



Oficina Virtual

Trabalho Prático de Programação Web

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1. Introdução

In this project I have tried to give a solution for a system in which providers can register services and customers can ask for a them.

I have achieved the most relevant objective which is registration as a customer or a provider, log in, registration of the products only if you are a provider and the supervising of the users by the Admin who can delete users.

I have done everything in the project, from the database to the design of the website. For this design I have choose to use Bootstrap.

The tools I have used are basically Microsoft Visual Studio and the internet to help me in some tutorials and information.

I have had some problems in the implementation of the "request-and-response" functionality in which a customer could ask for a service and providers answer with a price and finally I have not been able to implement it.

I have an idea of how can it be possible that I explain on the conclusions page.

2. Funcionalidades

2.1. Perfil "Customer"

This profile can access to the system but can not add services on the different sections of the website. It has permissions to see the different services and could ask for an estimation of a service by clicking the "Request" button.

2.2. Perfil "Provider"

This profile have the same permissions as the Customer Profile plus it can add services in the different sessions of the app (Building Maintenance, Household Appliances, Vehicles Repairs and Garden Maintenance).

2.3. Outros

"Admin"

This profile is the only one that when it is logged in it can access to the database of customers and providers and edit or delete users.

3. Outras Informações

3.1. Base de Dados

It has been created 7 tables for this project. One for the customers registration called "Table", one for the providers registration called "tblProvider", one for each section of the services/products as Building Maintenance ("tblProductsBuild"), Household Appliances ("tblHouse", Vehicles Repairs ("tblVehicles") and Garden Maintenance ("tblGarden"), and another one for the services requested by the customers called "tblServiciosSolicidados" in which will go the services requested by the customers appeared on the customer panel page.

Table:

Name	Data Type	Allow Nulls	Default	
CustomerId	nvarchar(50)	<input type="checkbox"/>		
UserName	nchar(20)	<input checked="" type="checkbox"/>		
Password	nchar(20)	<input checked="" type="checkbox"/>		
Email	nchar(50)	<input checked="" type="checkbox"/>		
Country	nchar(15)	<input checked="" type="checkbox"/>		
		<input type="checkbox"/>		

Keys (1)
<unnamed> (Primary Key, Clustered: CustomerId)
Check Constraints (0)
Indexes (0)
Foreign Keys (0)
Triggers (0)

Design

T-SQL

```
1 CREATE TABLE [dbo].[Table] (  
2     [CustomerId] NVARCHAR (50) NOT NULL,  
3     [UserName] NCHAR (20) NULL,  
4     [Password] NCHAR (20) NULL,  
5     [Email] NCHAR (50) NULL,  
6     [Country] NCHAR (15) NULL,  
7     PRIMARY KEY CLUSTERED ([CustomerId] ASC)  
8 );
```

tblProvider:

Name	Data Type	Allow Nulls	Default	
ProviderId	nvarchar(50)	<input type="checkbox"/>		
UserName	nchar(20)	<input checked="" type="checkbox"/>		
Password	nchar(20)	<input checked="" type="checkbox"/>		
Email	nchar(50)	<input checked="" type="checkbox"/>		
Country	nchar(15)	<input checked="" type="checkbox"/>		
		<input type="checkbox"/>		

Keys (1)
<unnamed> (Primary Key, Clustered: ProviderId)
Check Constraints (0)
Indexes (0)
Foreign Keys (0)
Triggers (0)

Design

T-SQL

```
1 CREATE TABLE [dbo].[tblProvider] (  
2     [ProviderId] NVARCHAR (50) NOT NULL,  
3     [UserName] NCHAR (20) NULL,  
4     [Password] NCHAR (20) NULL,  
5     [Email] NCHAR (50) NULL,  
6     [Country] NCHAR (15) NULL,  
7     PRIMARY KEY CLUSTERED ([ProviderId] ASC)  
8 );
```

tblProductsBuild:

Name	Data Type	Allow Nulls	Default		Keys (1) <unnamed> (Primary Key, Clustered: Id) Check Constraints (0) Indexes (0) Foreign Keys (0) Triggers (0)
Id	nvarchar(50)	<input type="checkbox"/>			
Name	nchar(20)	<input checked="" type="checkbox"/>			
Description	nvarchar(MAX)	<input checked="" type="checkbox"/>			
Provider	nvarchar(50)	<input checked="" type="checkbox"/>			
		<input type="checkbox"/>			

Design

T-SQL

```

1 CREATE TABLE [dbo].[tblProductsBuild] (
2     [Id] NVARCHAR (50) NOT NULL,
3     [Name] NCHAR (20) NULL,
4     [Description] NVARCHAR (MAX) NULL,
5     [Provider] NVARCHAR (50) NULL,
6     PRIMARY KEY CLUSTERED ([Id] ASC)
7 );
8

```

tblHouse:

Name	Data Type	Allow Nulls	Default		Keys (1) <unnamed> (Primary Key, Clustered: ProductId) Check Constraints (0) Indexes (0) Foreign Keys (0) Triggers (0)
ProductId	nvarchar(50)	<input type="checkbox"/>			
Name	nchar(20)	<input checked="" type="checkbox"/>			
Description	nvarchar(MAX)	<input checked="" type="checkbox"/>			
Provider	nchar(20)	<input checked="" type="checkbox"/>			
		<input type="checkbox"/>			

Design

T-SQL

```

1 CREATE TABLE [dbo].[tblHouse] (
2     [ProductId] NVARCHAR (50) NOT NULL,
3     [Name] NCHAR (20) NULL,
4     [Description] NVARCHAR (MAX) NULL,
5     [Provider] NCHAR (20) NULL,
6     PRIMARY KEY CLUSTERED ([ProductId] ASC)
7 );
8

```

tblVehicles:

Name	Data Type	Allow Nulls	Default
ProductId	nvarchar(50)	<input type="checkbox"/>	
Name	nchar(20)	<input checked="" type="checkbox"/>	
Description	nvarchar(MAX)	<input checked="" type="checkbox"/>	
Provider	nchar(20)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Keys (1)
 <unnamed> (Primary Key, Clustered: ProductId)
Check Constraints (0)
Indexes (0)
Foreign Keys (0)
Triggers (0)

Design T-SQL

```

1 CREATE TABLE [dbo].[tblVehicles] (
2     [ProductId] NVARCHAR (50) NOT NULL,
3     [Name] NCHAR (20) NULL,
4     [Description] NVARCHAR (MAX) NULL,
5     [Provider] NCHAR (20) NULL,
6     PRIMARY KEY CLUSTERED ([ProductId] ASC)
7 );

```

tblGarden:

Name	Data Type	Allow Nulls	Default
ProductId	nvarchar(50)	<input type="checkbox"/>	
Name	nchar(20)	<input checked="" type="checkbox"/>	
Description	nvarchar(MAX)	<input checked="" type="checkbox"/>	
Provider	nvarchar(50)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Keys (1)
 <unnamed> (Primary Key, Clustered: ProductId)
Check Constraints (0)
Indexes (0)
Foreign Keys (0)
Triggers (0)

Design T-SQL

```

1 CREATE TABLE [dbo].[tblGarden] (
2     [ProductId] NVARCHAR (50) NOT NULL,
3     [Name] NCHAR (20) NULL,
4     [Description] NVARCHAR (MAX) NULL,
5     [Provider] NVARCHAR (50) NULL,
6     PRIMARY KEY CLUSTERED ([ProductId] ASC)
7 );

```

tblServiciosSolicitados:

Name	Data Type	Allow Nulls	Default
Id	nvarchar(50)	<input type="checkbox"/>	
CustomerId	nvarchar(50)	<input checked="" type="checkbox"/>	
ProductName	nchar(20)	<input checked="" type="checkbox"/>	
Description	nvarchar(MAX)	<input checked="" type="checkbox"/>	
Provider	nchar(20)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Keys (1)
 <unnamed> (Primary Key, Clustered: Id)

Check Constraints (0)

Indexes (0)

Foreign Keys (1)
 FK_tblServiciosSolicitados_ToTable (CustomerId)

Triggers (0)

Design T-SQL

```

1 CREATE TABLE [dbo].[tblServiciosSolicitados] (
2     [Id] NVARCHAR (50) NOT NULL,
3     [CustomerId] NVARCHAR (50) NULL,
4     [ProductName] NCHAR (20) NULL,
5     [Description] NVARCHAR (MAX) NULL,
6     [Provider] NCHAR (20) NULL,
7     PRIMARY KEY CLUSTERED ([Id] ASC),
8     CONSTRAINT [FK_tblServiciosSolicitados_ToTable] FOREIGN KEY ([CustomerId]) REFERENCES [dbo].[Table] ([CustomerId])
9 );
  
```

3.2. Gestão de Acessos

In one hand we have to do an access control when a user wants to register a product/service. This is controlled by a form in each section of the website in which the user have to put his credentials so if the user is recognized as a provider the app gives him the permission to register a new product in that section.

Also we have the "admin" role who can access to his panel when he logs in recognized by his password.

If i would have implemented the customer and provider panel we would have to gen into account some more access permissions like to request for a service or give a prize if we are provider.

3.3. Outros

4. Conclusões

In this project I have learned a lot about C# above all and some of SQL and also a lot about asp.Net. I have never developed a project like this on my own and I didn't know it has a lot to work with. Probably I have spent around 60 hours developing the system and between 5 and 10 learning with tutorials and searching information on the internet.

I didn't know anything about asp.NET and C# and I have done the work on my own when it is designed for groups of 2 people so may be that is the reason why I have not been able to implement all the functionalities.

About how could be implemented the "request-and-response" functionality, I have implemented a button called "Request" in each service in each section of the app. So, when a user (the session has to recognize it as a customer) click the button it adds the service to the customer panel immediately and register on "tblServiciosSolicitados" the service and the ID of the customer that has requested the service (foreign key). Also we will have to register this on the provider panel associated with that service. Then the provider could give an estimation fare about it and finally the customer can accept it or deny it.

We will also have to create a table for the price given service.