Lecture 4: Introduction to Computer Programming Course - CS1010

DEPARTMENT OF COMPUTER SCIENCE | 09/13/2019

Some Practice Problems

- To be finished in class.

- Today's set is not graded.

- From next practice class onwards - You will be asked to submit a code online in-class.

- You can work in teams for all in-class grade-able exercises. However, each student needs to submit their work when asked.

- We will also look at some built in functions

Some important functions

- abs()
- pow()
- round()
- max()
- min()
- float()
- int()

Reminding the Methodology (Lecture 1)

- U – Understand the Problem: Write down the inputs you have

- D – Devise a Good Plan to Solve: Write down the Algorithm you will use

- I – Implement the Plan: Translate Algorithm to code

- E – Evaluate the Solution: Run for a few test cases

Problem 1

- Write a program that asks the user for their name and greets them with their name.

Problem 2

- Write a program that asks the user to enter their name and their age. Print out a message addressed to them that tells them the year that they will turn 100 years old.

Problem 3

- Write a program that finds the average of 3 numbers.

Problem 4

- Write a Python Script that takes user input as two numbers and performs a comparison of whether the numbers are equal or not.
  - Output 'FALSE' if they are equal and 'TRUE' if they are not.
  - Output 'TRUE' if they are equal and 'FALSE' if they are not.

Problem 5

- Write a program that takes the user input as his/her name and greets them with their name.

- Modify the previous program such that only the users Alice and Bob are greeted with their names.

Problem 6

- Write a program that asks the user for a number n and gives them the possibility to choose between computing the sum or computing the product of n and n-1.

Problem 7

- Write a program that prints whether a user provided number is an even number or not.

Problem 8

- On my birthday I am planning to invite *n* friends and distribute some chocolates to all of them. At the chocolate shop I found each packet contains different number of *m* chocolates.

- Write a program that calculates whether a given packet will distribute all chocolates evenly to my friends or not. In addition the program must also tell me how many will be in surplus or short if I buy a particular packet.

Problem 9

- A user provided mileage is in miles per hour. Write a Python Program to convert this to kilometers per day.

Next Week

- Strings
- String Manipulations