



6G4Z1003: **Information Systems**

Entity-Relationship Diagram (ERD)
Week 6: Lab B
Tutorial – Identify Entities

What is an Entity?

- **Something of **significance** to the system **about which information is held****
 - E.g. Banking System entities will include **customers, bank account** and **loans**
- Thus, an **entity** is a **specific object/thing** that should answer **YES** to the following 3 questions:
 - Is there more than one?
 - Can I think of data to be held?
 - Can I think of a suitable key?
- **If it does not satisfy all of the above, then it is **unlikely** to be an Entity**

Identifying Entities

- One way of identifying possible entities is to find all the **nouns** in a description of a system
- But, be careful as...
 - Some of these might be **attributes**
 - Some of these might be **neither** entities nor attributes

Big Jim's Bikes

1. Big Jim sells Bikes on the Internet. Customers email Big Jim with their details and those of the bike that they want to buy
2. The customer takes the details from the bike list posted on Big Jim's Website, where every bike is listed with a unique stock number
3. On receipt of an email order Big Jim checks the bike details and then requests payment in full
4. On receipt of payment Big Jim wraps the bike in brown paper and posts it to the customer using Royal Mail
5. Big Jim stores customer details in case they buy another bike. No details of payments are stored

Identify noun phrases

1. Big Jim sells Bikes on the Internet. Customers email Big Jim with their details and those of the bike that they want to buy
2. The customer takes the details from the bike list posted on Big Jim's Website, where every bike is listed with a unique stock number
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Identify noun phrases

1. **Big Jim** sells **Bikes** on the **Internet**. **Customers** email Big Jim with their **details** and those of the bike that they want to buy
2. The customer takes the details from the **bike list** posted on Big Jim's **Website**, where every bike is listed with a unique **stock number**
3. On receipt of an **email order** Big Jim checks the bike details and then requests **payment** in full
4. On receipt of payment Big Jim wraps the bike in brown **paper** and posts it to the customer using **Royal Mail**
5. Big Jim stores **customer details** in case they buy another bike. No details of payments are stored

Identify entities

1. ~~Big Jim~~ sells Bikes on the ~~Internet~~. Customers email Big Jim with their ~~details~~ and those of the bike that they want to buy
2. The customer takes the details from the ~~bike~~ ~~ist~~ posted on Big Jim's ~~Website~~, where every bike is listed with a unique ~~stock~~ ~~number~~
3. On receipt of an email order Big Jim checks the bike details and then requests ~~pay~~ ~~ment~~ in full
4. On receipt of payment Big Jim wraps the bike in brown ~~paper~~ and posts it to the customer using ~~Royal~~ ~~Mail~~
5. Big Jim stores ~~customer~~ ~~details~~ in case they buy another bike. No details of payments are stored

We have now identified the Entities for Big Jim's Bikes

1. Big Jim sells Bikes on the Internet. Customers email Big Jim with their details and those of the bike that they want to buy
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Next

- Go through the 'Quick guide to drawing ERDs in Visual Paradigm'
- Try drawing an ERD for Big Jim's Bikes