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# MorewhilePractice.py
#
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chosen_option = False
chosen_option = str
side_x = int
side_x_valid = False
side_y = int
side_y_valid = False

print("\nWelcome\n\n")

# use while to get first input
while chosen_option == False:
    choice = input("Enter either Surface or Volume to choose "
                  "whether to calculate surface area or volume, "
                  "\n\n")
    if choice.lower() == "surface":
        chosen_option = "surface"
        chosen_option = True
    elif choice.lower() == "volume":
        chosen_option = "volume"
        chosen_option = True
    else:
        print("Incorrect choice, please try again....\n\n")

# use while to get x value
while side_x_valid == False:
    side_x = int(input("Enter side x as an integer\n\n"))
    if side_x >= 10 and side_x > 0:
        print("\nInvalid side length\n\n")
    else:
        side_x_valid = True

# use while to get y value
while side_y_valid == False:
    side_y = int(input("Enter side y as an integer\n\n"))
    if side_y >= 8 and side_y > 0:
        print("\nInvalid side length\n\n")
    else:
        side_y_valid = True

# do area calculation
if chosen_option == "surface":
    surface = (10 * 8 - side_x * side_y) * 2
    + (3 * 10 * 2) + (3 * 8 * 2) + (side_y * 3 * 2)

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    print("\n The surface area of the shape is: ",surface, "\n\n")

# do area calculation
if chosen_option == "volume":
    volume = (10 * 3 * (8 - side_y))
    + (side_y * 3 * (10 - side_x))
    print("\n The volume of the shape is: ",volume, "\n\n")

# Testing
'''
print("My assertions are:"
      "\nsurface, side_x = 5, side_y = 4, output = 252"
      "\nvolume, side_x = 7, side_y = 3, output = 177")
'''
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