## **Assignment 5**

- Q1 Apply inheritance n polymorphism
- a) Arrange Fruit, Apple, Orange, Mango in inheritance hierarchy
- b) Properties (instance variables): color: String, weight: double, name: String, is Fresh: boolean
- c) Add suitable constructors.
- d) Override toString correctly to return state of all fruits (including : name ,color , weight )
- e) Add a taste() method : public String taste()

For Fruit: it should return "no specific taste"

Apple: should return "sweet n sour"
Mango: should return "sweet"
Orange: should return "sour"

- f) Add all of above classes under the package "com.app.fruits"
- g) Create java application FruitBasket, with main method, as a tester
- h) Prompt user for the basket size n create suitable data structure and give options
- 0. Exit
- 1. Add Mango

case 1: boundary checking

basket[counter++]=new Mango(nm, weight, color);

break;

- 2. Add Orange
- 3. Add Apple

NOTE: You will be adding a fresh fruit in the basket, in all of above options.

- 4. Display names of all fruits in the basket.
- eg: for-each --- null checking --getName()
- 5. Display name, color, weight, taste of all fresh fruits, in the basket.
- eg: for-each, null checking --toString, taste, isFresh: getter
- 6. Mark a fruit as stale

i/p: index

eg : setter : isFresh : false

o/p : error message (in case of invalid index) or mark it stale

- 7. Display tastes of all stale(not fresh) fruits in the basket.
- 8. Mark all sour fruits stale (optional)

eg: for-each, taste --equals(String)