

Department of Computer Science & Engineering, NITS  
CS212 - Object Oriented Programming Laboratory  
Session : January - June 2024  
**Lab-2: Constructors and Destructors**

Programming Assignments :

1. Define a class **String** that could work as a user-defined string type. Include constructors that will enable us to create an uninitialized string  
`String s1; // string with length 0`  
and also to initialize an object with a string constant at the time of creation like  
`String s2("Well dine!");`  
Include a function that adds two strings to make a third string. Note that the following statement  
`s2 = s1;`  
will be a perfectly reasonable expression to copy one string to another. Write a complete program to test your class to see that it does the following tasks:
  - (a) Creates uninitialized string objects
  - (b) Creates objects with string constants
  - (c) Concatenates two strings properly
  - (d) Displays a desired string object
2. A common place to buy juice is from a machine. A new juice machine has been purchased for the gym, but it is not working properly. The machine sells the following types of juices: orange, apple, mango, and strawberrybanana. You have been asked to write a program for this juice machine so that it can be put into operation.  
The program should do the following:
  - (a) Input Show the customer the different products sold by the juice machine.
  - (b) Let the customer make the selection.
  - (c) Show the customer the cost of the item selected.
  - (d) Accept money from the customer.
  - (e) Release the item.

**Input :** The item selection and the cost of the item.

**Output :** The selected item.

A juice machine has two main components: a built-in cash register and several dispensers to hold and release the products.

3. Modify the programs from Lab-1, and include constructors and destructors as per the utilisation. *Submit this assignment in soft copy only.*

Submission Details :

- Date of Issue : 30 January 2024
- Date of Submission : 6 February 2024 (Soft Copy, before 2 PM)
- Evaluation time : 2 - 5 PM