# Different methods of testing

## White box testing

White box testing is the method of testing a system while knowing everything about that system, it is said to be a white box because you can see through it into the mechanics of the system.

This system is effective in testing if implemented validation is working as intended. This method of testing is usually conducted by the developer or the company producing the system. This is because they’re the people that know the most about the system and will know exactly what will happen to the inputs.

This method is usually not very good at finding new, unexpected inputs that need to be validated, because the person testing knows exactly what the data needs to be.

## Black box testing

Black box testing is the opposite of white box testing, this means that the person testing the system knows nothing about it, all they can see if the inputs, and the outputs. They can’t see the source code, the mechanisms, nothing.

The people who normally do these kinds of testing are people who aren’t a part of the development team as they’ll not have had any contact with the system so therefore they should know nothing about how it works and should therefore be willing to try inputs that the development team didn’t expect.

This is a lot more likely to bring up results of inputs that need to be validated, because the tester doesn’t know what the input should be. Things that may have been overlooked like validating that an image upload will only accept image files because when the developers tested it they didn’t think anyone would upload anything other than an image.

This type of testing becomes increasingly difficult however because it gets harder to find someone who knows nothing about the system each time you need to test it.

# Testing my database

## Selected testing method

I’ve selected white box testing for my database, mainly due to the fact that I already know the system so I can only do white box testing, and I can’t bring in an outsider to do black box testing.

## Test inputs

### Test 1

Put letters in the contact number to see if it gets rejected

### Test 2

Add stock to an equipment item to see if the stock increases

### Test 3

Try to book a vehicle while all the vehicle type requested is already booked

### Test 4

Enter a customer id into manage customer to see if details come up

### Test 5

Enter a letter into the customer id

## Expected outputs

### Test 1

I know that that isn’t validated yet, so it will accept the incorrectly formatted phone number

### Test 2

The stock should increase, and it’s validated that it is an integer so it shouldn’t break

### Test 3

I implemented a booking availability service to check so it shouldn’t work, which is the right behaviour

### Test 4

I know it’s validated very well so it should act accordingly

### Test 5

I know it’s validated very well so it should act accordingly

## Actual outputs

### Test 1

The system accepted the incorrect phone number

### Test 2

The stock increased correctly.

### Test 3

The booking did not go through, which is the expected behaviour

### Test 4

The customer details came up

### Test 5

Nothing came up and the system didn’t crash.

## Actions to take

From this testing I need to resolve the contact number validation issue.

# Role of a database administrator

The role of a database administrator in my database is to correct any information that was somehow entered incorrectly, to make sure that the integrity of the database doesn’t fall, to make sure the database is backed up properly so that if there is a fatal error that occurs or someone writes the wrong command that accidentally wipes the database, the data is safe.

The role of a database administrator also includes installing new database hardware like servers if you wish to host your own on-site. This also includes maintaining those servers too. This naturally leads to scaling the database, making sure the database can scale, and setting the servers to be able to manage large amounts of data between them.