

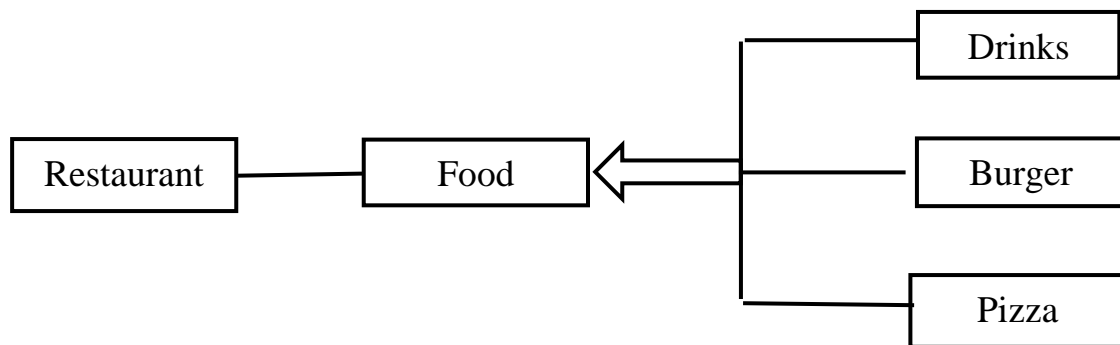


**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)**  
 Faculty of Science and Technology (FST)  
 Department of Computer Science (CS)

**Course Title:** Object Oriented Programming 2

**Lab Task :** Developing a basic C# program with Inheritance, Association and Polymorphism.

Look at the following class notations and class diagram carefully, and develop the program.



**Class Diagram**

Food
String name String ingredients [] double price float calories
Food() Food (String name, String[] ingredients, double price, float calories)  void setName(String name) void setIngredients (String[] ingredients) void setPrice(double price) void setCalories (float calories)  String getName ( ) String[] getIngredients ( )

```
double getPrice ( )  
float getCalories ( )  
void removeIngredient(String ingredient)  
void addingredient(String ingredient)  
  
abstract void showDetails( )
```

### Drinks

```
String Type  
int sizeInLitter
```

```
Drinks()  
Drinks (String name, String[] ingredients, double price, float calories, String type, int  
sizeInLitter)  
  
void setType (String type)  
void setSize(int sizeInLitter)  
  
String getType ()  
int getSize ()
```

### Burger

```
int numberOfPatty
```

```
Burger()  
Burger( String name, String[] ingredients, double price, float calories, int numberOfPatty)  
  
void setNumberOfPatty (int numberOfPatty)  
int getNumberOfPatty ()  
  
void showDetails ()
```

### Pizza

```
int sizeInInches
```

```
Pizza()  
Pizza( String name, String[] ingredients, double price, float calories, int sizeInInches)  
  
void setSize (int sizeInInches)  
int getSize ()
```



```
void showDetails ()
```

Restaurant
String restaurantName Food foods [] //size of array should be 100.
Restaurant() Restaurant(String restaurantName)  void setRestaurantName(String restaurantName) String getRestaurantName( )  void addToOrder(Food f) void removeFromOrder (Food f) void showOrders() double calculateBill()

Start
Inside the main method, create <i>five objects of Drinks, five objects of Burger</i> and <i>five objects of Pizza</i> . <i>One object of Restaurant</i> . Demonstrate all the methods and constructors.

