

---

## Table of Contents

[Table of Contents](#)

[Project Description](#)

[Functionality](#)

[Development Platform](#)

[Website Flow](#)

[Coding Guidelines](#)

[Database Setup](#)

[Flow Chart](#)

[Login Pages](#)

[Home](#)

[Home with Menu](#)

[User Form with Menu](#)

[User Table](#)

[User Table With Menu](#)

[Customer Form](#)

[Customer Form with Menu](#)

[Customer Table](#)

[Customer Table with menu](#)

[Jobs Form](#)

[Jobs Form with Menu](#)

[Customer Table](#)

[Customer Table with Menu](#)

[Transaction Form](#)

[Transaction Form with Menu](#)

[Transaction Table](#)

[Transaction Table with Menu](#)

[Release Notes](#)

Jared Hawkins

# Excavation Website

July 16, 2018

## Project Description

A website for an excavation business, with a lighter customer interface and a more in depth admin interface for the business to use. The customer section would mostly consist of the usual business things (about the business, completed projects), but also a more detailed form for potential customers to request an estimate for a new job. The admin section would have the ability to utilize all CRUD functions to better organize and utilize relevant data sets pertinent to not only scheduling new jobs, but fine tuning the job estimate process.

## Users

### 1. Customers

- Will interact with the public website

- Want to see completed jobs

- Want to inquire about getting a job done, price and time availability wise

### 2. Boss

Will interact with employee side

Will want to see what his employees are doing

Manage different levels of permissions and roles

Have a general overview of completed and ongoing jobs

Get to see information derived from the datasets, so he can make decisions  
about his business going forward

### 3.Accountants

Will interact with employee side

Will want to enter in financial data

Collect information from datasets to better advise boss

Will have restricted access to directly editing database

### 4.All other employees

Will interact with employee side

Enter in job data, including estimates and customer information

Have limited access to database other than for viewing information

## Functionality

1. Customer web pages where they can view business info and initiate job requests.
2. Secure Admin login, logging successful and unsuccessful attempts
3. Admins have varied privileges based on what data they need to access (limiting potential for data loss)
4. Admin privileges:
  - a. CRUD new/current jobs
    - i. May need to be branched or ability to hold onto original proposals when job runs past original completion estimate.
  - b. CRUD customers
  - c. CRUD completed jobs
  - d. Data analyzing page, to measure accuracy of proposals against completed jobs
  - e. Set and manage user privileges

- f. Possibly add simple dynamic document creation, with the ability to scale.

### **Development Platform**

The project will be coded in either PHP or .NET, using MySQL or SQL server as the DBMS. I will maintain the project locally, and then once it is completed it will be hosted on a domain that will be determined at a later date.

## Website Flow

### Login Page

Site opens with login page, one login has already been created for main admin, who will create the rest within the website.

- Successful login goes to main page
- Password reset flag bool directs to reset pass page

### Main Page

Main page has menu on side with up to 4 options: Home, Users, Customers, Jobs, . The following is the flow and suboptions within each option. Div with 3 Divs in it, One for each paragraph and title and a statistic brought in dynamically.

### ***Users/Jobs/Transactions/Customers***

### Forms

Create - Add a new user to the DB given permissions

User goes to page to input user information

After input and submitting notified if successful

Showed record in table

Search Users - Search user base

User goes to page to input search terms

Search executed and results placed in table

Links to edit user with id in them, placed dynamically

### Tables

Sends to view where users are listed in table

Update/Delete Users - Buttons appear if postback

Takes id query string and uses it to fetch the user data to edit/delete

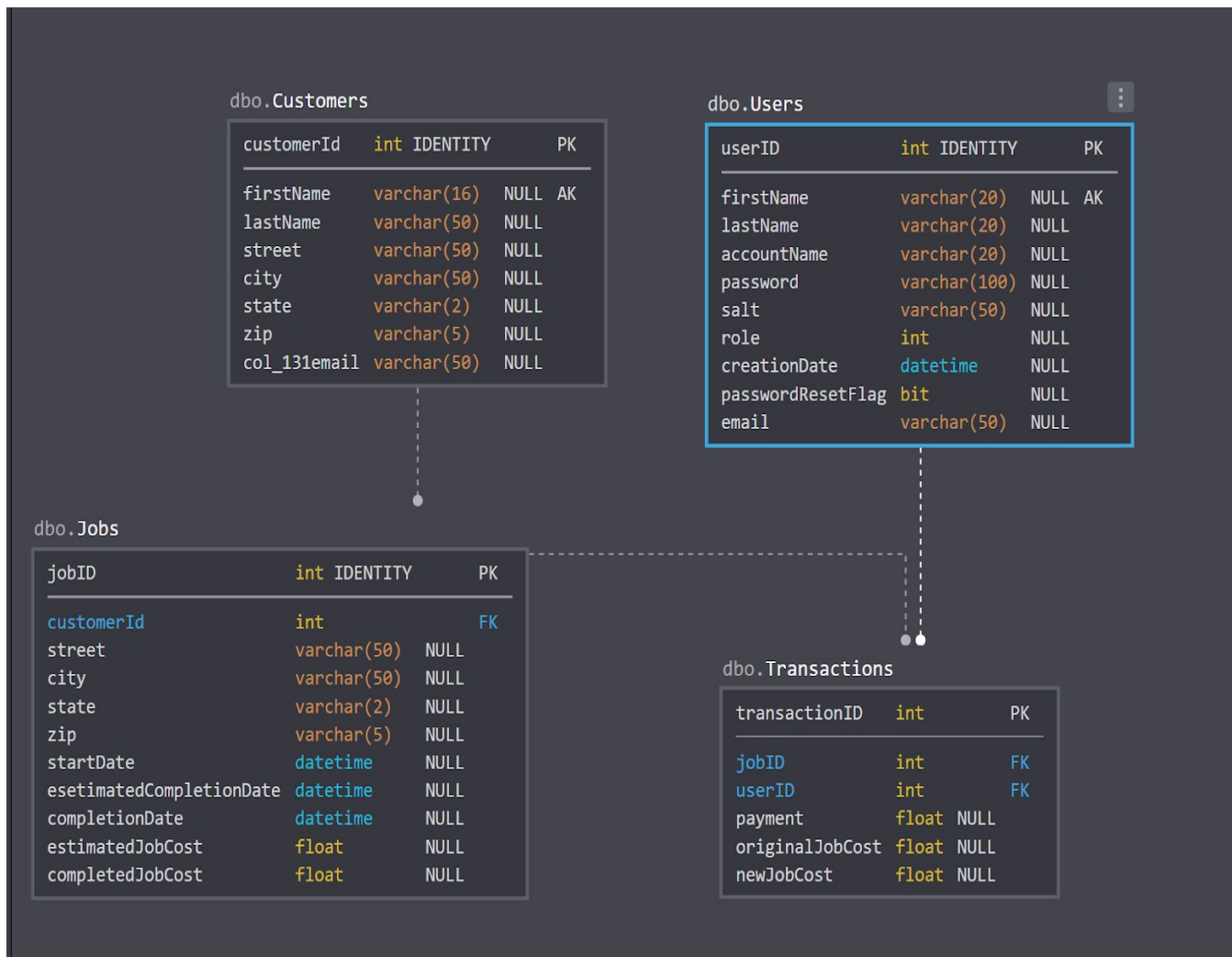
## Coding Guidelines

Although I'm sure it'll end up occasionally falling outside of these parameters for the sake of time, as of now these are the general principles and guidelines that I try to follow.

- Local variable names use camelCase.
- Methods use PascalCase.
- Use as much common code as possible to make it easier to maintain.
- Design code so that properties can be added to classes without radically altering the design.
  - Use objects whenever possible.
- Separate code as much as possible. Keep views, models, and controller isolated.
- Don't expose information if you don't have to.
- Validate info as much as you can.
- Try to check for nulls at some point within the method, if not at several points.
- Stability over style, wherever possible.



## Database Setup



## Database Scripts

**/\*\*\*\*\* Object: Table [dbo].[Customers]   Script Date: 9/18/2018  
4:32:03 AM \*\*\*\*\*/**

**SET ANSI\_NULLS ON**

**GO**

**SET QUOTED\_IDENTIFIER ON**

**GO**

**CREATE TABLE [dbo].[Customers](**

**[customerID] [int] IDENTITY(1,1) NOT NULL,**

**[firstName] [varchar](16) NULL,**

**[lastName] [varchar](50) NULL,**

**[street] [varchar](50) NULL,**

**[city] [varchar](50) NULL,**

[state] [varchar](2) NULL,

[zip] [varchar](5) NULL,

[email] [varchar](50) NULL,

**CONSTRAINT [PK\_Customers] PRIMARY KEY CLUSTERED**

**(**

[customerID] ASC

**)WITH (STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF) ON [PRIMARY]**

**) ON [PRIMARY]**

**GO**

**/\*\*\*\*\* Object: Table [dbo].[Jobs] Script Date: 9/18/2018 4:32:24 AM \*\*\*\*\*/**

**SET ANSI\_NULLS ON**

**GO**

**SET QUOTED\_IDENTIFIER ON**

**GO**

**CREATE TABLE [dbo].[Jobs](**

**[jobID] [int] IDENTITY(1,1) NOT NULL,**

**[customerID] [int] NOT NULL,**

**[street] [varchar](50) NULL,**

**[city] [varchar](50) NULL,**

**[state] [varchar](2) NULL,**

**[zip] [varchar](5) NULL,**

**[startDate] [datetime] NULL,**

**[estimatedCompletionDate] [datetime] NULL,**

**[completionDate] [datetime] NULL,**

**[estimatedJobCost] [float] NULL,**

**[completedJobCost] [float] NULL,**

**CONSTRAINT [PK\_Jobs] PRIMARY KEY CLUSTERED**

(

[jobID] ASC

)WITH (STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF) ON [PRIMARY]

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [dbo].[Transactions] Script Date: 9/18/2018  
4:32:38 AM \*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [dbo].[Transactions](

[transactionID] [int] IDENTITY(1,1) NOT NULL,



**SET QUOTED\_IDENTIFIER ON**

**GO**

**CREATE TABLE [dbo].[Users](**

**[userID] [int] IDENTITY(1,1) NOT NULL,**

**[firstName] [varchar](20) NULL,**

**[lastName] [varchar](20) NULL,**

**[accountName] [varchar](20) NULL,**

**[password] [varchar](100) NULL,**

**[salt] [varchar](50) NULL,**

**[role] [int] NULL,**

**[creationDate] [datetime] NULL,**

**[passwordResetFlag] [bit] NULL,**

**[email] [varchar](50) NULL,**

**CONSTRAINT [PK\_Users] PRIMARY KEY CLUSTERED**

(

[userID] ASC

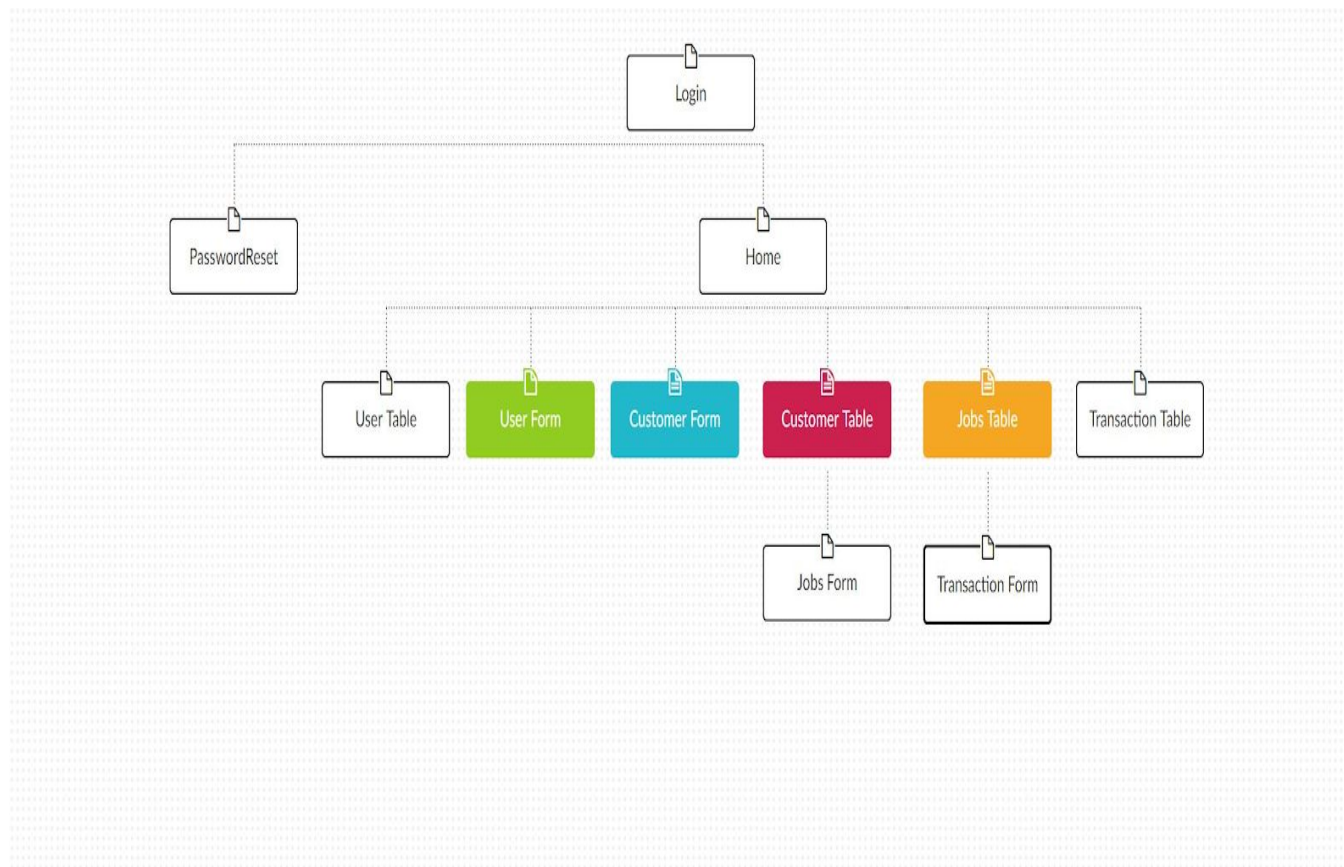
)WITH (STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY =  
OFF) ON [PRIMARY]

) ON [PRIMARY]

GO



## Flow Chart



## Login Pages

### Login

The image shows a login page with a dark blue header bar. In the top left of the header is a button labeled "Toggle Sidebar" with a hamburger menu icon. Below this, on the left side of the header, is a login form. It includes a "User Name" label followed by a text input field containing "jaredhwkins", a "Password" label followed by a password input field with masked characters, and a "Login" button. The main body of the page is a solid light gray color.

### Login with menu

AJAX

Home

Users

Customers

Jobs

Toggle Sidebar

User Namejaredhawkins

Password\*\*\*\*\*

Login

# Home

Log Out

Toggle Sidebar

25%

Job Completion Estimate Accuracy

Our jobs are completed 25% longer than our estimate.

15%

Job Cost Estimate Accuracy

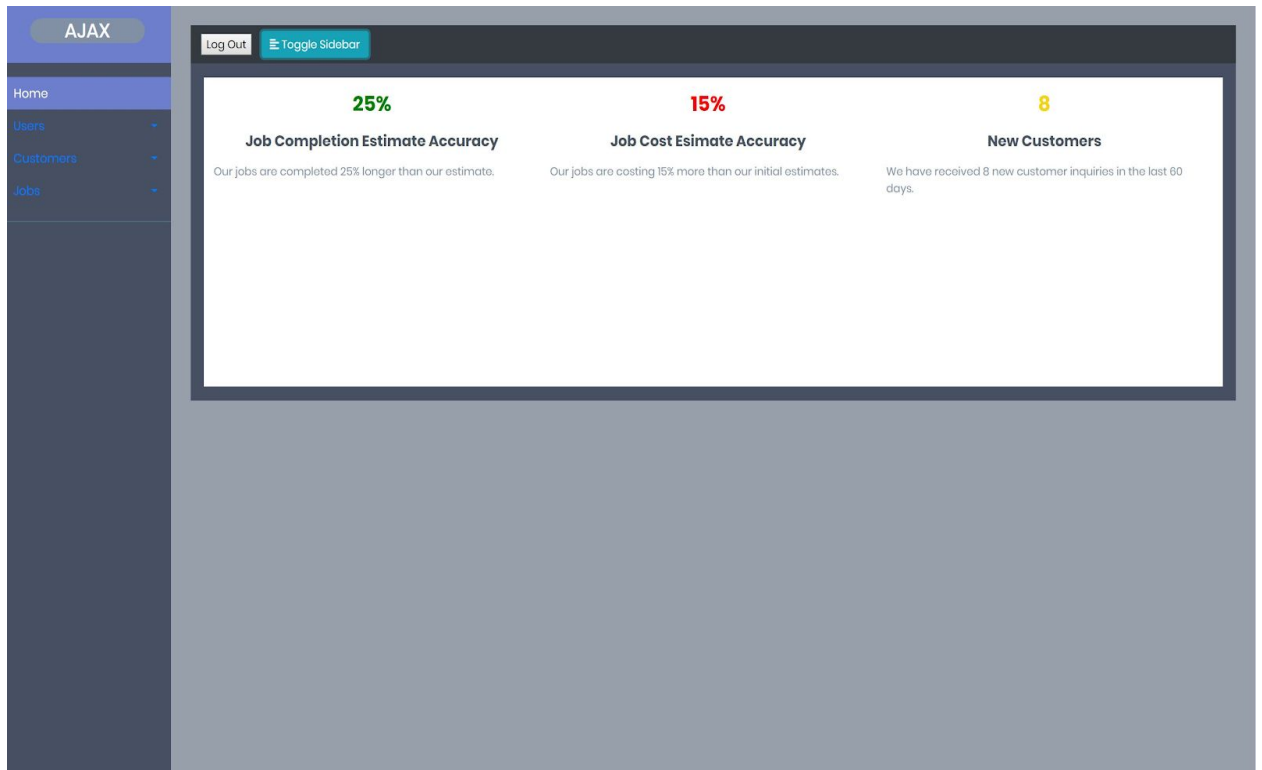
Our jobs are costing 15% more than our initial estimates.

8

New Customers

We have received 8 new customer inquiries in the last 60 days.

## Home with Menu



## User Form with Menu

AJAX

Home

Users ▾

Customers ▾

Jobs ▾

Log Out

Toggle Sidebar

ID

Account Name

First Name

Last Name

E-mail

Role

Admin ▾

Require User to Change Password

☐

Creation Date

Create User

## User Table

Log Out

Toggle Sidebar

Search Term

Column to Search

First Name

Account Name	First Name	Last Name	Role	Email	Creation Date	
jaredhawkins	Jared	Hawkins	1	jaredhawkins401@gmail.com	September 17, 2018	<a href="#">Edit</a>
shellyhawkins	Shelly	Hawkins	1	ShellyHawkins401@gmail.com	September 18, 2018	<a href="#">Edit</a>
KevinBacon	Kevin	Bacon	1	KB@gmail.com	September 18, 2018	<a href="#">Edit</a>

Search

## User Table With Menu

AJAX

Home

Users

Customers

Jobs

Log Out

Toggle Sidebar

Search Term

Column to Search

First Name

Account Name	First Name	Last Name	Role	Email	Creation Date	
jaredhawkins	Jared	Hawkins	1	jaredhawkins401@gmail.com	September 17, 2018	Edit
shellyhawkins	Shelly	Hawkins	1	ShellyHawkins401@gmail.com	September 18, 2018	Edit
KevinBacon	Kevin	Bacon	1	KB@gmail.com	September 18, 2018	Edit

Search



## Customer Form

[Log Out](#) [Toggle Sidebar](#)

ID

First Name

Last Name

Street Address

City

State

Zip Code

E-mail

Create Customer

## Customer Form with Menu

AJAX

Home

Users

Customers

Create Customer

Customer Table

Jobs

Log Out

Toggle Sidebar

ID

First Name

Last Name

Street Address

City

State

Zip Code

E-mail

Create Customer

## Customer Table

[Log Out](#) [Toggle Sidebar](#)

Search Term

Column to Search

First Name ▾

First Name	Last Name	Street	City	State	Zip	Email		
Jimmy	Durante	98 river farms drive	west warwick	ri	02893	jimmyd@gmail.com	<a href="#">Edit</a>	<a href="#">Create Job</a>

Search

## Customer Table with menu

AJAX

Home

Users

Customers

Jobs

Log Out

Toggle Sidebar

Search Term

Column to Search

First Name

First Name	Last Name	Street	City	State	Zip	Email		
Jimmy	Durante	98 river farms drive	west warwick	ri	02893	jimmyd@gmail.com	Edit	Create Job

Search

## Jobs Form

[Log Out](#) [Toggle Sidebar](#)

Start Date

<

September 2018

>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Estimated Completion Date

<

September 2018

>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Completion Job Cost

<

September 2018

>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Estimated Job Cost

Completed Job Cost

Street Address

City

State

Zip Code

Customer ID

1

Job ID

Create Job

## Jobs Form with Menu

AJAX

Home

Users

Customers

Jobs

Log OutToggle Sidebar

Start Date

Estimated Completion Date

Completion Job Cost

<September 2018>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

<September 2018>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

<September 2018>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Estimated Job Cost

Completed Job Cost

Street Address

City

State

Zip Code

Customer ID

Job ID

Create Job

## Customer Table

Log Out

Toggle Sidebar

Search Term

Column to Search

First Name ▾

First Name	Last Name	Street	City	State	Zip	Email		
Jimmy	Durante	98 river farms drive	west warwick	ri	02893	jimmyd@gmail.com	<a href="#">Edit</a>	<a href="#">Create Job</a>

Search

## Customer Table with Menu

AJAX

Home

Users

Customers

Jobs

Log Out

Toggle Sidebar

Search Term

Column to Search

First Name

First Name	Last Name	Street	City	State	Zip	Email		
Jimmy	Durante	98 river farms drive	west warwick	ri	02893	jimmyd@gmail.com	Edit	Create Job

Search



## Transaction Form

Log OutToggle Sidebar

Transaction ID User ID 2 Job ID 0

Payment

Original Job Cost

New Job Cost

Create TransactionJob was found

## Transaction Form with Menu

AJAX

Home

Users

Customers

Jobs

Log OutToggle Sidebar

Transaction ID User ID 2 Job ID 0  
Payment

Original Job Cost

New Job Cost

Create TransactionJob was found

## Transaction Table

Log Out

Toggle Sidebar

Search Term

Column to Search

Payment

Job ID	User ID	Payment	Original Job Cost	New Job Cost	
0	2	10	17	7	<a href="#">Edit</a>

Search

## Transaction Table with Menu

AJAX

Home

Users

Customers

Jobs

Log Out

Toggle Sidebar

Search Term

Column to Search

Payment

Job ID	User ID	Payment	Original Job Cost	New Job Cost	
0	2	10	17	7	<a href="#">Edit</a>

Search

## Release Notes

---

**1.0 - Document created minor overview added.**

**1.1 - Added models and some parts of website**

**1.2 - Finished website, reworked substantially.**

**1.3 - Added code guidelines, added more to descriptions of models.**

**1.4 - Went back to beginning and cleaned up parts of the descriptions.**

**1.5 Added remaining info and views.**