

## EXERCISE 1 (GENERIC CLASS):

Create a generic class named **Box** that can store any type of object. The **Box** class should have methods to put an object into the box (**put**) and retrieve the object from the box (**get**). Additionally, implement a method **printContents** that prints the contents of the box. Then, create a simple program to demonstrate the usage of this generic class with different types of objects.

## EXERCISE 2 (GENERIC CLASS – MULTIPLE TYPES):

Let's create a generic class named **Tuple** that represents a tuple of values of any type with multiple type parameters. We can use it to represent a tuple containing various pieces of information, such as a person's name, age, and occupation.

Implement methods to set and get the values of the tuple.

Implement a simple program to demonstrate the usage of this generic class with different types of items.

- Create a Tuple for person's name (String), age (Integer), and occupation (String)
- Create a Tuple for product ID (String), price (Double), and availability (Boolean)

## EXERCISE 3 (GENERIC METHOD):

Create a generic method named **swap** that takes an array and two indices as input and swaps the elements at those indices in the array. Array can be of any type **T**. Implement a simple program to demonstrate the usage of this generic method with different types of arrays (Integer, String, and Double). Create instances of arrays for each type, perform swaps using the **swap** method, and then print out the arrays before and after the swaps to verify the results.