

Chapter 11 - Practice Set

- 1 Create a class `E2dvector` and use it to create another class representing a 3-d vector.
- 2 Create a class `Pets` from a class `Animals` and further create class `Dog` from `Pets`. Add a method `bark` to class `Dog`.
- 3 Create a class `Employee` and add salary and increment properties to it.
Write a method `SalaryAfterIncrement` method with a `@property` decorator with a setter which changes the value of increment based on the salary.
- 4 Write a class `Complex` to represent complex numbers, along with overloaded operators `+` and `*` which adds and multiplies them.
- 5 Write a class `vector` representing a vector of n dimension. Overload the `+` and `*` operator which calculates the sum and the dot product of them.
- 6 Write `--str--()` method to print the vector as follows:

$$7 \hat{i} + 8 \hat{j} + 10 \hat{k}$$

Assume vector of dimension 3 for this problem.

7
= Override the `len()` method on `Vector` of problem 5 to display the dimension of the `Vector`.

$$\hat{i} + 8\hat{j} + 10\hat{k}$$