

PROGRAMMING LANGUAGE 2 (C++)

Type Inheritance [IsA Relationship]

LAB TASK

Due date **In class**

Weighting Tba

6

OBJECTIVES

This assessment item is designed to test your skills on basic inheritance.

ASSESSMENT TASK

[READ THE INSTRUCTIONS VERY CAREFULLY BEFORE YOU SUBMIT THE ASSIGNMENT]

Consider the scenario illustrated below:

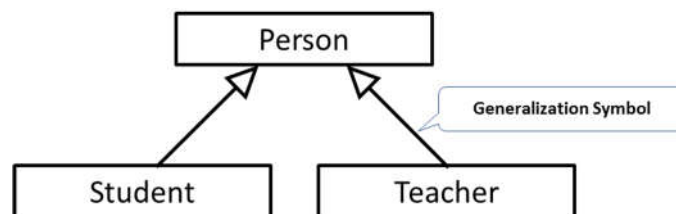


Figure: IsA Relationship

Now, write C++ codes to perform the following tasks:

1. Implement the class **Person** which should contain following members:

MEMBERS	DESCRIPTION
<i>name</i>	String
<i>email</i>	String
<i>Person()</i>	Default Constructor
<i>~Person()</i>	Destructor
<i>void showPerson()</i>	Should print a <i>person</i> object in following format: Printing Person----- Name: James Bond Email: example@aiub.edu -----

2. Implement the class **Student** which should contain following members:

MEMBERS	DESCRIPTION
<i>studentId</i>	String
<i>admissionDate</i>	String

<i>Student()</i>	Default Constructor
<i>~Student()</i>	Destructor
<i>void setStudent(studentId, admissionDate, name, email)</i>	Sets the attributes of a <i>student</i>
<i>void showStudent()</i>	Should print a <i>student object</i> in following format:
	<pre> Printing Student----- ID: 00-00000-0 Admission Date: 13/01/2015 Name: James Bond Email: bond@aiub.edu ----- </pre>

3. Implement the class **Teacher** which should contain following members:

MEMBERS	DESCRIPTION
<i>employeeId</i>	string
<i>joiningDate</i>	string
<i>Teacher()</i>	Default Constructor
<i>~Teacher()</i>	Destructor
<i>void setTeacher(employeeId, joiningDate, name, email)</i>	Sets the attributes of a <i>teacher</i>
<i>void showTeacher()</i>	Should print a <i>teacher object</i> in following format:
	<pre> Printing Teacher----- ID: 0000-0000-0 Joining Date: 13/01/2015 Name: Karl Ei Email: karl@aiub.edu ----- </pre>

- Maintain proper **Encapsulation** for all the classes mentioned above.
- Add a main function to the program, declare some objects of **Student** & **Teacher** class and test all the methods of those objects.

WHAT& HOW TO SUBMIT

You need to upload through your VUES account.

Reference : https://www.tutorialspoint.com/cplusplus/cpp_inheritance.htm

SUBMISSION STEPS:

- Create a Directory/Folder with YourID (ex:**17-10380-1_LT-06**)
- Put all the files into that Folder
- Upload the zipped format of that Folder (**Zip only**)