Table Structure:

The structure of my database will be as follows. There will be a table containing all agent information and a table containing all property information. Then there will be a listing table. The listing table will have a single property and agent associated with it, as well as information relevant to the current listing eg. Price, auction date while the other property specific information will be in the property table eg. Address, size. The reason for this is so that property information can be stored independently of the listing and if in the future the property is resold with the company the property’s information (which very rarely changes) is already available to the company and able to be adjusted as necessary which saves them time and all they have to do is load in the property and list it instead of wasting time getting all of the property information that the company already has. This is similar to getting the property information from a council database that stores basic information of all houses in the district. I also have a user table to control admin access to editing database information.

While creating my database from my plan I have realized that due to the One to Many relationship between tbl\_agents and tbl\_listings I no longer require the tbl\_agents.Listings field. This has been removed.

[Database Layout - Original.pdf](Database%20Layout%20-%20Original.pdf)

# Tbl\_users

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Field** | **Case** | | **Expected** | **Result** | | **Comment** |
| UID | Valid - Blank | | 1 | 1 | | Auto Increment field that doesn’t get assigned a value and automatically assigns to previous record plus one |
| Username | Valid – ‘testuser’ | | Record added | Record added | | Works as expected |
| Invalid – Blank | | Field required | Record added | | Required fields are not easily applied in PHPMyAdmin so instead I will add client side processing to make form fields required before submission – required fields will be ignored for now. |
| Invalid – Len > 30 ‘qwertyuiopasdfghjklzxcvbnmqwert’ | | Too long | A screenshot of a cell phone  Description automatically generated | | Works as expected |
|  | Invalid – duplicate username “” | | Duplicate Entry | A close up of a logo  Description automatically generated | | Works as expected |
| Password | Valid – ‘password’ | | Record Added | Record Added | | Works as expected |
| Invalid – Len > 30 ‘qwertyuiopasdfghjklzxcvbnmqwert’ | | Too Long | A picture containing knife  Description automatically generated | | Works as expected |
| Permissions | Valid – 1 | | Record Added | Record Added | | Works as Expected |
| Valid – Blank | | Record Added (0) | Record Added (0) | | Record is added and permissions defaults to 0 |
| Invalid – Non Int ‘one’ | | Invalid Type |  | | Works as expected |
| I have decided to change the permissions column to a boolean isAdmin for simplicity and ease of use. As there are only two levels of permission for a user, admin or not, there is no need for the additional permission levels integers provide. | | | | | | |
| IsAdmin | | Valid - 1 | Record Added | | Record Added | Works as expected |
| Invalid – Not int ‘true’ | Invalid Type | |  | Works as expected |
| Invalid – Not 1 or 0 - 4 | Invalid Value | | Record Added | PHPMyAdmin treats Boolean as a single character tiny int so this will need to be dealt with client side |

# Tbl\_agents

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Case** | **Expected** | **Result** | **Comment** |
| AID | Valid - Blank | 1 | 1 | Auto Increment field that doesn’t get assigned a value and automatically assigns to previous record plus one |
| FName | Valid – ‘FirstName’ | Record Added | Record Added | Works as expected |
| Invalid – Len > 20 ‘qwertyuiopasdfghjklzx’ | Too Long | Record Added | A screenshot of a cell phone  Description automatically generatedThere was no character limit on field. TinyText field does not allow for character limits so all TinyText fields will now become VarChar.  Now works as expected |
| SName | Valid – ‘Surname’ | Record Added | Record Added | Works as Expected |
| Invalid – Len > 20 ‘qwertyuiopasdfghjklzx’ | Too Long | A close up of a logo  Description automatically generated | Works as Expected |
| Qualification | Valid – ‘Fancy Degree’ | Record Added | Record Added | Works as Expected |
| Invalid – Len > 20 ‘qwertyuiopasdfghjklzx’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as Expected |
| WorkPh | Valid – ’03 456 7892’ | Record Added | Record Added | RegEx will be used client side to validate integers only |
| Invalid – Len > 15 ‘qwertyuiopasdfgh’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| MobilePh | Valid – ‘021 123 4567’ | Record Added | Record Added | RegEx will be used client side to validate integers only |
| Invalid – Len > 15 ‘qwertyuiopasdfgh’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| Email | Valid – ‘test@gmail.com’ | Record Added | Record Added | Works as expected |
| Invalid – Len > 50  ‘qwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbn’ | Too Long | A close up of a person  Description automatically generated | Works as expected |

# Tbl\_Properties

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Case** | **Expected** | **Result** | **Comment** |
| PID | Valid - Blank | 1 | 1 | Auto Increment field that doesn’t get assigned a value and automatically assigns to previous record plus one |
| Address | Valid – ‘123 Main St’ | Record Added | Record Added | Works as expected |
|  | Invalid – Duplicate ‘123 Main St’ | Duplicate Entry | A screenshot of a cell phone  Description automatically generated | Works as expected |
|  | Invalid – Len > 40 ‘qwertyuiopasdfghjklzxcvbnmqwertyuiopasdfg’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| Suburb | Valid – ‘Redwood’ | Record Added | Record Added | Works as expected |
|  | Invalid – Len > 15 ‘qwertyuiopasdfgh’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as  Expected |
| Bedrooms | Valid – 4 | Record Added | Record Added | Works as Expected |
|  | Invalid – Len > 2 | Too Long | Record Added | Len does not work on an integer field so the use of TinyInt restricting it to +/- 128 is sufficient. |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
| Bathrooms | Valid - 4 | Record Added | Record Added | Works as Expected |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
|  | Invalid - > 128 - 129 | Out of range |  | Works as expected |
|  | Invalid < -128 - -129 | Out of range |  | Works as expected |
| Toilets | Valid - 4 | Record Added | Record Added | Works as Expected |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
|  | Invalid - > 128 - 129 | Out of range |  | Works as expected |
|  | Invalid < -128 - -129 | Out of range |  | Works as expected |
| GarageSpaces | Valid - 4 | Record Added | Record Added | Works as Expected |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
|  | Invalid - > 128 - 129 | Out of range |  | Works as expected |
|  | Invalid < -128 - -129 | Out of range |  | Works as expected |
| Size | Valid - 400 | Record Added | Record Added | Works as Expected |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
|  | Invalid - > 32768 - 32769 | Out of range |  | Works as expected |
|  | Invalid < -32768 - -32769 | Out of range |  | Works as expected |
| Year | Valid - 1970 | Record Added | Record Added | Works as Expected |
|  | Invalid – Not Int ‘one’ | Invalid Type |  | Works as expected |
| Construction | Valid – ‘Lockwood’ | Record Added | Record Added | Works as Expected |
|  | Invalid – Len > 20 ‘qwertyuiopasdfghjklzx’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| PCondition | Valid – ‘Good’ | Record Added | Record Added | Works as Expected |
|  | Invalid – Len > 10 ‘qwertyuiopa’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| Insulation | Valid – ‘Floor, Ceiling | Record Added | Record Added | Works as Expected |
|  | Invalid – Len > 50 ‘qwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbn’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as Expected |

# Tbl\_Listings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Case** | **Expected** | **Result** | **Comment** |
| LID | Valid - Blank | 1 | 1 | Auto Increment field that doesn’t get assigned a value and automatically assigns to previous record plus one |
| Title | Valid – ‘Hot New Property’ | Record Added | Record Added | Works as expected |
|  | Invalid -Len > 30 ‘qwertyuiopasdfghjklzxcvbnmqwert’ | Too Long | A screenshot of a cell phone  Description automatically generated | Works as expected |
| Description | Valid – ‘A fantastic house’ | Record Added | Record Added | Works as expected |
| Price | Valid – 40000000 | Record Added | Record Added | Float has not been used as cents are not common practice for house pricing |
|  | Invalid – Non int ‘Four Million’ | Invalid Type |  | Works as expected |
| Property | Valid – ID 1 | Record Added (links to record 1) | Record Added (links to record 1) | Works as expected. Only takes input from dropdown list of valid properties. No invalid input |
| Agent | Valid – ID 1 | Record Added (links to record 1) | Record Added (links to record 1) | Same as property |
| AuctionDate | Valid – 20-06-21 | Record Added | Record Added | Works as expected |
|  | Invalid – Non date ‘today’ | Invalid type | A screenshot of a cell phone  Description automatically generated | Works as expected |
|  | Invalid – wrong format 21-06-20 | Invalid data | A screenshot of a cell phone  Description automatically generated | Works as expected |
| Sold | Valid - 1 | Record Added | Record Added | Works as expected |
|  | Invalid – non int ‘one’ | Invalid type |  | Works as expected |

**Import data into tables:**

Agents –

Properties - A picture containing screenshot, boat, large, flock

Description automatically generated

Listings - A screenshot of a cell phone

Description automatically generated

Users -

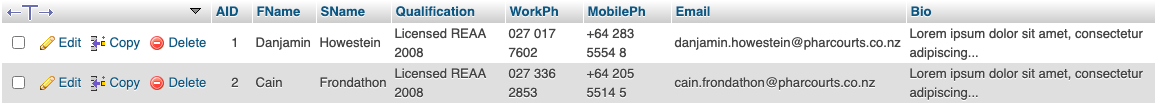
A picture containing clock

Description automatically generated

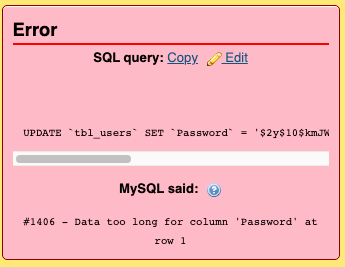
Data was successfully imported according to the defined validation rules. I overlooked there only being two agents currently employed so the third agent has been removed and his listings reassigned.

There is no way for each agent to have a unique bio on their pages so I will add a bio field to the agents table meaning they will be able to have their own written descriptions about themselves and their history etc. to better appeal to customers.

Field: Bio LONGTEXT



Field successfully added and bios successfully updated. As it is a longtext field it was can take any characters meaning validation testing is not required.

 The password field is too short for an encrypted string. Size has been increased to 60.

Note Regarding Auto-Increment issue. While I thought I was having a problem having my tables (listings and properties) to auto increment with a step of 1 this wasn’t the case. There was an error in my add-listing form where is controls the switch between updating an existing property and adding a new one where it wasn’t processing my conditions properly. After fixing this problem my tables auto increment normally. However, if all property information is valid and not listing information then since the listing is added after the property (due to the relationship) the property is then deleted which is what caused the ‘gap’ in the increments of my table. These ‘gaps’ in the table IDs are fine however as they are still consistently increasing and are unique. I could, however, fix this by resetting the auto increment of the table to the ID of the deleted listing plus one since the deleted listing will always be the most recently added (highest ID number)