NATIONAL UNIVERSITY
OF COMPUTER & EMERGING SCIENCES
PESHAWAR CAMPUS

Problem Set:	Assignment: A02	**Semester**:	Fall 2019
Points:	*10*		
Date Set:	*See Autograder*	**Due Date**:	*See Autograder*
Course:	CS218 - Data Structures	**Instructor**:	Dr. Nauman

1 OOP Case Study

Here is a description of the classes you need to create:

1.1 Address

This class should have a constructor which takes the following optional parameters (default values given in brackets)

```
house_no (0)
street (0)
city ("")
country ("")
```

These should be saved as *class fields* of the same names.
Following functions must be created in the class:

1. get_full_address: takes no parameters, returns a string in the following format:

   `H. No. 2, Street 3, Peshawar Pakistan`

   (where 2 is the house_no, 3 is the street and Peshawar and Pakistan are city and country respectively.)

2. Dunder function for str: this function should simply call get_full_address and return the string produced by that function.

1.2 Employee

This class should have a constructor which takes the following optional parameters (default values given in brackets)

```
id (1)
name (None)
```

It should also set fields current_address and permanent_address to None.
Following functions must be created in the class:

1. set_current_address: takes in a house_no, street, city and country. It should create an object of class Address with the information given and save it as member field by the name current_address

2. set_permenent_address: Same as above except field name must be permanent_address

3. get_current_address: Should return the string representation of current_address

4. get_permanent_address: Should return the string representation of permanent_address

5. Dunder function for str: this should produce a string in the following format:

   `11 Ali H. No. 1, Street 2, Cape Town South Africa`

   (where 11 is the id, Ali is the name and the rest of it is the string representation of permanent_address.)

1.3 Lecturer

1. This class should inherit from `Employee` class. It should have a constructor which takes in *no parameters* from the caller. This constructor should call the constructor of its parent with the id value of 1 and name value of 'Mr. Bigshot'.

2. Dunder function for str: this should produce a string in the following format:

   `Lecturer:  1 Mr.  Bigshot H. No.  44, Street 24, KL Malaysia`

   (where the word lecturer is hard coded and the rest is the string representation of its parent class. There is a single space between `Lecturer` and the digit 1.)

2 Submission

Use `python run.py local` to ensure all tests are passing and then submit your assignment using `python run.py remote`

If you wish to request an extension, use the autograder UI to do so. Each student gets a maximum of 3 extension days per semester.