

School Nova Computer Science 201 Homework 5

Save your code as lastname_homework5.py and submit on Google Classroom

Task 1

Solve the planes problem from the previous homework using object-oriented programming (OOP) approach. Create a class PLANE. Each plane should have three attributes: unique ID, departed status (0 or 1), and arrived status (0 or 1).

Task 2

Generate a list of 10,000 objects from the class PLANE. Make sure that each plane has a unique ID. Initially, all planes should have departed and arrived status as 0.

Task 3

Using the list of planes which departed (PD in classwork), update the departed attribute for all objects in the list of planes. Similarly, using the list of planes which arrived (PA in classwork), update the arrived attribute for all objects in the list of planes.

Task 4

Create a function that examines a list of plane objects and returns ID of the object (plane), which departed but has not arrived.

Task 5

Compare the speed of the function from Task 4 versus the previous approaches (from the previous homework and classwork).