Columbia College
Vancouver, Canada

Introduction to Computer Science and Programming 1
CSCI120

Chapter9: Tuples

Assignment

Note: This document has been designed and developed as part of an initiative for creating an OER (Open Education Resource) package for the course CSCI 120 at Columbia College.

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# of Students in the Group:		
Student 1	*First name, last name*	*Student-ID*
Student 2	*First name, last name*	*Student-ID*
Student 3	*First name, last name*	*Student-ID*
Student 4	*First name, last name*	*Student-ID*

Requirements

- Please use meaningful name for your variables and functions
- Try to reuse your solutions as much as possible.
- For each of the following problem you need to
    - Define a function
    - For all test cases you have already written for your algorithm, write a function call inside the main function
- Define all the functions in one file (all in one)
- Define one main function
- Call the functions inside the main function
- If the function you have implemented for a question is big, please try to break down to multiple functions.
- Do not use methods, functions, statements that we have not covered in the previous lectures.

Problem1

- Write a Python function which receives a list of courses and grades a student has received in that course and return the average, highest and lowest grades of the student.

Problem2

Write a Python function which receives a list of tuples. Each tuple has two components: 1- a string which is the name of a student and 2- an integer which is the age of the student. The function will convert the list of tuples to a dictionary without losing any

information, meaning that we still should be able to find the age of any given student in the list.

Problem3

- Write a Python function which receives two points in the 2D coordination system and returns True if the points are on a same line and returns False otherwise.

Problem4

- We usually use list to collect and contains items with similar types (like integers). What data structure would you use to contain and collect items with different types.

Good Luck ☺