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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

Acknowledgement:

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1. Introduction

This is a report of the coursework which had given the assignment of dissecting, planning and carrying out an online data set application dependent on a given business contextual investigation utilizing Oracle SQL Developer Data Modeler, Oracle SQL Developer and ASP.NET with C# (Visual Studio). According to the contextual investigation, the framework needs to have an appropriate information base for Good Food Hotel which keeps the record of the relative multitude of exchanges.

The given assignment in the coursework were difficult by any means. Acknowledging about the durability of the assignment, this coursework was begun and finished with extraordinary assurance. Since, the fundamental objective of the coursework was to complete every one of the undertakings given in the coursework inside the given timeframe. Another, primary point of the task was to finish every one of the standards of the coursework in the most ideal manner conceivable.

At first, normalization of given figures was done. Then, according to the normalization and case study a proper ER diagram using Oracle SQL Developer Data Modeler was made. Similarly, assumptions according to the ER diagram was also done. Then, from the ER diagram, DDL file and data dictionary was exported to generate the tables and produce a list of attributes for each entity respectively. Likewise, DDL file was imported in Oracle SQL Developer and all the tables were generated. Similarly, all the generated tables were populated with suitable data values using INSERT statement. Finally, implementation of web-based database application was done using ASP.NET with C# which contains different web forms in an attractive dashboard. The conceptual diagram of my report is shown below:

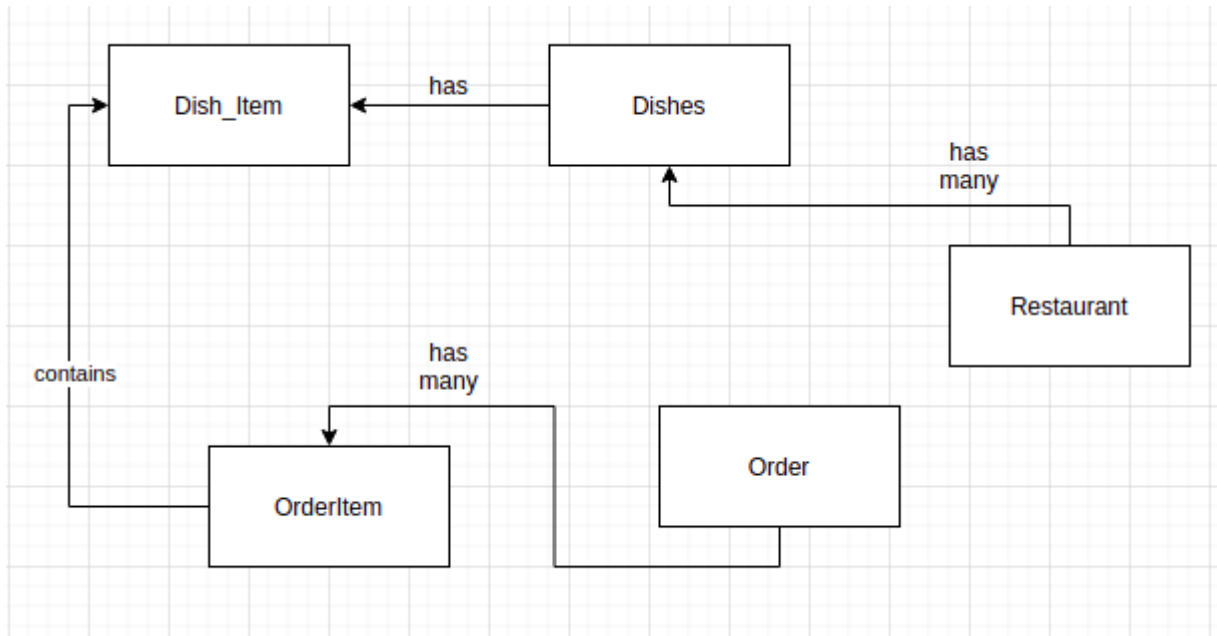


Figure 1: figure of conceptual diagram

The above figure displays the tables in my database structure. The table contains different attributes and entities which is going to be displayed in the Entity Relational Diagram (ERD). The figure is a rough assumption of my database which is going to be displayed in the following reports thoroughly.

2. Normalization:

2.1. Textual Analysis:

- i. OrderItem contains many dishes_items which is related using dish_code
- ii. One Restaurant can have many dish_item.
- iii. One restaurant can have many dishes and many dishes can contain the same dish item.
- iv. One Order can have many order items.
- v. This relation is set up using Order_OrderItem_.

2.2. Normalization of Figure 1:

1-NF

Rules of 1-NF

- Each cell must have atomic value
- Each record must be unique

Dishes

DISH Code	Dish Name	Local or Another Name	Available on Restaurant
CHKMO	Chicken Momo	Chicken Momo	Royale Luxury
VEGTM	Vegetable Tempura		Royale Luxury
CHKMO	Chicken Momo	Chicken Momo	Taste Buds
MIXCHT	Mixed Chatamari	Nepali Pizza	Local Foodie

Order

SN	Data/Time	Order	Order	Delivery Point	Status	Dish Code	Dish Name	Order Unit	Dish	Line	Restaurant
----	-----------	-------	-------	----------------	--------	-----------	-----------	------------	------	------	------------

		Num ber	Amo unt						Ra te	Tot al	
2020-09-223334	9th November 2020/14:30	09-00231	2750	Banes hwor	On Time	CHK MO	Chicke n Momo	6 Plat es	350	2100	Taste Buds
2020-09-223334	9th November 2020/14:30	09-00231	2750	Banes hwor	On Time	MIXC HT	Mixed Chata mari	2 Plat e	325	650	Local Foodie
2020-09-223374	9th November 2020/15:20	09-00345	700	Kalanki	Earl y	CHK MO	Chicke n Momo	2 Plat es	350	700	Taste Buds
2020-09-223334	9th November 2020/14:40	09-00360	5000	Baluwa tar	On Time						
2020-09-223334	9th November 2020/16:50	09-09000	3450	Kalanki	Lat e						

Tables after 1-NF

Dishes(dish_code,dish_name,local_another_name,available_restaurant)

Order(SN,date_time,order_number,delivery_point,status,dish_code,dish_name,order_unit,dish_rate,line_total,restaurant)

2-NF

Rules of 2-NF

- The table must be in 1-NF
- Single Column Primary key

From the table we can see that we can break the dishes table into dishes and restaurants because the available one does not depend on the primary key dish code.

Restaurant Code	Restaurant Name
RXL51	Royal Luxury
TAB49	Taste Buds
LOC59	Local Foodie

The dishes table can be further splitted inorder to reduce the data redundancy for dish items for restaurants. For example chicken momo repeats for taste buds and royale luxury.

Dish_Item

Dish Code	Dish Name	Local or Another Name
CHKMO	Chicken Momo	Chicken Momo
VEGTM	Vegetable Tempura	
MIXCHT	Mixed Chatamari	Nepali Pizza

Dishes

DISH Code	Restaurant Code
CHKMO	RXL51
VEGTM	RXL51
CHKMO	TAB49
MIXCHT	LOC59

Dish_Item(dish_code(PK),dish_name,alternative_name)

Dishes(dish_code(PK/FK),reasturant_code(PK/FK))

Restaurant(reasturan_code, reasturant_name)

Order(SN,date_time,order_number,delivery_point,status,dish_code,dish_name,order_unit,dish_rate,line_total,restaurant)

3-NF

Rules for 3-NF

- Tables must be in 3NF
- There must not exist any transitive dependency

We can see columns in the order register table. The dish code can be obtained using SN, and the dish code can be used to acquire information about the dish name using the dish code (SN->dish code->dish name). As a result, transitive dependence occurs. As a result, we divided the table as follows:

For example:

SN	Data/Time	Order Number	Order Amount	Delivery Point	Status	Dish Code	Dish Name	Order Unit	Dish Rate	Line Total	Restaurant
2020-09-223334	9th November 2020/14:30	09-00231	2750	Banes hwor	On Time	CHK MO	Chicken Momo	6 Plates	350	2100	Taste Buds
2020-09-223334	9th November 2020/14:30	09-00231	2750	Banes hwor	On Time	MIXC HT	Mixed Chata mari	2 Plate	325	650	Local Foodie

We can separate the table into Order, OrderItem and OrderRegisterTable

Table Name:Order

SN	Data/Time	Order Number	Order Amount	Delivery Point	Status
2020-09-223334	9th November 2020/14:30	09-00231	2750	Baneshwor	On Time

Table Name: Order Item

Dish Code	Dish Name	Order Unit	Dish Rate	Line Total	Restaurant
CHKMO	Chicken Momo	6 Plates	350	2100	Taste Buds
MIXCHT	Mixed Chatamari	2 Plate	325	650	Local Foodie

Table Name: OrderRegisterTable

SN	DishCode
2020-09-223334	CHKMO
2020-09-223334	MIXCHT

Tables after 3-NF

Dish_Item(dish_code(PK),dish_name,alternative_name)

Dishes(dish_code(PK/FK),reasturant_code(PK/FK))

Restaurant(reasturant_code, reasturant_name)

OrderItem(dish_code(PK/FK),order unit,dishRate,line_total)

Order(SN(PK),date_time,order_number,order_amount,delivery_point,status)

OrderRegisterTable(SN(PK/FK),dishCode(PK/FK))

3.ER- MODEL:

3.1. Assumptions:

- i. Dishes manages the relation between dish_item and restaurant where one restaurant can have many dishes and one dish_item can be in many restaurants.
- ii. OrderRegisterTable handles the relation between order and items that were ordered. A single user can order many items in a 1 order so there exists one to many relationships.
- iii. OrderItem contains many dishes_items which is related using dish_code
- iv. One Restaurant can have many dish_item.
- v. One restaurant can have many dishes and many dishes can contain the same dish item.
- vi. One Order can have many order items.
- vii. This relation is set up using Order_OrderItem_.

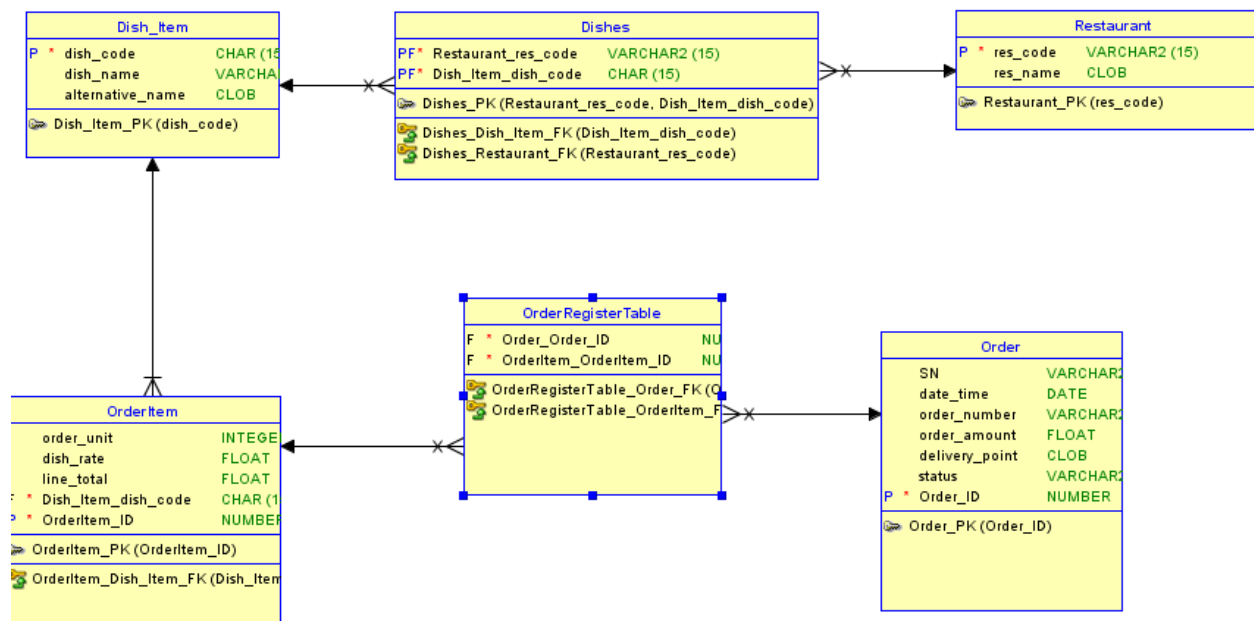


Figure 2: figure of entity relationship diagram

4. Data Dictionary:

Dish Item

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	DISH_CODE	CHAR(15 BYTE)	No	(null)	1 (null)	
2	DISH_NAME	VARCHAR2(100 BYTE)	Yes	(null)	2 (null)	
3	ALTERNATIVE_NAME	CLOB	Yes	(null)	3 (null)	

Dishes

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	RESTAURANT_RES_CODE	VARCHAR2(15 BYTE)	No	(null)	1 (null)	
2	DISH_ITEM_DISH_CODE	CHAR(15 BYTE)	No	(null)	2 (null)	

OrderItem

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ORDER_UNIT	NUMBER(38,0)	Yes	(null)	1 (null)	
2	DISH_RATE	FLOAT	Yes	(null)	2 (null)	
3	LINE_TOTAL	FLOAT	Yes	(null)	3 (null)	
4	DISH_ITEM_DISH_CODE	CHAR(15 BYTE)	No	(null)	4 (null)	
5	ORDERITEM_ID	NUMBER	No	(null)	5 (null)	

Order Register Table

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ORDERS_ORDERS_ID	NUMBER	No	(null)	1 (null)	
2	ORDERITEM_ORDERITEM_ID	NUMBER	No	(null)	2 (null)	

Orders

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	SN	VARCHAR2(100 BYTE)	Yes	(null)	1 (null)	
2	DATE_TIME	DATE	Yes	(null)	2 (null)	
3	ORDER_NUMBER	VARCHAR2(100 BYTE)	Yes	(null)	3 (null)	
4	ORDER_AMOUNT	FLOAT	Yes	(null)	4 (null)	
5	DELIVERY_POINT	CLOB	Yes	(null)	5 (null)	
6	STATUS	VARCHAR2(100 BYTE)	Yes	(null)	6 (null)	
7	ORDERS_ID	NUMBER	No	(null)	7 (null)	

Restaurant

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	RES_CODE	VARCHAR2(15 BYTE)	No	(null)	1 (null)	
2	RES_NAME	CLOB	Yes	(null)	2 (null)	

5. Generation of Database:

5.1. Create Statement:

```

CREATE TABLE dish_item (
    dish_code      CHAR(15) NOT NULL,
    dish_name      VARCHAR2(100),
    alternative_name CLOB
);

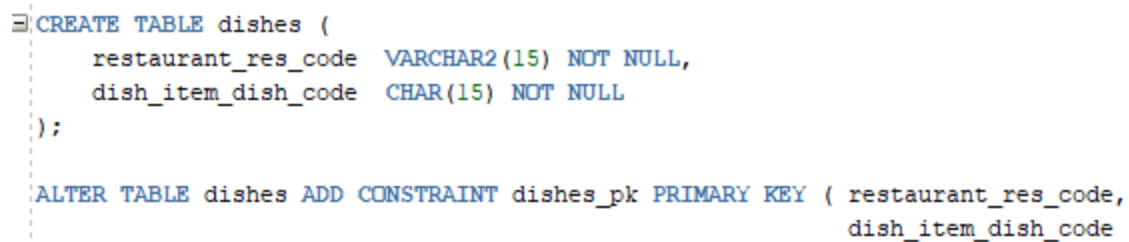
ALTER TABLE dish_item ADD CONSTRAINT dish_item_pk PRIMARY KEY ( dish_code );

```

Figure 3: figure of creation of dish_item table

```
CREATE TABLE dishes (  
    restaurant_res_code VARCHAR2(15) NOT NULL,  
    dish_item_dish_code CHAR(15) NOT NULL  
);
```

```
ALTER TABLE dishes ADD CONSTRAINT dishes_pk PRIMARY KEY ( restaurant_res_code,  
dish_item_dish_code );
```

A screenshot of a SQL development tool interface. It shows two SQL statements. The first statement is 'CREATE TABLE dishes (' followed by two columns: 'restaurant_res_code VARCHAR2(15) NOT NULL,' and 'dish_item_dish_code CHAR(15) NOT NULL', and ends with ');'. The second statement is 'ALTER TABLE dishes ADD CONSTRAINT dishes_pk PRIMARY KEY (' followed by 'restaurant_res_code,' and 'dish_item_dish_code', and ends with ');'. The text is color-coded: keywords like 'CREATE', 'TABLE', 'ALTER', 'CONSTRAINT', 'PRIMARY KEY' are in blue, and identifiers like 'dishes', 'dishes_pk', 'restaurant_res_code', 'dish_item_dish_code' are in black. The background is light gray with a vertical dashed line on the left.

```
CREATE TABLE dishes (  
    restaurant_res_code VARCHAR2(15) NOT NULL,  
    dish_item_dish_code CHAR(15) NOT NULL  
);  
  
ALTER TABLE dishes ADD CONSTRAINT dishes_pk PRIMARY KEY ( restaurant_res_code,  
dish_item_dish_code );
```

Figure 4: figure of creation of dishes table

```
CREATE TABLE orderitem (  
    order_unit    INTEGER,  
    dish_rate     FLOAT,  
    line_total    FLOAT,  
    dish_item_dish_code CHAR(15) NOT NULL,  
    orderitem_id  NUMBER NOT NULL  
);
```

```
ALTER TABLE orderitem ADD CONSTRAINT orderitem_pk PRIMARY KEY ( orderitem_id );
```



```

CREATE TABLE orderitem (
    order_unit      INTEGER,
    dish_rate       FLOAT,
    line_total      FLOAT,
    dish_item_dish_code CHAR(15) NOT NULL,
    orderitem_id    NUMBER NOT NULL
);

ALTER TABLE orderitem ADD CONSTRAINT orderitem_pk PRIMARY KEY ( orderitem_id );

```

Figure 5: figure of creation of orderitem

```

CREATE TABLE orderregistertable (
    orders_orders_id    NUMBER NOT NULL,
    orderitem_orderitem_id NUMBER NOT NULL
);

CREATE TABLE orderregistertable (
    orders_orders_id    NUMBER NOT NULL,
    orderitem_orderitem_id NUMBER NOT NULL
);

```

Figure 6: figure of creation of orderregistertable table

```

CREATE TABLE orders (
    sn          VARCHAR2(100),
    date_time    DATE,
    order_number VARCHAR2(100),
    order_amount FLOAT,
    delivery_point CLOB,
    status       VARCHAR2(100),
    orders_id    NUMBER NOT NULL
);

```

```

ALTER TABLE orders ADD CONSTRAINT orders_pk PRIMARY KEY ( orders_id );

```

```
CREATE TABLE orders (
  sn          VARCHAR2(100),
  date_time   DATE,
  order_number VARCHAR2(100),
  order_amount FLOAT,
  delivery_point CLOB,
  status      VARCHAR2(100),
  orders_id   NUMBER NOT NULL
);
```

Figure 7: figure of creation of orders table

```
CREATE TABLE restaurant (
  res_code VARCHAR2(15) NOT NULL,
  res_name CLOB
);
```

Figure 8: figure of creation of restaurant

5.2. Insert Statement:

Dish Item

```
INSERT ALL
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('CHKMO','Chicken Momo',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('VEGTM','Vegetable Tempura',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('MIXCHT','Mixed Chatamari',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('ALURT','ALU Roti','Alu Roti',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('RTOVL','Red Chilly','Rato Kursani ko achar',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('KHANE','Khanea hoo','Khanea hoo',
  INTO dish_item(dish_code,dish_name,alternative_name) VALUES ('CHIKG','Chicken Leg Piece','Chicken Leg Piece')
SELECT 1 from dual;
```

Figure 9: figure of insertion into dish_item

	DISH_CODE	DISH_NAME	ALTERNATIVE_NAME
1	CHKMO	Chicken Momo	Chicken Momo
2	VEGTM	Vegetable Tempura	Vegetable Tempura
3	MIXCHT	Mixed Chatamari	Nepali Pizza
4	ALURT	ALU Roti	Alu Roti
5	RTOVL	Red Chilly	Rato Kursani ko achar
6	KHANE	Khanea hoo	Khanea hoo
7	CHIKG	Chicken Leg Piece	Chicekn Leg Piece

Restaurant

```

INSERT ALL
  INTO restaurant(res_code,res_name) VALUES ('RXL51','Royal Luxury')
  INTO restaurant(res_code,res_name) VALUES ('TAB49','Taste Buds')
  INTO restaurant(res_code,res_name) VALUES ('LOC59','Local Foodie')
  INTO restaurant(res_code,res_name) VALUES ('SI69','Sainli Ko Batti')
  INTO restaurant(res_code,res_name) VALUES ('AMOG12','Amogg Cafe')
SELECT 1 from dual;

```

Figure 10: figure of insertion into restaurant

	RES_CODE	RES_NAME
1	RXL51	Royal Luxury
2	TAB49	Taste Buds
3	LOC59	Local Foodie
4	SI69	Sainli Ko Batti
5	AMOG12	Amogg Cafe

Dishes

```

INSERT ALL
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('RXL51','CHKMO')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('RXL51','VEGTM')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('RXL51','MIXCHT')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('LOC59','CHKMO')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('LOC59','MIXCHT')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('LOC59','ALURT')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('AMOG12','ALURT')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('AMOG12','RTOVL')
  INTO dishes(RESTAURANT_RES_CODE,DISH_ITEM_DISH_CODE) VALUES ('RXL51','RTOVL')
SELECT 1 from dual;

```

Figure 11: figure of insertion into dishes

	RESTAURANT_RES_CODE	DISH_ITEM_DISH_CODE
1	AMOG12	ALURT
2	AMOG12	RTOVL
3	LOC59	ALURT
4	LOC59	CHKMO
5	LOC59	MIXCHT
6	RXL51	CHKMO
7	RXL51	MIXCHT
8	RXL51	RTOVL
9	RXL51	VEGTM

OrderItem

```

INSERT ALL
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('CHKMO',1,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('VEGTM',2,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('VEGTM',3,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('CHKMO',4,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('CHKMO',5,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('RTOVL',6,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('VEGTM',7,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('CHKMO',8,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('CHKMO',9,10,120,1200)
  INTO orderitem(DISH_ITEM_DISH_CODE,orderitem_id,order_unit,dish_rate,line_total) VALUES ('RTOVL',10,10,120,1200)
SELECT 1 from dual;

```

Figure 12: figure of insertion into orderitem

ORDER_UNIT	DISH_RATE	LINE_TOTAL	DISH_ITEM_DISH_CODE	ORDERITEM_ID
1	10	120	1200 CHKMO	1
2	10	120	1200 VEGTM	2
3	10	120	1200 VEGTM	3
4	10	120	1200 CHKMO	4
5	10	120	1200 CHKMO	5
6	10	120	1200 RTOVL	6
7	10	120	1200 VEGTM	7
8	10	120	1200 CHKMO	8
9	10	120	1200 CHKMO	9
10	10	120	1200 RTOVL	10

Orders

```

INSERT ALL
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223334',10,250.69,'kumarigal','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223335',10,250.69,'Bouddha','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223336',10,250.69,'bhaktapur','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223337',10,250.69,'banesowore','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223338',10,250.69,'shaku','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-223339',10,250.69,'kumarigal','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-2233310',10,250.69,'bouddha','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-2233311',10,250.69,'udhyapur','ON Time')
  INTO Orders(SN,order_number,order_amount,delivery_point,status) VALUES ('2020-09-2233312',10,250.69,'saknu','ON Time')
SELECT 1 from dual;

```

Figure 13: figure of insertion into orders

SN	DATE_TIME	ORDER_NUMBER	ORDER_AMOUNT	DELIVERY_P...	STATUS	ORDERS_ID
1 2020-09-223334	(null)	10	250.69	kumarigal	ON Time	1
2 2020-09-223335	(null)	10	250.69	Bouddha	ON Time	2
3 2020-09-223336	(null)	10	250.69	bhaktapur	ON Time	3
4 2020-09-223337	(null)	10	250.69	banesowore	ON Time	4
5 2020-09-223338	(null)	10	250.69	shaku	ON Time	5
6 2020-09-223339	(null)	10	250.69	kumarigal	ON Time	6
7 2020-09-2233310	(null)	10	250.69	bouddha	ON Time	7
8 2020-09-2233311	(null)	10	250.69	udhyapur	ON Time	8
9 2020-09-2233312	(null)	10	250.69	saknu	ON Time	9

OrderRegisterTable

```

INSERT ALL
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (1, 1)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (2, 2)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (3, 3)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (4, 4)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (5, 5)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (6, 6)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (7, 7)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (8, 8)
  INTO ORDERREGISTERTABLE (ORDERS_ORDERS_ID, ORDERITEM_ORDERITEM_ID) VALUES (9, 9)
SELECT 1 from dual;

```

Figure 14: figure of insertion into orderregistertable

	ORDERS_ORDERS_ID	ORDERITEM_ORDERITEM_ID
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

6. IMPLEMENTATION OF WEB BASED DATABASE APPLICATION:

6.1. Home Page:

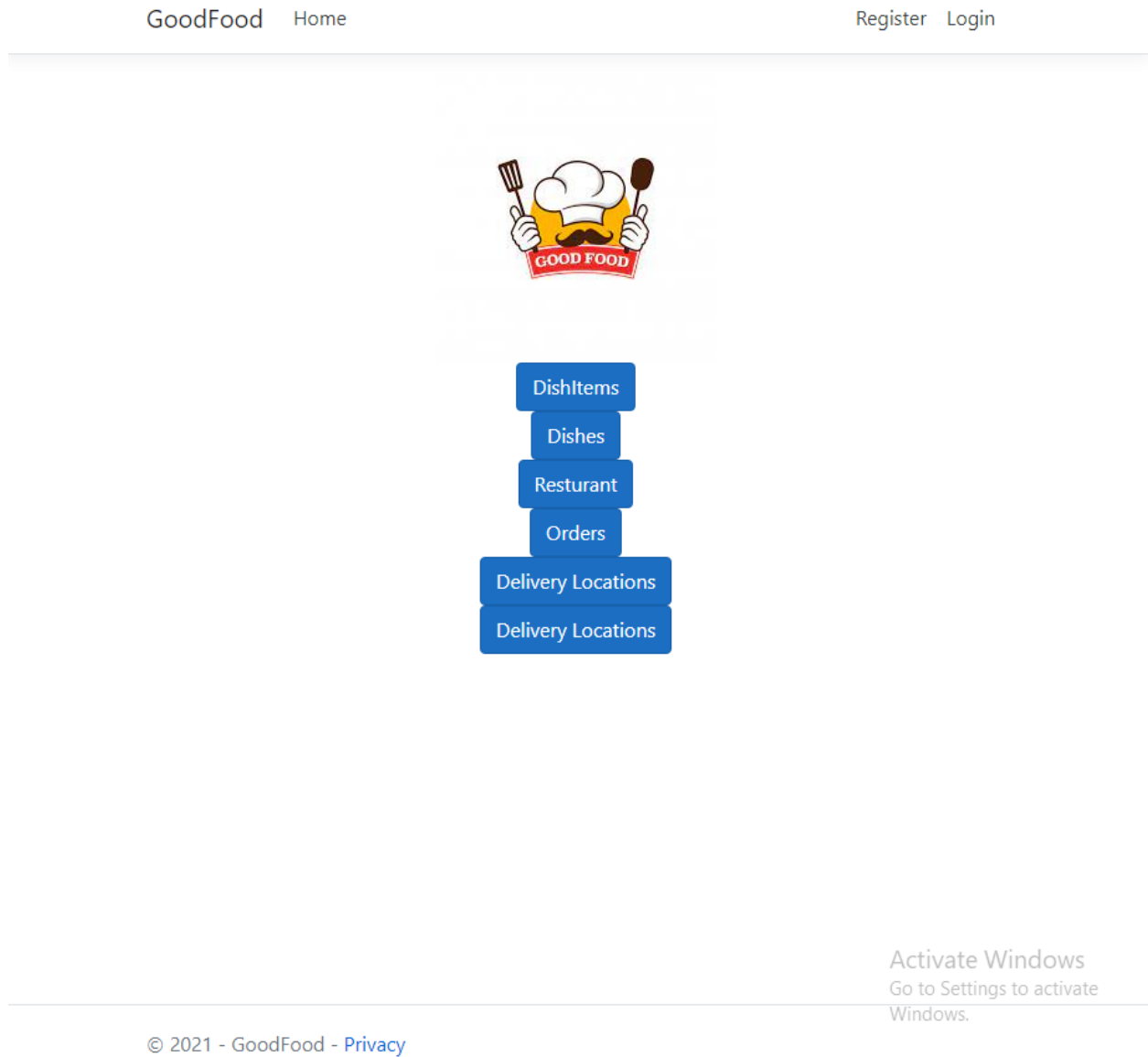


Figure 15: Home page of Webform

6.2. WEBFORMS:

Dish Item

GoodFood Home

Register Login

Index

[Create New](#)

dish_name	dish_code	another_name	
chow mine	chwmn	chowmine	Edit Details Delete
momo	x3456	momo	Edit Details Delete
pizza	piz	pizza	Edit Details Delete
choupsey	cho	choupsey	Edit Details Delete
Fried Rice	FR	Bhuteko Bhat	Edit Details Delete

Figure 16: Webform of DishItem

Dishes

Index

[Create New](#)

item_rate	dishitem	resturant	
1200	1	1	Edit Details Delete
340	2	2	Edit Details Delete
1200	2	1	Edit Details Delete
450	4	3	Edit Details Delete
700	5	3	Edit Details Delete

Figure 17: Webform of Dishes

Restaurant

GoodFood	Home	Register	Login
<h1>Index</h1> Create New			
restaurant_name	restaurant_code		
amog	amg123	Edit Details Delete	
assf	asdf	Edit Details Delete	
KFC	kkk	Edit Details Delete	
Crowne Plaza	CP	Edit Details Delete	
Umbrella	dur	Edit Details Delete	

Figure 18: Webform of Restaurant

Orders

GoodFood

Home

Register

Login

Index

Create New

date_time	order_number	order_amount	status	order_item	delivery_location	
9th March	1	2	on time	2	3	Edit Details Delete
10th march	4	5	Delayed	3	6	Edit Details Delete
12 th march	3	6	on time	3	4	Edit Details Delete
13th March	5	10	on time	5	5	Edit Details Delete
15th March	2	9	Delayed	1	6	Edit Details Delete

Activate Windows

Go to Settings to activate Windows.

Figure 19: Webform of Orders

Locations

GoodFood [Home](#)[Register](#) [Login](#)

Index

[Create New](#)

location	
Kathmandu	Edit Details Delete
Pokhara	Edit Details Delete
Biratnagar	Edit Details Delete
Dharan	Edit Details Delete
Chitwan	Edit Details Delete

Figure 20: Webform of location

OrderItem

GoodFood Home

Register Login

Index

[Create New](#)

order_unit	dishitem	
4	1	Edit Details Delete
2	3	Edit Details Delete
4	4	Edit Details Delete
5	3	Edit Details Delete
3	4	Edit Details Delete

Figure 21: Webform of OrderItem

7. Testing:

7.1. Testing of DishItems:

GoodFood Home Register Login

Index

[Create New](#)

dish_name	dish_code	another_name
-----------	-----------	--------------

Figure 22: inserting in empty fields

GoodFood Home Register Login

Create

DishItem

dish_name

Thukpa

dish_code

thu

another_name

Jhol Chowmein

Create

[Back to List](#)

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Figure 23: Inserting the data

GoodFood	Home	Register	Login
<h2>Index</h2> Create New			
dish_name	dish_code	another_name	
Thukpa	thu	Jhol Chowmein	Edit Details Delete

Figure 24: Datas Inserted

GoodFood

Home

Register

Login

Details

DistItem

dish_name	Thukpa
dish_code	thu
another_name	Jhol Chowmein

[Edit](#) | [Back to List](#)

Figure 25: Details of Dish Item

Edit

DishItem

dish_name

Chicken Thukpa

dish_code

thu

another_name

Jhol Chowmein

Save

[Back to List](#)

Figure 26:Editing DishItem

Index

[Create New](#)

dish_name	dish_code	another_name	
Chicken Thukpa	thu	Jhol Chowmein	Edit Details Delete

Figure 27:Dishitem Edited

Delete

Are you sure you want to delete this?

DistItem

dish_name Thukpa
dish_code thu
another_name Jhol Chowmein

[Delete](#) | [Back to List](#)

Figure 28:Deleting DishItems

GoodFood Home

[Register](#) [Login](#)

Index

[Create New](#)

dish_name	dish_code	another_name
-----------	-----------	--------------

Figure 29:DishItems deleted

Objective	To test the entire webform named DishItems.
Expected Result	To insert, edit and delete data.
Outcome	Data's inserted, edited, and deleted.
Result	Data's inserted, edited, and deleted.

7.2 Testing of Restaurant:

GoodFood Home Register Login

Index

[Create New](#)

restaurant_name	restaurant_code
-----------------	-----------------

Figure 30: Empty Field Restaurant

GoodFood Home Register Login

Create

Resturant

restaurant_name

restaurant_code

Create

[Back to List](#)

Figure 31: Creating into restaurant

GoodFood [Home](#) [Register](#) [Login](#)

Index

[Create New](#)

restaurant_name	resturant_code	
ABC	1	Edit Details Delete

Figure 32:Restaurant Created

GoodFood [Home](#)

Edit Resturant

restaurant_name

restaurant_code

[Back to List](#)

Figure 33:Editing Restaurant

GoodFood Home

[Register](#) [Login](#)

Index

[Create New](#)

restaurant_name	restaurant_code	
ABCD	1	Edit Details Delete

Figure 34: Restaurant Edited

GoodFood Home

[Register](#) [Login](#)

Details

Resturant

restaurant_name	ABCD
restaurant_code	1

[Edit](#) | [Back to List](#)

Figure 35: Details of Restaurant

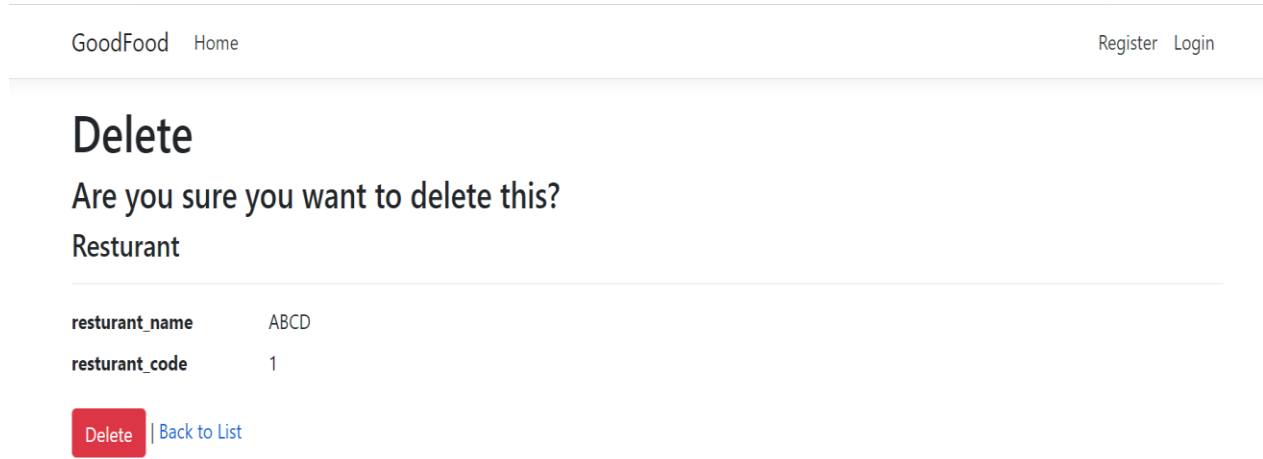


Figure 36:Deleting Restaurant

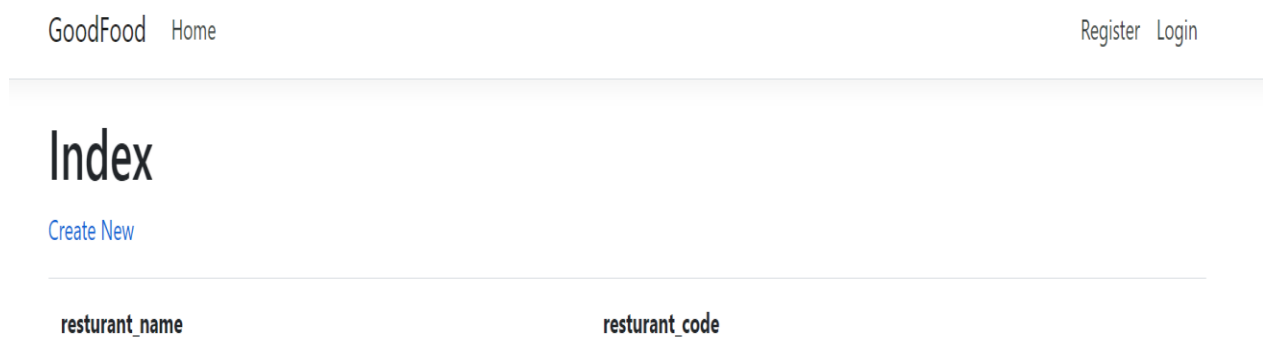


Figure 37:Restaurant Deleted

Objective	To test the entire webform named Restaurant.
Expected Result	To insert, edit and delete data.
Outcome	Data's inserted, edited, and deleted.
Result	Data's inserted, edited, and deleted.

7.3. Testing of Delivery Locations:

GoodFood Home Register Login

Create

DeliveryLocation

location

Create

[Back to List](#)

Figure 38: Creating Location

GoodFood Home Register Login

Index

[Create New](#)

location
Kathmandu Edit Details Delete

Figure 39: Location Created

GoodFood Home

[Register](#) [Login](#)

Edit

DeliveryLocation

location

[Save](#)[Back to List](#)

Figure 40:editing Location

GoodFood Home

[Register](#) [Login](#)

Index

[Create New](#)**location**

Kathmandu/Kamalpokhari

[Edit](#) | [Details](#) | [Delete](#)

Figure 41:Location Edited

GoodFood Home

[Register](#) [Login](#)

Details

DeliveryLocation

location Kathmandu/Kamalpokhari

[Edit](#) | [Back to List](#)

Figure 42:Details of Location

GoodFood Home

[Register](#) [Login](#)

Delete

Are you sure you want to delete this?

DeliveryLocation

location Kathmandu/Kamalpokhari

[Delete](#) | [Back to List](#)

Figure 43:Deleting Location

[GoodFood](#) [Home](#)[Register](#) [Login](#)

Index

[Create New](#)

location

Figure 44:Location Deleted

Objective	To test the entire webform named DeliveryLocation.
Expected Result	To insert, edit and delete data.
Outcome	Data's inserted, edited, and deleted.
Result	Data's inserted, edited, and deleted.

7.4. Testing of OrderItems:

GoodFood [Home](#) [Register](#) [Login](#)

Create OrderItem

order_unit

dishitem_id

Create

[Back to List](#)

Figure 45: Creating OrderItem

GoodFood [Home](#) [Register](#) [Login](#)

Index

[Create New](#)

order_unit	dishitem	
2	3	Edit Details Delete

Figure 46: OrderItems Created

GoodFood [Home](#) [Register](#) [Login](#)

Edit

OrderItem

order_unit

dishitem_id

[Save](#)

[Back to List](#)

Figure 47:Editing OrderItems

GoodFood [Home](#) [Register](#) [Login](#)

Index

[Create New](#)

order_unit	dishitem	
3	3	Edit Details Delete

Figure 48:OrderItems Edited

GoodFood Home

Register Login

Delete

Are you sure you want to delete this?

OrderItem

order_unit 3

dishitem 3

Delete | [Back to List](#)

Figure 49:Deleting OrderItems

GoodFood Home

Register Login

Index

[Create New](#)

order_unit

dishitem

Figure 50:OrderItems deleted

GoodFood [Home](#)[Register](#) [Login](#)

Details

OrderItem

order_unit 3

dishitem 3

[Edit](#) | [Back to List](#)

Figure 51:Details of OrderItems

Objective	To test the entire webform named OrderItems.
Expected Result	To insert, edit and delete data.
Outcome	Data's inserted, edited, and deleted.
Result	Data's inserted, edited, and deleted.

7.5. Testing of Dishes:

GoodFood Home Register Login

Create Dishes

dist_item_id
3

resturant_id
2

item_rate
300

Create

[Back to List](#)

Figure 52: Creating dishes

GoodFood Home Register Login

Index

[Create New](#)

item_rate	dishitem	resturant	
300	3	2	Edit Details Delete

Figure 53: Dishes Created

GoodFood Home Register Login

Edit Dishes

dist_item_id

3

resturant_id

3

item_rate

500

Save

[Back to List](#)

Figure 54:Editing Dishes

GoodFood Home Register Login

Index

[Create New](#)

item_rate	dishitem	resturant	
500	3	3	Edit Details Delete

Figure 55:Dishes Edited

GoodFood [Home](#)[Register](#) [Login](#)

Details

Dishes

item_rate	500
dishitem	3
resturant	3

[Edit](#) | [Back to List](#)

Figure 56: Viewing Details of Dishes

GoodFood [Home](#)[Register](#) [Login](#)

Delete

Are you sure you want to delete this?

Dishes

item_rate	500
dishitem	3
resturant	3

[Delete](#) | [Back to List](#)

Figure 57: Deleting Dishes

GoodFood [Home](#)[Register](#) [Login](#)

Index

[Create New](#)

item_rate	dishitem	resturant
-----------	----------	-----------

Figure 58: Dishes Deleted

Objective	To test the entire webform named Dishes.
Expected Result	To insert, edit and delete data.
Outcome	Data's inserted, edited, and deleted.
Result	Data's inserted, edited, and deleted.

7.6. Testing of Orders:

GoodFood Home Register Login

Create Orders

date_time
1 jan

order_number
4

order_amount
10

delivery_id
2

status
Delivered

order_id
2

Create

Figure 59: Creating Orders

GoodFood Home Register Login

Index

[Create New](#)

date_time	order_number	order_amount	status	order_item	delivery_location	
1 jan	4	10	Delivered	2	2	Edit Details Delete

Figure 60: Orders Created

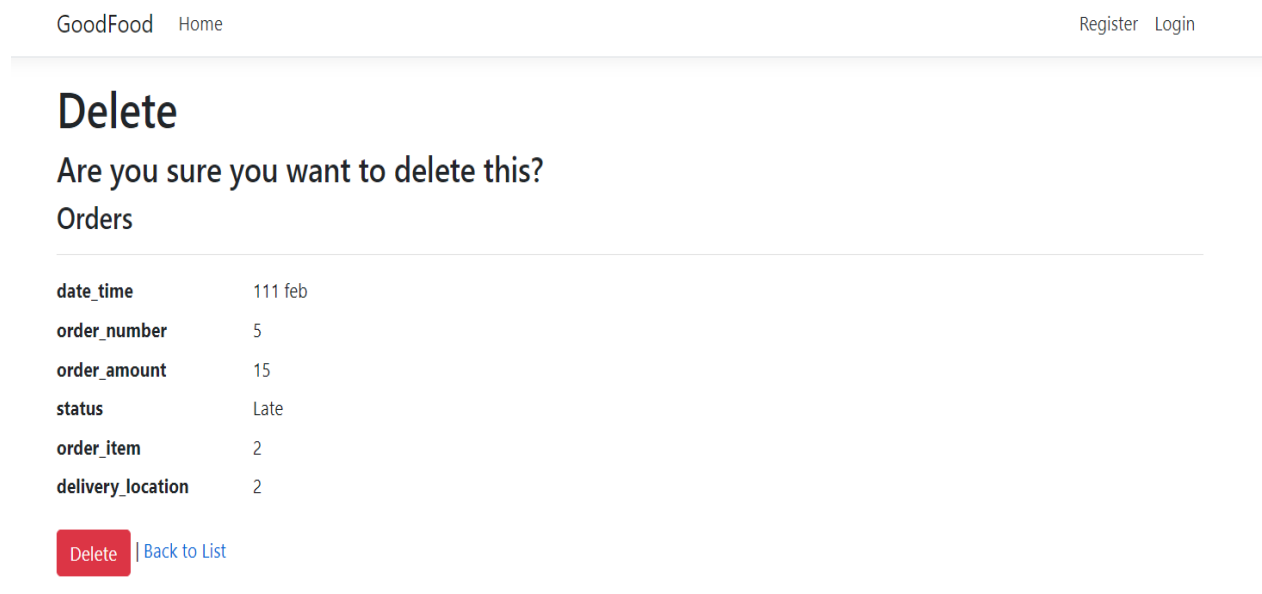


Figure 61:Deleting Orders

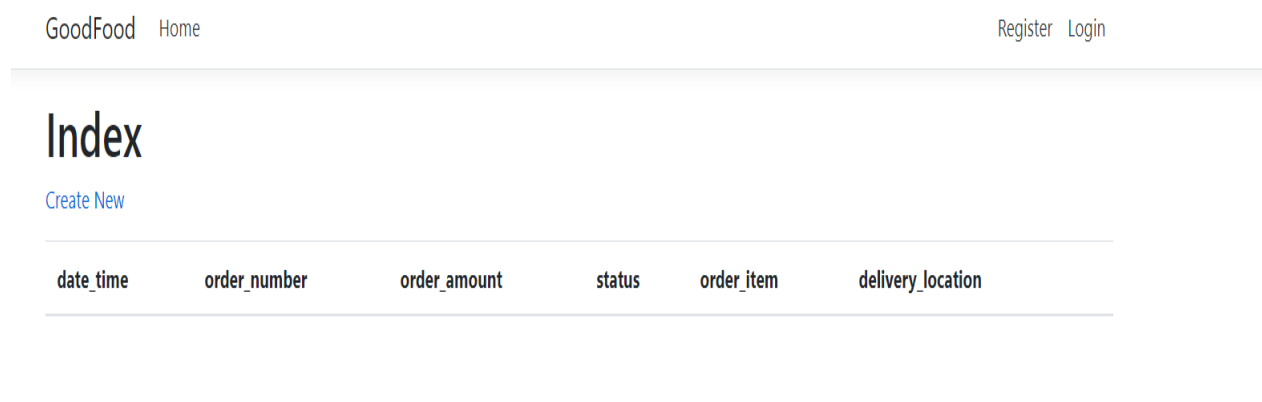


Figure 62:Orders deleted

GoodFood Home

Register Login

Details

Orders

date_time	111 feb
order_number	5
order_amount	15
status	Late
order_item	2
delivery_location	2

[Edit](#) | [Back to List](#)

Figure 63: Viewing Details of Orders

GoodFood Home

Register Login

Edit

Orders

date_time

order_number

order_amount

delivery_id

status

order_id

Figure 64: Editing Orders

GoodFood [Home](#) [Register](#) [Login](#)

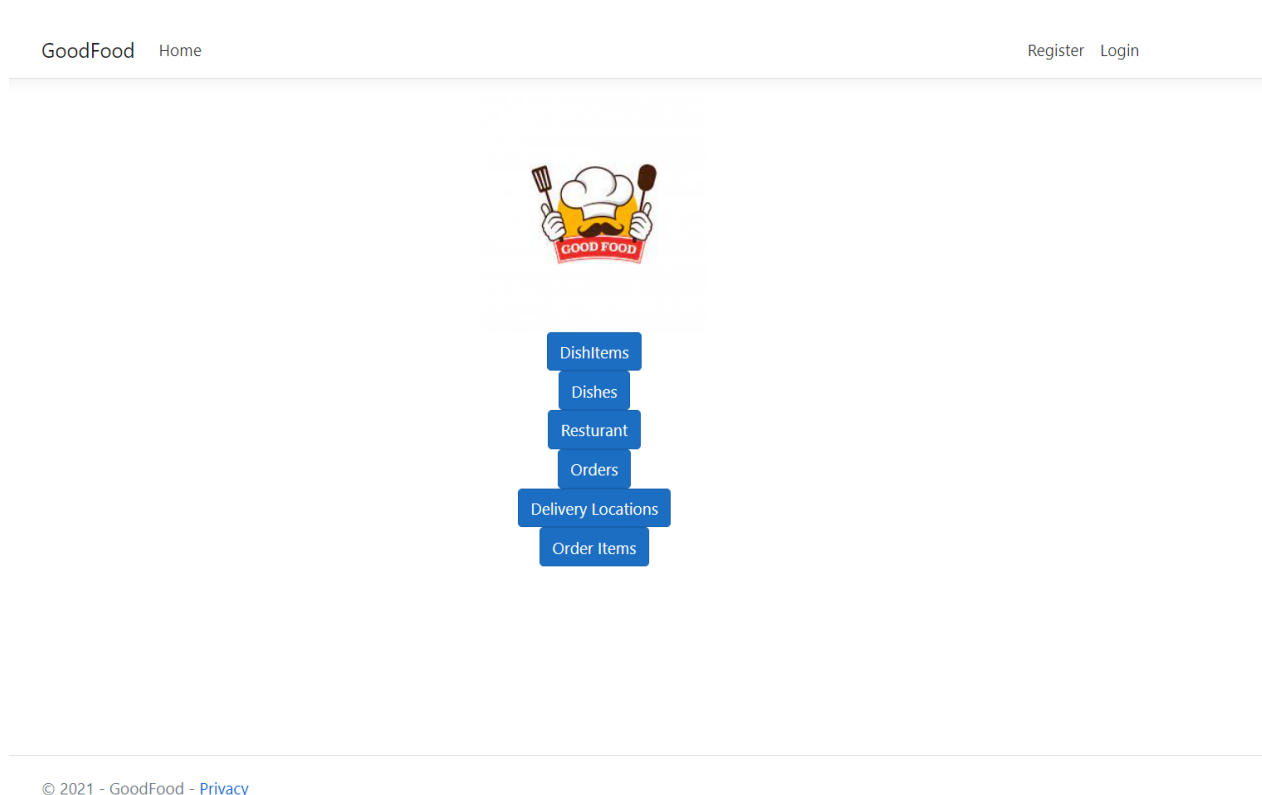
Index

[Create New](#)

date_time	order_number	order_amount	status	order_item	delivery_location	
111 feb	5	15	Late	2	2	Edit Details Delete

Figure 65:Orders edited

8. User Manual



The above Webform is the GUI (Graphical User Interface) of my project where I have included the appropriate buttons. The following actions are performed in the web form:

- i. The DishItems include DishName, DishCode and substitute Name.
- ii. The Dishes include itemrate, dishitem and restaurant.
- iii. The restaurant includes restaurantName and restaurantcode.
- iv. The orders include
date_timeorder_numberorder_amountstatusorder_itemdelivery_location.
- v. The deliverylocation includes location
- vi. The orderItems includes orderunit and ordItems.

9.FURTHER DISCUSSION:

Through this coursework, a lot of experience has been achieved. The task in the coursework was hard but it was finally completed through lots of research, effort and hard work. At first lots of research were done regarding the different software that were needed to be used. After the research, all the tasks were carried out according to the requirement of the coursework. The coursework did not only complete the tasks given but also helped in developing various skills and taught many things which can be helpful for the career as a database developer. I learned a lot about analyzing the scenario of a company. In brief, an analyzation of working mechanism of travel and tour company. Likewise, I learned to identify the entities and attributes of the system and show the relationship between entities in Oracle SQL Developer Data Modeler. Oracle SQL Developer Modeler was easy to use and made the task a lot easier as it generates the DDL file which contains the generation of table. Similarly, I learned to connect the database from Oracle SQL Developer to ASP.NET with C# (Visual Studio). The Module Teacher Rohit Panday gave different ideas and techniques which made the coursework less hard and its completion in time

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