

Lecture 6: Introduction to Computer Programming Course - CS1010

DEPARTMENT OF COMPUTER SCIENCE | 09/20/2019



Rensselaer

Announcements

- Homework 2 is posted (will be due in a week)
- Test 1 is on October 1
 - More information on Tuesday's Lecture

Goals

- Problems on Strings
- First Lecture Exercise to be Submitted in class.

Problem 1

- Given two strings, a and b, return the result of putting them together in the order abba, e.g. "Hi" and "Bye" returns "HiByeByeHi".

For example:

('Hi', 'Bye') → 'HiByeByeHi'

('Yo', 'Alice') → 'YoAliceAliceYo'

('What', 'Up') → 'WhatUpUpWhat'

Problem 2

- Given a string, return the string made of its first two chars, so the String "Hello" yields "He". If the string is shorter than length 2, return whatever there is, so "X" yields "X", and the empty string "" yields the empty string "".
- For example:
 - ('Hello') → 'He'
 - ('abcdefg') → 'ab'
 - ('ab') → 'ab'

Problem 3

- Given a string, return a version without the first and last char, so "Hello" yields "ell". The string length will be at least 2.
- - ('Hello') → 'ell'
 - ('java') → 'av'
 - ('coding') → 'odin'

Problem 4

- Given a string of odd length greater 7, return a string made of the middle three chars of a given String
- ("JhonDipPeta") → "Dip"
- ("Jasonay") → "son"

Problem 5

- Calculate the area of a circle with radius as user input (can be an integer or a floating point).
- Print the output as:
- The area of the circle having radius 6.3 is 124.63

Problem 6

- Take values of length and breadth of a rectangle from user and check if it is square or not. Output appropriate message.

Problem 7

- A school has following rules for grading system:

- a. Below 25 - F
- b. 25 to 45 - E
- c. 45 to 50 - D
- d. 50 to 60 - C
- e. 60 to 80 - B
- f. Above 80 - A

Ask user to enter marks and print the corresponding grade.

Problem 8

- Write a program to check whether a entered character is lowercase (a to z) or uppercase (A to Z)

Problems for submission

- Problem 1(5 points):

Problem 2(10 points)

Problem 3 (5 points)