

# SSN College of Engineering

## Department of Information Technology

### UIT2201 — Programming and Data Structures

2022 – 2023

#### Exercise — 07

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- You can upload only one ZIP file
  - The naming convention is “<Your first name (first letter capital and all the other letters small)>-UIT2201-ex-07.zip”
  - The questions marked as “OPTIONAL” are, as the name implies, optional! Complete your core assignment first and attempt the optional problem only if you have sufficient time
  - Judicious use of Python features and standard modules, version control using ‘git’, adhering to Python coding standards are expected
  - You are expected to use PSP0.1 process for all the code that you write!
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The purpose of this exercise is gain knowledge on Inheritance OOPS concepts in Python.

#### Part A

Write a program to model a real-time online shopping system using inheritance. The base class should be called Product, and it should have attributes for the name, price, and quantity of the product. The derived classes should be ElectronicProduct and ClothingProduct, which inherit from Product. Each derived class should have additional attributes specific to that type of product, such as the brand and model for ElectronicProduct, and the size and color for ClothingProduct. Implement methods in each class to display the product information. Additionally, override the display\_information() method in the derived classes to include the specific attributes of each product type. Also, implement a function in the derived classes to calculate the total price based on the quantity of the product. Finally, overload the ‘+’ operator in the derived classes to allow adding two products together offering a combo pack with the summed-up price tag.