Introduction

Purpose of this document

The purpose of this document is to define the console application implementation of the Restaurant Management System.
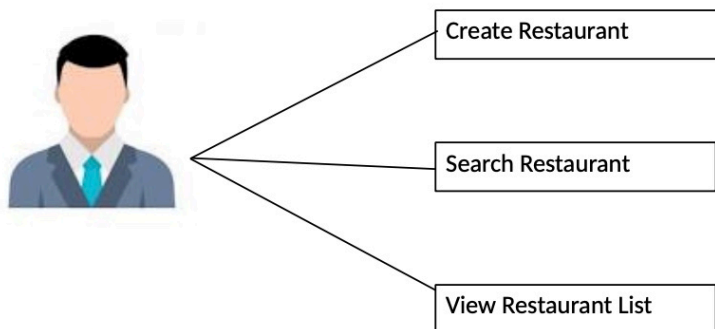
Intended Audience

Trainees / Developers

Project Overview

The project involves creating restaurant management system. The user can enter the restaurant details like the name, online order status, cuisine and launch date. This restaurant details are stored in the list. All the restaurant details are retrieved from the list and displayed on the screen. A user can search for a particular restaurant by cuisine.
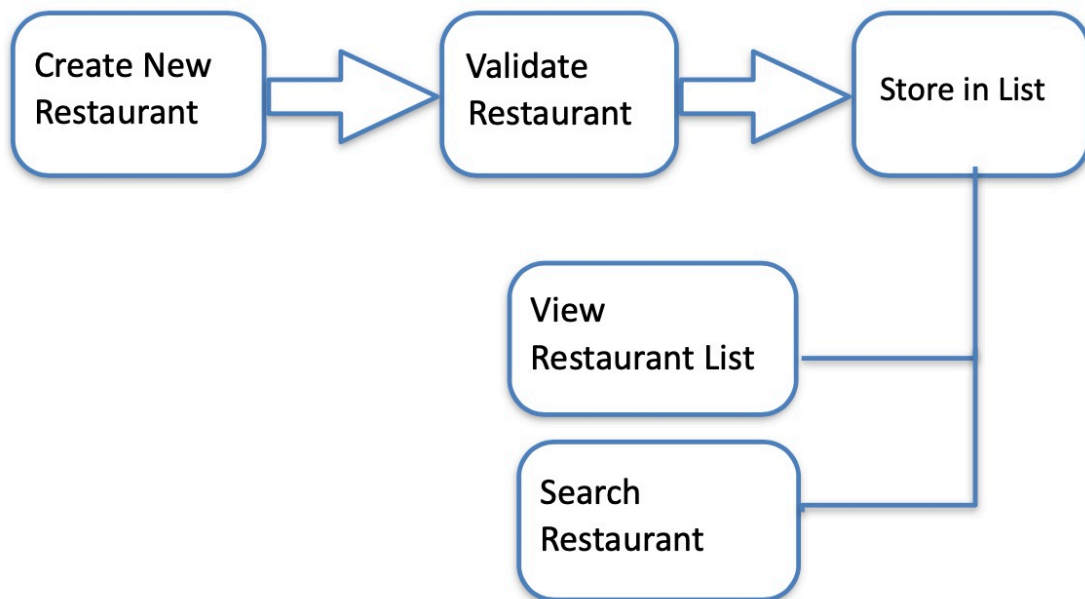
Use Case Diagram

Scope

Creation of C# console application for Restaurant Management system application

System diagram

System diagram

```
┌──────────────┐        ┌──────────────┐        ┌──────────────┐
│ Create New   │ ═════> │ Validate     │ ═════> │ Store in List│
│ Restaurant   │        │ Restaurant   │        │              │
└──────────────┘        └──────────────┘        └──────────────┘
                                                        │
                   ┌──────────────┐                     │
                   │ View         │─────────────────────┤
                   │ Restaurant List│                   │
                   └──────────────┘                     │
                   ┌──────────────┐                     │
                   │ Search       │─────────────────────┘
                   │ Restaurant   │
                   └──────────────┘
```

Design for Creating Restaurant

Requirement flow

Steps explanation for creating restaurant

1. Application user launches the application.

2. The page is displayed as shown below. *This is the default home page.*

```
C:\Windows\system32\cmd.exe
Menu
1.Create new restaurant
2.Search restaurant by cuisine
3.View restaurant list
4.Exit
Please enter your choice
```

3. *When application u*ser enters 1 the application will take restaurant details as shown

4. The application validates restaurant details and saves data to list.
   Note: Validate the input by verifying all required fields are provided before you add to list.(**This is optional**)

Design for Searching Restaurant

Requirement flow

Steps explanation for searching restaurant
1. Application user launches the application.

2. The page is displayed as shown below. *This is the default home page.*

3. *When application u*ser enters the choice '2' the application asks for cuisine id and retrieves the restaurants with the given cuisine from list if found as show below

```
Please enter your choice
2
Cuisine List
Id      Cuisine
1       Indian
2       American
3       Italian
4       Mexican
5       French
6       Japaneese
7       Chineese
8       Arabian
9       Continental
10      BBQ
Please enter cuisine id from above list
2
Id    Name                  OnlineOrderStatus Cuisine Launch Date
1     kfc                   True              2       5/20/2019
3     pizza hut             True              2       1/2/1999
```

4. Otherwise it displays restaurant not found as shown below

```
Please enter cuisine id from above list
7
No restaurant found with the cuisine, please try other cuisine
```

Design for Viewing Restaurant List

Requirement flow

Steps explanation for viewing restaurant list
1. Application user launches the application.

2. The page is displayed as shown below. *This is the default home page.*

```
C:\Windows\system32\cmd.exe
Menu
1.Create new restaurant
2.Search restaurant by cuisine
3.View restaurant list
4.Exit
Please enter your choice
```

3. *When application u*ser enters the choice '3' it will retrieve restaurant list from
   list and display restaurant list as shown below when the data is available

```
Please enter your choice
3
Id    Name                  OnlineOrderStatus Cuisine Launch Date
4     KFC                   True              1       5/18/2020
5     Dominos               True              3       2/28/2001
```

4. Otherwise it displays restaurant list is empty as shown below


```
Please enter your choice
3
The restaurant list is empty
```

Technical guidelines

Domain Entities

1. Create a class named **Restaurant domain entity class**.

2. Add the following properties.

Class	Property	Data Type	Required/Optional
Restaurant	Id	Int	Required
	Name	String	Required
	OnlineOrderStatus	Boolean	Optional
	Cuisine	Int	Required
	LaunchDate	DateTime	Required

3. Create a class named **CuisineType domain entity class**.

4. Add the following properties.

Class	Property	Data Type
CuisineType	Id	Int

CuisineType	Cuisine	String

Business Logic

5. Create a class named **RestaurantMgmtBLL class and add the following methods**

Method	Purpose
public static bool CreateRestaurant(Restaurant restaurant)	Creates new restaurant
public static List<Restaurant> ReadRestaurantList()	Retrieves restaurant list
public static List<CuisineType> ReadCuisineList()	Retrieves cuisine list (**Note: Return the cuisineList provided in the below Note section**)
public static List<Restaurant> SearchRestaurant(int cuisine)	Searches restaurants with cuisine

Note: Create a private static list of CuisineType as shown below in the RestaurantMgmt-BLL class to use as as sample cuisine list.

```
private static List<CuisineType> cuisineList=new List<CuisineType>{
new CuisineType{Id=1,Cuisine="Indian"},
new CuisineType{Id=2,Cuisine="American"},
new CuisineType{Id=3,Cuisine="Italian"}
};
```

Presentation Layer(Console UI)

In the Program class Main method write appropriate logic to display menu and to switch between the operations.