**Chapter: 4**

**Assignment: MIDTERM**

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This program is called Math Whiz.

This is version 1.0, to be released to select schools for beta test. As a beta, we expect some bugs, and the development team will handle these as they are reported. Projected release version shall be version 2.0.

**PROGRAM DESCRIPTION:**

This program is designed to be used as a teaching aid for elementary age students to assist them with checking their answers on homework assignments.

The input module will utilize a simplistic menu style.

We will be using the CASE command to create the menu driven portions of the program, and dual selection structure.

For the selection menus I will be creating several modules that the program can switch between; A main menu module, a module for over 8 and a module for under 8 where the processing will take place, and an exit module.

**MAIN MENU:**

MainMenu Module

Write " How old are you?"

Write " Younger than 8 years old  . . . . . . . . . . . Enter 0"

Write " Older than 8 years old . . . . . .. . . . . . . . Enter 1"

Write “ I want to quit the program ……………...Enter 2”

Write “ ………………………………..Selection …..🡪

**INPUT**:

This module will capture the required information and a small personalized touch from the student. The program is designed to use the student’s first name to make them enjoy using the program a little bit more.

“Please enter your first name.”

FirstName (string)

Second menu will look just like first. Ask student to select the type of math to be performed.

“Please enter your first number.”

“Thank you “ + FirstName + “, please enter the second number.”

FirstNumber (integer)

SecondNumber (integer)

VARIABLES: FirstName (string) FirstNumber (integer) SecondNumber (integer)

**PROCESS/ASSIGNMENT STATEMENTS**:

This module will perform the necessary mathematics for the student.

Do not forget data types.

DECLARE FirstName as string

DELCARE FirstNumber , SecondNumber , Answer as integer

FORMULAS:

SET Answer = FirstNumber + SecondNumber

SET Answer = FirstNumber - SecondNumber

SET Answer = FirstNumber \* SecondNumber

SET Answer = FirstNumber / SecondNumber

**OUTPUT**:

The student should see a menu screen, and be able to select options from that list.

The student will see their results of the chosen mathematical formula, and when exiting the program the student should see the second personalized message below.

“Your answer is “ + Answer + ”.”

“Thank you for using Math Whiz!, “ + FirstName + “.”