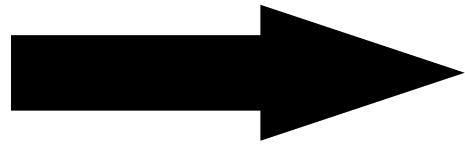
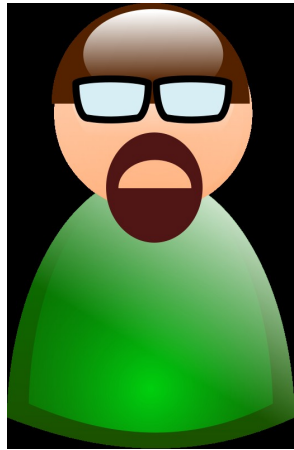
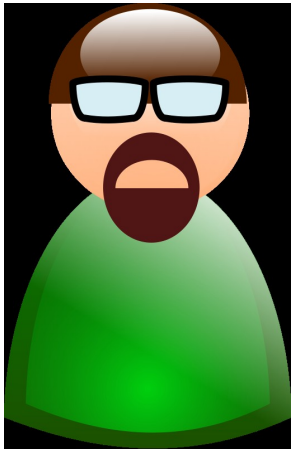


Online payments

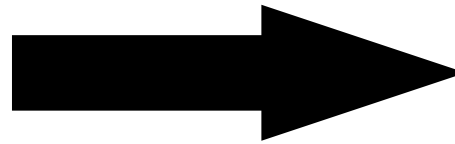
Customer goes in to a online shop



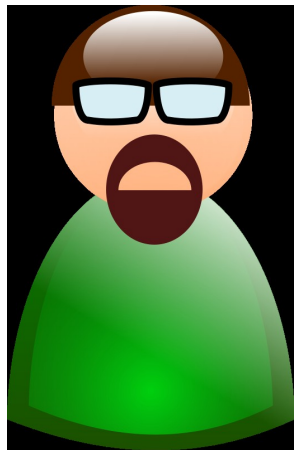
# Customer buys something in the online shop



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# Customer uses a credit card to buy something in the online shop

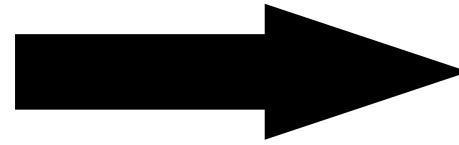


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\$



Credit Card  
is the  
Money here

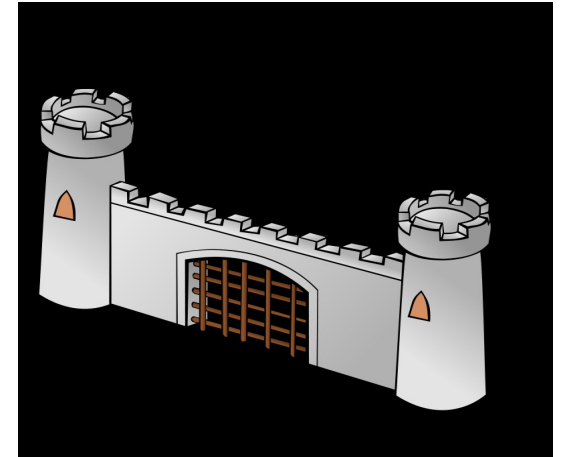
- A customer is making a purchase at an online shop.
- They are prompted to enter their credit card details on a secure page.  
(In some cases the Online Shop may not have a secure server so this page will be hosted by a Payment Gateway.)
- The customer enters their credit card details and submits the form.

Shop check the customers details just like they would in a real shop



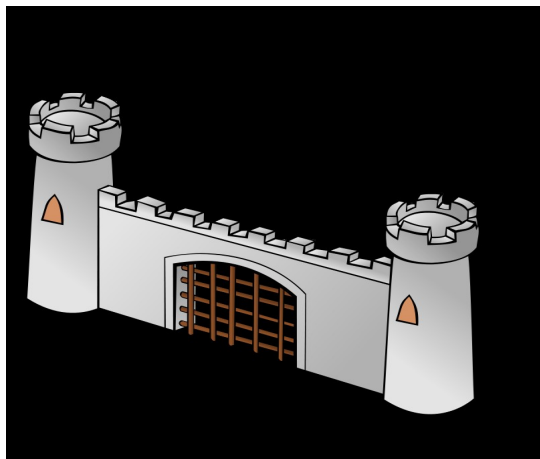
- The information is validated (checks for errors) before being packaged into a Transaction Message.
- If the validation fails the customer will be prompted to correct it by the Online Shop.
- The Online Shop is often referred to as the **merchant** in online payments terminology.

# Shop sends the info to the payment gateway





# The Gateway checks for



Info present and corect format



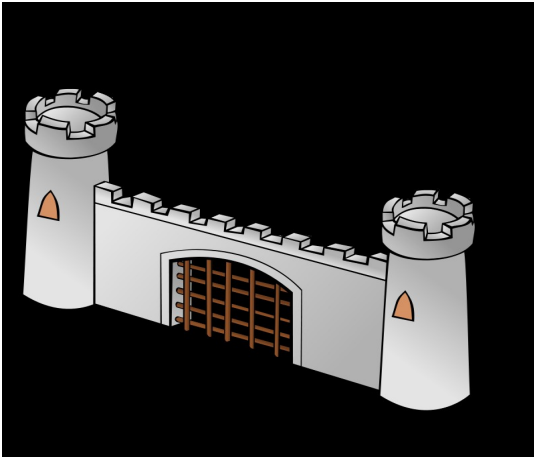
fraudulent transactions



Record The transaction

- The Online Shop sends the transaction message to the Payment Gateway.
- The Payment Gateway performs validation on the transaction to confirm the required information is present and is in the correct format.
- The Payment Gateway may carry out checks to detect fraudulent transactions.
- The transaction details are recorded by the Payment Gateway.
- The Transaction Message is converted into the message format required by the bank.

payment gateway sends the  
Message to the Bank



- The Payment Gateway sends the Transaction Message to the bank.
- In online payments terminology this bank is known as the Acquiring Bank.
- They carry out various checks on the Transaction Message to ensure it is valid and that the transaction is not fraudulent.
- The Acquiring Bank determines who the Card Issuer is.
- The Transaction Message is converted into the message format required by the Card Issuer.

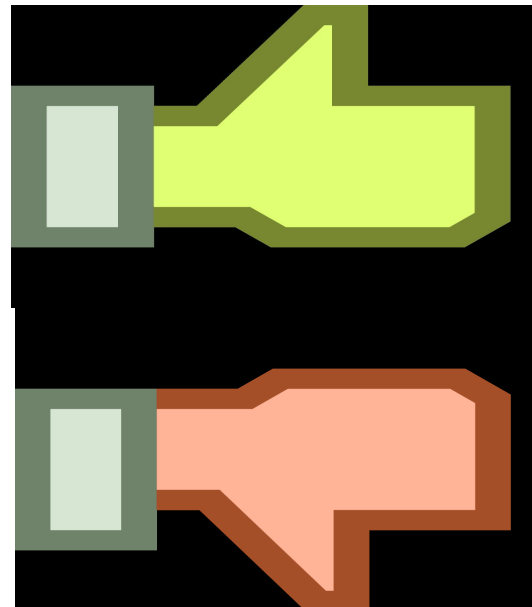
# Bank sends the Message to the Card Issuer



# The Card Issuer checks for



Info present  
and correct  
format



decides to  
approve or decline  
the transaction.

- The Acquiring Bank sends the transaction to the Card Issuer.
- The Card Issuer validates the information and confirms there is sufficient funds available.
- The Card Issuer decides to approve or decline the transaction.
- If the transaction is approved they place a hold on the credit card funds for the amount requested.
- If the transaction is declined they provide a reason for declining the transaction.
- A Response Message is created to store the result of the transaction.

# Card Issuer sends the Message to the Bank





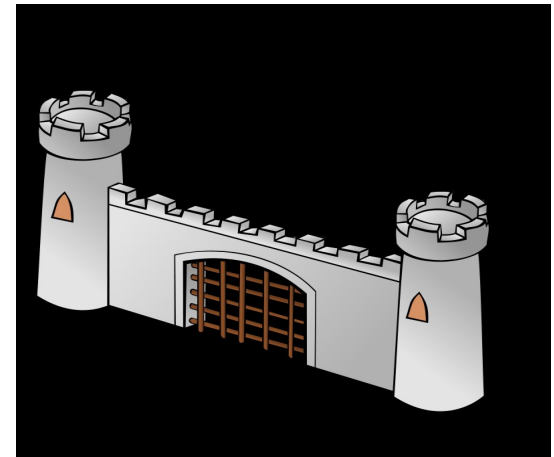
# The Bank then



Records The transaction

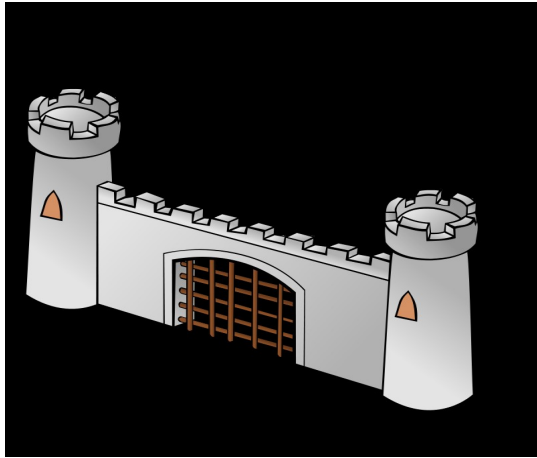
- The Card Issuer sends this Response Message to the Acquiring Bank.
- The Acquiring Bank validates the information contained within the response message.
- They update their systems with the transaction result.

# Bank sends the Message to the Payment gateway



- The Acquiring Bank sends the response message to the Payment Gateway.
- The Payment Gateway validates the response information and then updates their system with the result.
- In the case of a declined transaction the Payment Gateway may translate the Card Issuer decline message into a more readable format.
- The Response Message will be converted into the Payment Gateway message format.

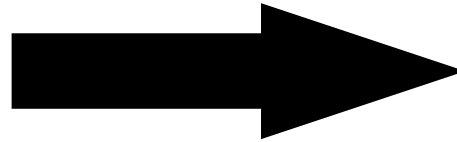
payment gateway sends the info to  
the Shop



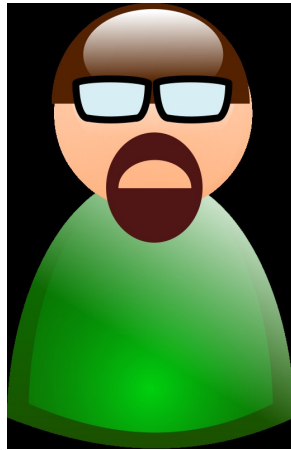
- The Payment Gateway sends the response message to the Online Shop.
- The Online Shop verifies that the response message came from the Payment Gateway.
- They validate the contents of the response to confirm the information is correct.
- They save the result of the transaction in their system.
- Based on the transaction result the Online Shop determines which page to present to the user.

# Money goes to shop

\$



# Customer gets product



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- The Online Shop displays the result of the transaction to the customer.
- This is the final step in the authorisation process.
- This process typically takes less than **5 seconds** end-to-end to complete.
- If the transaction was successful then the transaction amount is reserved on the customers credit card.
- The Settlement Process is what causes the funds to be debited from the customers card and deposited in the merchants bank account.
- This process takes place behind the scenes usually on a nightly basis.