TY CSE AY-2022-23 Sem-II

Sub: iOS Lab (6CS381)

Assignment No 5

Due date- 13/02/2024

 # Exercise - String Basics

1. Create a ‘name’ constant and assign it a string literal representing your name.

2. Create a ‘favoriteQuote’ constant and assign it the following string literal: - "My favorite quote is ."

3. Write in your own favorite quote where indicated, and be sure to include escaped quotation marks. When finished, print the value of `favoriteQuote`.

   Example: If your favorite quote is "The grass is always greener on the other side" the value of ‘favoriteQuote’ should be such that printing ‘favoriteQuote’ results in the following: ‘My favorite quote is "The grass is always greener on the other side."’

4. Write an if-else statement that prints "There's nothing here" if ‘emptyString’ is empty, and "It's not as empty as I thought" otherwise. let emptyString = ""

Exercise - Concatenation and Interpolation

5. Create a ‘city’ constant and assign it a string literal representing your home city. Then create a ‘state’ constant and assign it a string literal representing your home state. Finally, create a ‘home’ constant and use string concatenation to assign it a string representing your home city and state (i.e. Portland, Oregon). Print the value of ‘home’.

6. Use the compound assignment operator (‘+=’) to add ‘home’ to ‘introduction’ below. Print the value of ‘introduction’.

   var introduction = "I live in "

7. Declare a ‘name’ constant and assign it your name as a string literal. Then declare an ‘age’ constant and give it your current age as an ‘Int’. Then print the following phrase using string interpolation: - "My name is and after my next birthday I will be years old." Insert ‘name’ where indicated, and insert a mathematical expression that evaluates to your current age plus one where indicated.

App Exercise - Notifications

8. In your app, you may want to search for other users. This would be easier with first and last names stored separately. This is not an uncommon practice. Create ‘firstName’ and ‘lastName’ constants and assign them string literals representing a user's first name and last name, respectively. Create a ‘fullName’ constant that uses string concatenation to combine ‘firstName’ and ‘lastName’. Print the value of ‘fullName’.

9. Occasionally users of your fitness tracking app will beat previous goals or records. You may want to notify them when this happens for encouragement purposes. Create a new constant ‘congratulations’ and assign it a string literal that uses string interpolation to create the following string: - "Congratulations, <INSERT USER'S FULL NAME HERE>! You beat your previous daily high score of

<INSERT PREVIOUS HIGHEST STEPS HERE> steps by walking <INSERT NEW HIGHEST STEPS HERE> steps
yesterday!"
Insert ‘fullName’, ‘previousBest’ and ‘newBest’ where indicated. Print the value of ‘congratulations’.
let previousBest = 14392
let newBest = 15125

Exercise - String Equality and Comparison

10. Create two constants, ‘nameInCaps’ and ‘name’. Assign ‘nameInCaps’ your name as a string literal with proper capitalization. Assign ‘name’ your name as a string literal in all lowercase. Write an if-else statement that checks to see if ‘nameInCaps’ and ‘name’ are the same. If they are, print "The two are same” else “not same”.

11. Write a new if-else statement that also checks to see if ‘nameInCaps’ and ‘name’ are the same.

However, this time use the ‘lowercased ()’ method on each constant to compare the lowercase version of the strings. If they are equal, print the following statement using string interpolations: - "<INSERT LOWERCASED VERSION OF ‘nameInCaps’ HERE> and <INSERT LOWERCASED VERSION OF ‘name’ HERE> are the same."

12. If they are not equal, print the following statement using string interpolation: - "<INSERT LOWERCASED VERSION OF ‘nameInCaps’ HERE> and <INSERT LOWERCASED VERSION OF ‘name’ HERE> are not the same."

13. Imagine you are looking through a list of names to find any that end in "Jr." Write an if statement

below that will check if ‘junior’ has the suffix "Jr." If it does, print "We found a second generation

name!"
let junior = "Cal Ripken Jr."

14. Suppose you are trying to find a document on your computer that contains Hamlet's famous soliloquy written by Shakespeare. You write a simple app that will check every document to see if it contains the phrase "to be, or not to be." You decide to do part of this with the 'contains (_:)' method.
Write an if statement below that will check if 'textToSearchThrough' contains 'textToSearchFor'. If it does, print "I found it!" Be sure to make this functionality case insensitive.

import Foundation
let textToSearchThrough = "To be, or not to be--that is the question"
let textToSearchFor = "to be, or not to be"

15. Print to the console the number of characters in your name by using the 'count' property on 'name'.

App Exercise - Password Entry and User Search

16. You think it might be fun to incorporate some friendly competition into your fitness tracking app. Users will be able to compete with friends in small fitness challenges. However, to do this, users will need a password-protected account.
Write an if-else statement below that will check that the entered user name and password match the stored user name and password. While the password should be case sensitive, users should be able to log in even if their entered user name has the wrong capitalization. If the user name and password match, print "You are now logged in!" Otherwise, print "Please check your user name and password and try again."
let storedUserName = "TheFittest11"
let storedPassword = "a8H1LuK91"
let enteredUserName = "thefittest11"
let enteredPassword: String = "a8H1Luk9"

17. Now that users can log in, they need to be able to search through a list of users to find their friends. This might normally be done by having the user enter a name, and then looping through all user names to see if a user name contains the search term entered. You'll learn about loops later, so for now you'll just work through one cycle of that. Imagine you are searching for a friend whose user name is StepChallenger.
You enter "step" into a search bar and the app begins to search. When the app comes to the user name "stepchallenger," it checks to see if "StepChallenger" contains "step."
Using 'userName' and 'searchName' below, write an if-else statement that checks to see if 'userName' contains the search term. The search should *not* be case sensitive.
import Foundation
let userName = "StepChallenger"
let searchName = "step"

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