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**SDEV 300 6382 LAB 2**

**1/22/2022**

**Main Menu**

**Test Case 1:**

Input validation

**Requirements:**

Must contain input validation.

**Input:**

Error Check, -1, 100, 6

**Expected Output:**

\*\*\* Invalid Selection \*\*\*

**Actual Output:**

\*\*\* Invalid Selection \*\*\*

Text

Description automatically generated

**Generate Secure Password**

**Test Case 1:**

Generate a Secure Password

**Requirements:**

Prompt the user for the length of the password to be created

Use of Upper Case

Use of Lower Case

Use of Numbers

Use of Special Characters

**Input:**

1, 16, y, y, y, y, 6

**Expected Output:**

\*\*\* Generated Secure Password -> <password> \*\*\*

**Actual Output:**

\*\*\* Generated Secure Password -> `'FGg3HJ<&.^`(`z \*\*\*

Text

Description automatically generated

**Test Case 2:**

Input validation

**Requirements:**

Must contain input validation.

**Input:**

1, Error Check, -100, 100, 0, 16, Error Check, No, Error Check, No, Error Check, No, Error Check, No, 6

**Expected Output:**

\*\*\* Generated Secure Password -> You have selected NO to all items. Please try again. \*\*\*

**Actual Output:**

\*\*\* Generated Secure Password -> You have selected NO to all items. Please try again. \*\*\*

Text

Description automatically generated

**Calculate and Format a Percentage**

**Test Case 1:**

Calculate and Format a Percentage.

**Requirements:**

User enters numerator

User enters denominator

User enters the number of decimal points for formatting

Example: 22, 57, 3 would yield 38.596 %

**Input:**

2, 22, 57, 3 would yield 38.596 %

**Expected Output:**

\*\*\* Percentage = 38.596 \*\*\*

**Actual Output:**

\*\*\* Percentage = 38.596 \*\*\*

Text

Description automatically generated

**Test Case 2:**

Input validation

**Requirements:**

Must contain input validation.

**Input:**

2, Error Check, -100, 10, Error Check, -100, 88, Error Check, -100, 2, 6

**Expected Output:**

All invalid inputs are caught and handled.

**Actual Output:**

All invalid inputs are caught and handled.

Text

Description automatically generated

**How many days from today until July 4, 2025?**

**Test Case 1:**

Display the number of days between today (1/22/2022) and 7/4/2025.

**Requirements:**

Display the number of days between today and 7/4/2025.

**Input:**

3, 6

**Expected Output:**

\*\*\* Days = 1259 \*\*\*

**Actual Output:**

\*\*\* Days = 1259 \*\*\*

Text

Description automatically generated

**Use the Law of Cosines to calculate the leg of a triangle**

**Test Case 1:**

Find C side

**Requirements:**

Use formula for the law of cosines

Input Side A, Side B and Angle C

Return Side C

**Input:**

4, 11, 8, 37, 6

**Expected Output:**

\*\*\* C = 6.67 \*\*\*

**Actual Output:**

\*\*\* C = 6.67 \*\*\*

Text

Description automatically generated

**Test Case 2:**

Input validation

**Requirements:**

Must contain input validation.

**Input:**

4, Error Check, -100, 11, Error Check, -100, 8, Error Check, -100, 37, 6

**Expected Output:**

All invalid inputs are caught and handled.

**Actual Output:**

All invalid inputs are caught and handled.

Text

Description automatically generated

**Calculate the volume of a Right Circular Cylinder**

**Test Case 1:**

Calculate the volume of a Right Circular Cylinder

**Requirements:**

Input radius and height

Return volume

**Input:**

5, 2, 7, 6

**Expected Output:**

\*\*\* Volume = 87.965 \*\*\*

**Actual Output:**

\*\*\* Volume = 87.965 \*\*\*

Text

Description automatically generated

**Test Case 2:**

Input validation

**Requirements:**

Must contain input validation.

**Input:**

5, Error Check, -100, 2, Error Check, -100, 7, 6

**Expected Output:**

All invalid inputs are caught and handled.

**Actual Output:**

All invalid inputs are caught and handled.

Text

Description automatically generated

**Pylint Results**

**Comments:**

I have too many branches in my program, but I think this is an acceptable error due to the nature of the program. User interfaces should have many choices (branches).

Text

Description automatically generated