the same line on which the data is entered.
* Output should be readable. Use spaces, tabs, and formatting to de-uglify the console output.
* Match outputs to the example on the last page exactly.
* All output must be spelled correctly.
* Dollar amounts must appear in currency format (two decimals and a dollar sign).
* Dollar amounts in the invoice must line up on the decimal and must be right justified.
* Remove the word <SCRIPT> it is there to help you understand the example.
* Replace <your name here> with the name entered on launch.

## Coding Standards

* Use only one Write or WriteLine for multiple line output.
* Verify correct data type is used.
* Declare all variables as appropriate to their scope.
* Include a meaningful header.
* You are mature programmers by now, follow all other best practices to write the best industry standard code.

# Sample output

In the example interaction below, data typed by the user appears **highlighted and in boldface. You do not have to try to make your output highlighted and boldface.** It’s just a typographic convention intended to help you understand which parts you read from the console and which you display.

Remove the word <SCRIPT> it is there to help you understand the example.

Sums and amounts may not reflect accuracy and are provided for example output spacing and formatting.

\*\*\* ACME Anvils Corporation \*\*\*

Supporting the animation industry for 50 years and counting!

SCRIPT: Hi, I'm <your name here>. How many anvils would you like to order today?

Number of anvils: **10**

SCRIPT: I can certainly help you with that. Could you please give me your name and address?

First and last name: **Wile E. Coyote**

Street address: **25 S. Main St.**

City: **Sedona**

State (2-letters): **AZ**

Zip code: **83633**

Press any key to display invoice. . .

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\*\*\* ACME Anvils Corporation \*\*\*

Customer Invoice

SHIP TO:

Wile E. Coyote

25 S. Main St.

Sedona

AZ

83633

Quantity ordered: 10

Cost per anvil: $88.50

Subtotal: $885.00

Sales Tax: $84.08

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TOTAL: $969.08

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SCRIPT: Your total today is $969.08. Thanks for shopping with Acme!

And don't forget: Acme anvils fly farther, drop faster, and land harder than any other anvil on the market!

Press any key to end program...