CS Homework #21: OOP (final)

Deadline: 3/28/2020, 9:00 pm.
*Save your code as lastname_homework21.py and submit on **GOOGLE CLASSROOM***

Task 1
Create a class "human". Each human has two user defined attributes: (1) age, and (2) name. In addition, each human starts with a random favorite number between 1 and 10.

Task 2
Add an instance method "intro" that displays introduction, e.g., "Hi, I am John. I am 20 years old."

Task 3
Add an instance method that wishes the human happy birthday and increases age by 1.

Task 4
Create a human instance/object and test both methods from Tasks 2 and 3.

Task 5
Create a class "child" which is a subclass of "human". In addition to age and name, children have another attribute: a grade (integer). The grade value must be a function of age: The initial grade value must be equal to: age – 6.

Task 6
For the child subclass, add an instance method "intro" that displays introduction, e.g., "Hi, I am Max. I am 12 years old and I am in 6th grade." Yes, you are overriding the superclass method here.

Task 7
Create a child instance/object and display its introduction.

Task 8
Create a class "SNstudent" (School Nova student) which is a subclass of "child". In addition to age, name, and grade, School Nova students have a *list* of courses that they take at School Nova. (For the same of simplicity, assume that each SN student takes two courses).

Task 9
For the SNstudent subclass, add an instance method "intro" that displays introduction, e.g., "Hi, I am Jane. I am 11 years old and I am in 5th grade. My School Nova courses are Physics and Computer Science." (hint, use list[0] and list[1] to display the School Nova courses)

Task 10
Use help(SNstudent) and explore the Method resolution order for SNstudent, child, and human.