Database Concepts & Design

PandaExpress

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ERD
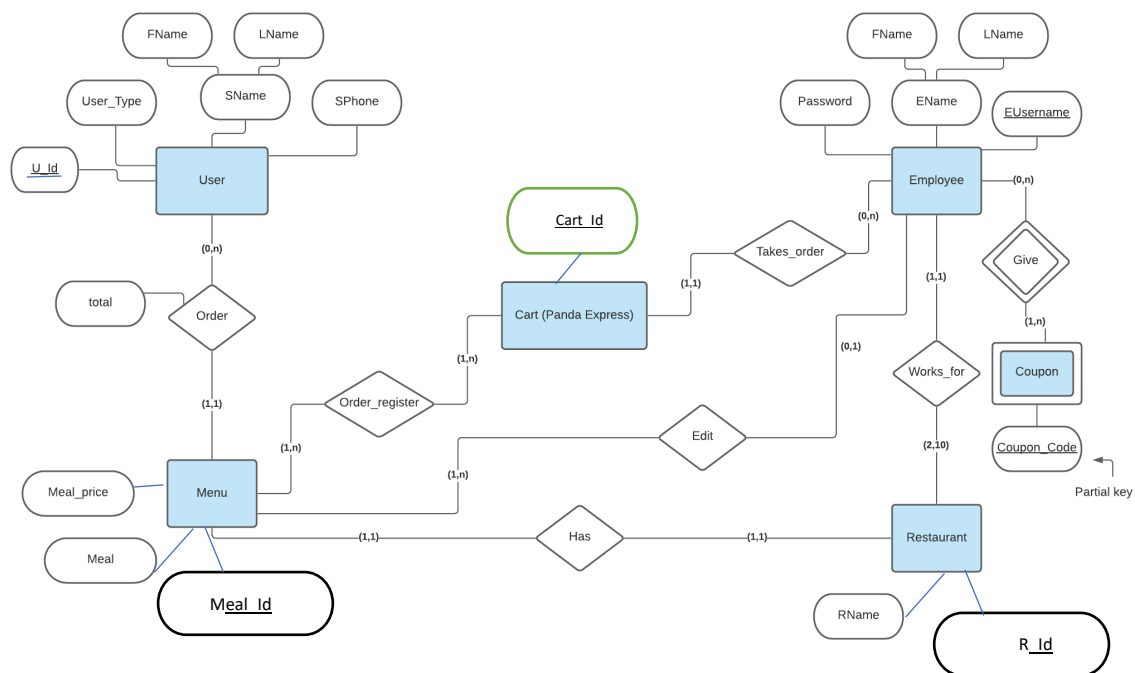
Entities and fields:

Cart (Panda Express): the main program /the cart that will contain the order.

User: may be a student or a guest, each user has full name, an ID and a phone number.

Menu: menu contain all the meals for each restaurant and its prices, the user will view the meals through the menu.

Restaurant: the restaurant that will offer the meals for the users, it will be identify by its name.

Coupon: the student will use it to have a discount on the order, each coupon is a code, it is weak entity because it may be or not.

Employee: the admin, the person who will Add/delete coupon, view order information /comment, each employee has a full name, a username and password.

Relationships and Constraints:

Order: the user may order from the menu or may not, the user can order more than one order. The order can be only from one restaurant menu. Each order has a price.

Order_register: between Cart (Panda Express) and menu, the order will be register from one or more menus, the cart will take only one order at a time.

Takes_order: between Cart (Panda Express) and Employee, the employee will take the order from the program (the cart) and may take none or many orders, and the Cart (Panda Express) can hold one order at a time.

Edit: between menu and Employee, each employee may edit only the restaurant's menu that she/he works for and the menu can be edited by one employee more than one time.

Works_for: between Restaurant and Employee, employee can work for only one Restaurant, Restaurant can have at least two employee and up to ten employees.

Has: between Restaurant and menu, Restaurant can have only one menu, menu can relate to only one Restaurant.

Give: between employee and coupon, employee may give a coupon or not, one coupon or more can be given by one or more employees.

Filled data:

User Data:

insert into User values (1, 'Student', 'Mie','Smth',333445555);

insert into User values (2, 'Student', 'Brlin',''Wong',123456789);

insert into User values (3, 'Student', 'Tei','Jos',009812678);

insert into User values (4, 'Teacher', 'May',' Wallace',120987653);

insert into User values (5, 'Teacher', 'Hand,' Narayan',987024701);

Employee Data:

insert into Employee values('Sara ','Omar' , 'SFO_2093', 'Aa123498');

insert into Employee values('Hind' ,'Alwani', 'HBA_0098', 'Mj32148');

insert into Employee values('Reem', 'Aloud', 'RK_0344', 'Rk2278');

insert into Employee values('Ruba ' ,'Mohammad', 'RA_5556', 'Ra21889');

insert into Employee values('Haya ','Alhabeeb', 'HH_7784', 'Hha8874');

Coupon Data:

Insert into Coupon values('AN532');

Insert into Coupon values('AB098');

Insert into Coupon values('ASD234');

Insert into Coupon values('JU000');

Restaurant Data:

Insert into Restaurant values('R1');

Insert into Restaurant values('R2');

Insert into Restaurant values('R3');

Menu Data:

Insert into Menu values('R1', 'Tuna Burger',20);

Insert into Menu values('R1','Beef Burger', 30);

Insert into Menu values('R1',Fries, 5.5);

Insert into Menu values('R1','pepsi', 3);

Insert into Menu values('R1','chicken Burger', 10);

Insert into Menu values('R2', 'Sushi',20);

Insert into Menu values('R2','Beef Sushi', 40);

Insert into Menu values('R2','tuna sishi', 50);

Insert into Menu values('R2','pepsi', 3);

Insert into Menu values('R2','chicken sushi', 30);

Insert into Menu values('R3', 'Tuna tacos,20);

Insert into Menu values('R3','Beef tacos, 20);

Insert into Menu values('R3',Fries, 5.5);

Insert into Menu values('R3','pepsi', 3);

Insert into Menu values('R3','chicken tacos, 20);

Cart (Panda Express) Data:

Insert into Cart values(1);

Insert into Cart values(2);

Insert into Cart values(3);

Insert into Cart values(4);

Insert into Cart values(5);

Insert into Cart values(6);

Insert into Cart values(7);

Insert into Cart values(8);

Mapping for ERD

User:

U_id	User _Type	FName	LName	SPhone

Menu:

Meal_price	meal	Meal_id	EUsername

Restaurant:

RName	Meal_id	EUsername

Employee:

Password	FName	LName	EUsername	Cart_id

Cart(PandaExpress)

Cart_id

Order_Register:

Meal_id	Cart_id

Coupon:

Copon_code	EUsername

Order:

U_id	Meal_id
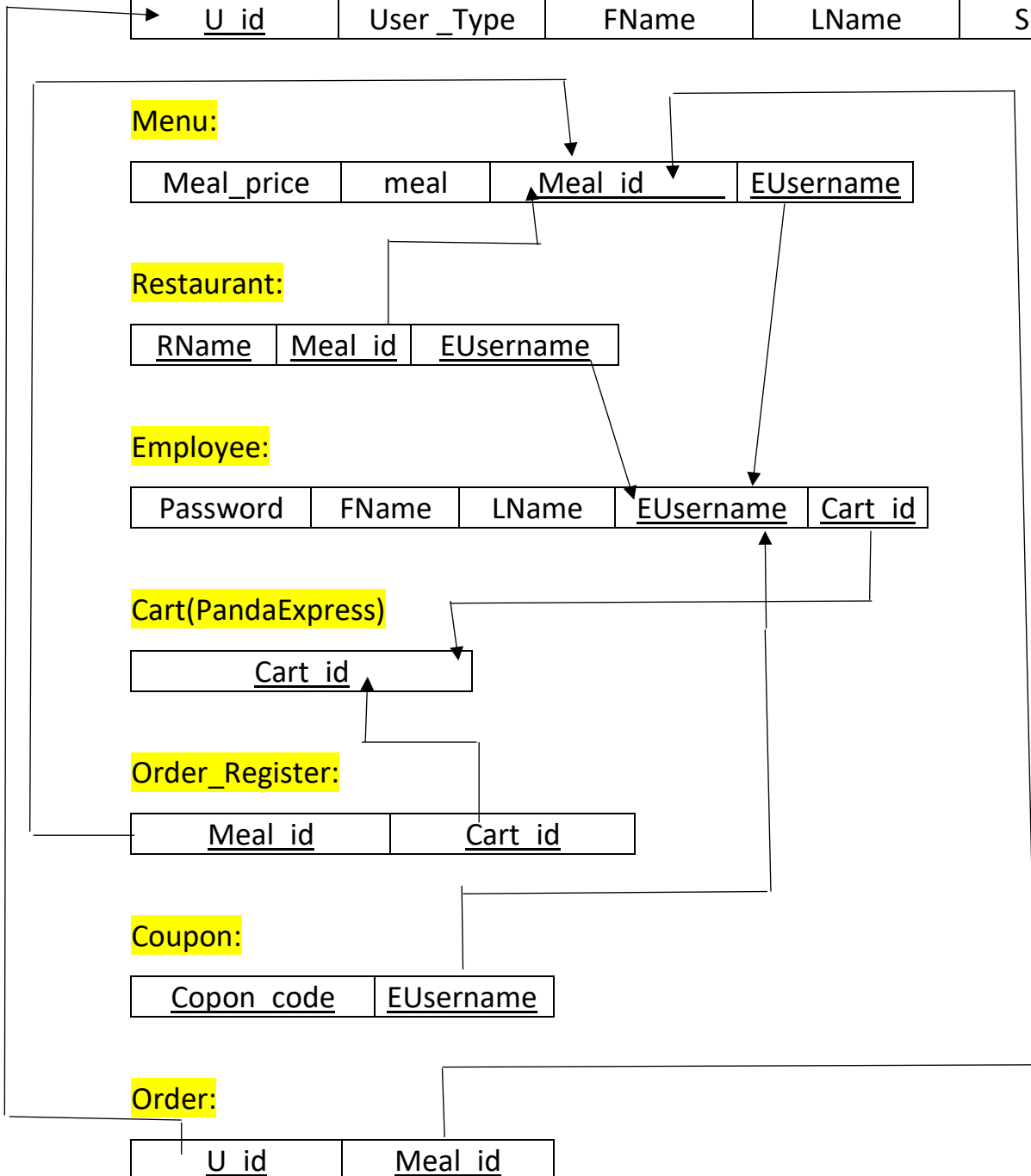
Tables with full specification:

```sql
create database Panda;
use Panda;

create table User_Data(
/*  the users who will use the program :
  may be any member from the university.
  student, teacher etc.. */
  user_Id int(10) primary key,
  User_type varchar(20) not null,
  user_Fname varchar(20)not null,
  user_Lname varchar(20)not null,
  user_Phone int(10)
);
create table Employee_Data(
/*  the employees in each resturant*/
  UserName varchar(10) primary key references User_Data(user_Id),
  employee_Fname varchar(10) not null,
  employee_Lname varchar(10) not null,
  passwordE varchar(10)
);
create table Coupon(
/*  the employees can add a coupon for the users to use*/
  copon varchar(10)
);
```

```sql
create table Coupon(
/*  the employees can add a coupon for the users to use*/
  copon varchar(10)
);

create table Restaurant(
/*  we have 3 Restaurant in the program*/
  RName varchar(20) ,
  R_id int(10)primary key
);

create table Menu(
/*  the menu for each resturant in the program*/
  foodname varchar(20),
  price double(10,3)
);

create table cart(
/*  the cart will be updated whenever the user order from the program*/
  cart_Id int(10)
);
```

```sql
insert into User_Data values(1,'Student','Mie','Smth',333445555);
insert into User_Data values (2,'Student','Brlin','Wong',123456789);
insert into User_Data values (3,'Student','Tei','Jos',009812678);
insert into User_Data values (4,'Teacher','May','Wallace',120987653);
insert into User_Data values (5,'Teacher','Hand','Narayan',987024701);

insert into Employee_Data values('Sara ','Omar' , 'Sara', '123');
insert into Employee_Data values('Hind ','Alwani', 'Hind', '123');
insert into Employee_Data values('Reem', 'Aloud', 'Reem', '123');
insert into Employee_Data values('Ruba ','Mohammad', 'Ruba', '123');
insert into Employee_Data values('Haya ','Alhabeeb', 'Haya', '123');


Insert into Coupon value('AN532');
Insert into Coupon value('AB098');
Insert into Coupon value('ASD234');
Insert into Coupon value('JU000');

Insert into Restaurant values('Burger Queen',102);
Insert into Restaurant values('Samurai Sushi',103);
Insert into Restaurant values('COCO Tacos',104);
```

```sql
Insert into Menu values( 'Tuna Burger',20.0);
Insert into Menu values('Beef Burger', 30.0);
Insert into Menu values('Fries', 5.5);
Insert into Menu values('pepsi', 3.0);
Insert into Menu values('chicken Burger', 10.0);

Insert into Menu values( 'Vegetable Sushi',20.0);
Insert into Menu values('Beef Sushi', 40.0);
Insert into Menu values('tuna sushi', 20.0);
Insert into Menu values('pepsi', 3.0);
Insert into Menu values('chicken sushi', 30.0);

Insert into Menu values( 'Tuna tacos',20.0);
Insert into Menu values('Beef tacos', 20.0);
Insert into Menu values('chicken tacos',20.0);
Insert into Menu values('Fries', 5.5);
Insert into Menu values('pepsi', 3.0);

Insert into cart values(1);
Insert into cart values(2);
Insert into cart values(3);
Insert into cart values(4);
Insert into cart values(5);
Insert into cart values(6);
Insert into cart values(7);
Insert into cart values(8);
```

```
91
92
93 ●    select *from cart ;
94 ●    select * from Employee_Data;
```

Result Grid | Filter Rows: [   ] | Expo

cart_Id
1
2
3
4
5
6
7
8

```
94 ●    select * from Employee_Data;
95 ●    select *from Menu;
96 ●    select * from User_Data;
97 ●    select *from Restaurant;
```

Result Grid | Filter Rows: [   ] | Edit: 📝 🗃 🗂 | E

UserName	employee_Fname	employee_Lname	passwordE
Haya	Alhabeeb	Haya	123
Hind	Alwani	Hind	123
Reem	Aloud	Reem	123
Ruba	Mohammad	Ruba	123
Sara	Omar	Sara	123
NULL	NULL	NULL	NULL

```
94 ●    select * from Employee_Data;
95 ●    select *from Menu;
96 ●    select * from User_Data;
97 ●    select *from Restaurant;
98 ●    select *from Coupon;
```

Result Grid | Filter Rows: [   ] | Export: 🖫 | Wrap Cell

foodname	price
Tuna Burger	20.000
Beef Burger	30.000
Fries	5.500
pepsi	3.000
chicken Burger	10.000
Vegetable Sushi	20.000
Beef Sushi	40.000
tuna sushi	20.000
pepsi	3.000
chicken sushi	30.000
Tuna tacos	20.000
Beef tacos	20.000
chicken tacos	20.000
Fries	5.500
pepsi	3.000

```
96 ●   select * from User_Data;
97 ●   select *from Restaurant;
98 ●   select *from Coupon;
```

user_Id	User_type	user_Fname	user_Lname	user_Phone
1	Student	Mie	Smth	333445555
2	Student	Brlin	Wong	123456789
3	Student	Tei	Jos	9812678
4	Teacher	May	Wallace	120987653
5	Teacher	Hand	Narayan	987024701
NULL	NULL	NULL	NULL	NULL

```
97 ●   select *from Restaurant;
98 ●   select *from Coupon;
```

RName	R_id
Burger Queen	102
Samurai Sushi	103
COCO Tacos	104
NULL	NULL

```
98 ●   select *from Coupon;
```

copon
AN532
AB098
ASD234
JU000

```
157
158 ●   Desc Menu;
159 ●   Desc User Data;
```

Field	Type	Null	Key	Default	Extra
foodname	varchar(20)	YES		NULL	
price	double(10,3)	YES		NULL	

```
159 •  Desc User_Data;
160 •  Desc Employee_Data;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
user_Id	int(10)	NO	PRI	NULL	
User_type	varchar(20)	NO		NULL	
user_Fname	varchar(20)	NO		NULL	
user_Lname	varchar(20)	NO		NULL	
user_Phone	int(10)	YES		NULL	

```
160 •  Desc Employee_Data;
161 •  Desc Coupon;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
UserName	varchar(10)	NO	PRI	NULL	
employee_Fname	varchar(10)	NO		NULL	
employee_Lname	varchar(10)	NO		NULL	
passwordE	varchar(10)	YES		NULL	

```
161 •  Desc Coupon;
162 •  Desc Restaurant;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
copon	varchar(10)	YES		NULL	

```
162 •  Desc Restaurant;
163 •  Desc cart;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
RName	varchar(20)	YES		NULL	
R_id	int(10)	NO	PRI	NULL	

```
162    Desc Restaurant
163    Desc cart;
```

Field	Type	Null	Key	Default	Extra
cart_Id	int(10)	YES		NULL	