

Homework #8 Handling exceptions.

Before submitting your code make sure it compiles without errors. Read problems carefully, and make sure your solution answers the questions stated in the problem.

Tasks:

1. Write a program that allows the user to convert the height in feet to cm. Your program should ask the user to input the name of a person and her height and output a string with converted height, e.g.:

Misha's height is 180 cm.

Formula for conversion: $\text{cm} = \text{ft} * 30,48$

Make sure that the user inputs correct data types, by executing try-except statements catching ValueError exception.

Bonus points, if you can make the program run indefinitely for an undetermined amount of conversions. In that scenario, a program should ask a user if she wants to continue and if not break from the loop.

2. Write a program that asks a user to input a number. Make sure the user actually did input a number. Convert that number to a string. Use infinite while loop (while True:) and go over each digit in the number, calling it with its index (as we did in the classwork). If there is a 3 in the number, break out of the loop and print out of the loop with a message "There is a 3 in the number. Program terminates". If there is not a 3 in the number, you will eventually run out of the characters, which would cause IndexError. Handle that exception, terminate the loop, and print out a statement saying that there are no 3s in the number.

3. Try to divide something by zero. What happens? Write a program that allows user to enter 2 numbers and returns the result of their division. Handle the case where the user tries to divide by zero.

4. Imagine that you have \$1 in the bank. Each day your money is increasing by 2%. How much money will you have after 365 days? Use for loop to find out.

5. This time imagine that you start with \$1 and your money is increasing by 3% but every two weeks you are losing 10% of all your money. Use for loop and if statement to find out how much money you will have in the end.