

Module 2.3

The Internet and the WWW – Activity

Activity

1. Give a concise but accurate definition of the Internet.
 1. The Internet is a worldwide computer network, consisting of devices, computers and networks connected to one another.
2. Many people use the terms the World Wide Web (WWW) and the Net (Internet) interchangeably. However, while they are linked concepts, they are two different things.
 - a) Give a concise but accurate definition of the WWW.
 - a) The WWW consists of a collection of interlinked, interactive documents stored on computers all over the world.
 - b) Describe the relationship between the Internet and the WWW.
 - b) The WWW is a (multimedia) service on the Internet where interactive documents stored on computers all over the world support links to other documents, as well as graphics, audio, and video files.
3. An advert appeared in a local newspaper looking for someone with ‘HTML experience’. Explain what HTML is and what type of work this person would probably do.
 3. HTML (HyperText Markup Language) is a language used to create documents (web pages) which support links to other documents, as well as graphics, audio, and video files. Someone with ‘HTML experience’ would design and create web sites using the HTML language.
4. Give two possible reasons why the need for faster, reliable Internet connections has increased.
 4. More and more mobile devices such as smart phones and tablets have emerged and the number of users has also increased dramatically.
5. Your friend wants to get ‘connected to the Net’.

What are the broad categories of Internet connections she can choose from?

Motivate your answer by giving a common example of connection from each of these categories.

 5. Fixed location Internet access e.g. ADSL
Mobile Internet access such as 3G or 4G (LTE)
6. How does ADSL differ from 3G/4G in terms of the communication media they use to send and receive data?
 6. ADSL uses cabled (telephone) technologies.

3G/4G technology uses wireless connectivity by using the cellular phone network. This is often referred to as mobile broadband Internet access.

7. Web 1.0 was characterised by static web pages which someone in the organisation had to control.
 - a) What do we mean by the term 'static' in this context?
 - a) It means the web pages' content was seldom or infrequently updated.
 - b) What is the general job title of someone in charge of a website?
 - b) Webmaster
8. What were the two major driving forces behind the shift from Web 1.0 to Web 2.0?
 8. Technological developments as well as the changing needs of the users of the Web.
 9. The biggest difference between Web 1.0 and Web 2.0 is interactivity.
Describe what this means in terms of how users interact with a website.
 9. With Web 2.0 users are able to interact dynamically by using and creating sites such as wikis, blogs, video sharing sites such as YouTube and social networking sites such as Facebook.
 10. What is the general term or category for websites like Facebook, Pinterest and YouTube?
 10. Social networking sites
 11. Another characteristic of Web 2.0 is the fact that users became content creators and not just content consumers.
Give two examples of the types of websites (not the actual names) that a user can create or use to upload content.
 11. Wikis, blogs, video sharing sites, etc.
 12. The Internet is increasingly being referred to as the 'Internet of Things'.
Explain what this means.
 12. Increasingly, all sorts of devices and not only computers are being connected to the Internet.
 13. Some experts feel that Web 3.0 will be identified as the 'Intelligent Web'.
Name two technologies that will probably contribute to this (besides fast Internet access).
 13. Data-mining, natural language interfaces and Artificial Intelligence techniques.
 14. Personalisation will be another characteristic of Web 3.0. Give an example of how personalisation can have both potential positive and negative effects for users by referring to a suitable example.
 14. On the positive side users can be presented with information based on their previous choices and 'browsing history'.
Examples:
 - Google accounts' search results may differ from user to user because Google will personalise their results and show what it thinks they want, based on data collected about them.

- Facebook uses an individual's data in order to tailor-make the types of adverts sent to that user.

This can also be seen in a negative light in terms of privacy concerns.

15. Web 3.0 will not be limited by incompatibilities in ICT systems.

Briefly explain what this means.

15. Data and information will be able to be shared and used irrespective of the type of hardware or software being used.

16. Give two benefits of cloud computing for users in terms of access to their data.

16. With cloud computing, users are able to access their data from anywhere in the world using any device.

17. Name and briefly describe the two ways multimedia files from the Internet can be viewed and give a potential advantage and disadvantage of each of the methods you listed.

17. Downloading

The multimedia file is downloaded and saved and then played at a later stage.

Advantage: Once it is downloaded you can view/listen to it at any time without being connected to the Internet.

Disadvantage: You have to wait until the whole file has been downloaded before you can watch or listen to the media.

Streaming

With streaming, the media file starts playing as soon as the file is opened and is streamed in real-time to your device.

Advantage: Content is often made available by certain websites using streaming so that at least a portion of the content can be 'previewed' before purchasing the item to download.

Disadvantage (any one of the following):

- The file is not saved to your device so Internet access/costs are involved every time you want to listen to or view the contents of the file.
- High quality, high definition video requires a fast Internet connection.

18. A friend complains that whenever he watches videos on YouTube, it pauses and he gets a message saying that it is 'buffering'.

Briefly explain what this means and what the likely cause of the problem is.

18. Buffering is when there are short periods of waiting whilst the next section is streamed.

The most likely cause is a slow Internet connection.

19. What is live blogging?

19. Live blogging is when a blog post is uploaded as an event is progressing, allowing users to view and comment on the event in real-time.

20. Your father received an e-mail inviting him to a free webinar.

Explain what a webinar is and give two advantages of webinars.

20. Webinars are conferences that are held in real-time on the web. Advantages include the fact that they are often free, they allow users in remote locations to 'attend' and they allow for 'delegates' to interact via interactive conferences and online workshops.

21. What is the most common example of a micro-blogging service?

21. Twitter

22. Briefly explain what the term Video on Demand (VOD) refers to?

22. Video on Demand (VOD) and Audio and Video on Demand (AVOD) are systems which allow users to watch video content and listen to audio content on demand

23. Explain what Internet Protocol Television (IPTV) is and how it differs from Video on Demand (VOD).

23. Internet Protocol Television (IPTV) delivers television services over the Internet instead of through traditional satellite systems (such as DSTV).

The difference between the two is that IPTV is scheduled – you need to watch a show at a specific time. With VOD, you choose what you want to watch and start watching it whenever you want to.

24. VOD is usually a 'pay per view' service.

Briefly explain what this means.

24. You are given a menu of options, choose a video, pay and then watch it. You often have a limited amount of time to finish watching your video.

25. Explain why it is necessary to compress multimedia files, especially video.

25. They take up a large amount of storage space and this in turn has a big impact in terms of sending or broadcasting the multimedia content.

26. What type of files or content would you associate with JPEG files?

26. Graphics/photos

27. What type of files or content would you associate with MPEG files?

27. Video

28. What type of files or content would you associate with MP3 files?

28. Music

29. Compression can be either lossless or lossy.

Briefly explain the differences between these compression techniques by referring to suitable examples.

29. Lossy compression compresses data by losing some of the data. Lossy compression is most commonly used in applications such as streaming media to compress audio, video and still images such as jpegs.

Lossless compression compresses data without losing any data, e.g. with a *Word* document where you cannot afford to have any 'contents go missing'.

It is used in many applications, the most common being the .zip files on digital data like documents, spreadsheets, databases, etc. where accuracy is important.

30. What is the relationship between the quality of a multimedia file, its size and the time it takes to download the file via the Internet?
30. The higher the quality, the larger the file size will be and the longer it will take to download.

Module 2.4: Internet services technologies – Activity

Activity

1. We tend to think of a website as one single item but it is in fact a collection of two types of files.
 - a) Briefly describe the function of each of these types of files.
 - a) The actual web pages with the content– each web page is a file of its own.
Supporting files (usually called assets) such as formatting information, images, movies, sounds and JavaScript programming.
 - b) What file format are these two types of files stored in?
 - b) Text file format
2. Websites are stored on a web server and the pages sent to your browser in one of two ways. Name the two different ways of receiving web pages.
 2. Statically or dynamically
3. What do we mean when we say a website is static?
 3. A static website consists of multiple pages – each a single file that displays exactly the same information every time to the user just as when it was created (hence the word ‘static’).
 4. What is the essential difference between static and dynamic websites?
 4. A dynamic website consists of web pages designed to be generated ‘on the go’ and may differ each time based on who the user is and what their recorded preferences and options are. Static websites by contrast present in the same way irrespective of the user.
5. Briefly explain how dynamic web pages are created and function.
 5. Dynamic web pages are created by software running on the web server each time they are accessed. The support files and usually a database containing content are stored on the web server. When you access the page, the HTML page is generated by the software on the server and sent to your browser along with the required supporting assets (some of the supporting assets may also be generated by software as needed).
6. Briefly explain how the URL of a web page can give an indication of whether a web page is dynamic.
 6. The URL for a dynamic page usually contains many parameters after the actual file name.
7. What are the parameters in the URL of dynamic web pages used for?
 7. The parameters include the information given to the software on the server so that it can generate the dynamic page you end up seeing.

8. Interactivity on a web page can take many forms. Two of the most common examples are Flash applets and scripts.
Briefly explain how these two technologies are used in this context.
8. Flash applets are programs created using Adobe Flash which are downloaded in their entirety from the server and need the Adobe Flash plugin to be installed in order to run.
JavaScript is a programming language used to create small 'script' programs that run on the client computer/device.
9. An interactive website is not necessarily dynamic.
Briefly explain what this means.
9. The Flash or JavaScript runs inside the browser and changes what you see on the screen using content already downloaded from the server. It is only when the interactive elements on a web page have an effect on the parameters sent to the server when you click on a link that they contribute to making the page dynamic.
10. List three advantages of static pages compared to dynamic web pages.
10. Relatively simple to design.
Don't need as much server power.
Designed for the client side only (no server side programming skills / database skills needed).
11. What type of situation would static web pages best be suited for?
11. Any situation where the web page does not need to be customisable or where frequent updating is not required.
12. Give the two main advantages of dynamic web pages compared to static web pages.
12. They can be adapted for the individual user's needs and preferences.
They provide a more comprehensive, interactive web experience.
13. What type of situations are dynamic web pages best suited for?
13. For online stores etc. where content is generated 'on the go'
Any situation where customisable pages or pages that need frequent updating are needed
Social web applications (blogs, wikis, etc.)
14. What type of technology makes location-based services sites such as Foursquare possible?
14. GPS technology
15. Give two benefits of a check-in service such as Foursquare from the perspective of a restaurant using this service.
15. Loyalty programmes for customers can be set up.
They can get immediate feedback as they are rated on all the likes, dislikes and ratings from previous check-ins.
16. Give two reasons why web designers have to include additional code for web pages that might be viewed on a mobile device.

16. They need to add code to allow the page to automatically resize the page to fit the screen. They need to have code that displays a different format and page layout that works better with a mobile browser e.g. without Flash animations, etc.
17. Consider the following URL: <https://m.facebook.com/notifications.php?refid=12>
- What is the significance of the https in the URL?
 - HTTPS is a protocol used for secure, encrypted communication over the Internet.
 - What is the significance of the 'm' in m.facebook.com?
 - It indicates a (version of a) website designed to be viewed on a mobile device.
18. Many well-known websites have developed apps that people can use to access the information on their site.
- Briefly explain what an app is.
 - Apps are programs designed to run on mobile devices.
 - Give three reasons why websites use these apps in this context.
 - To transfer less data, leading to faster speeds.
To give users a user-friendly mobile interface and more control.
To allow users to receive automatic notifications when content is updated.
 - Give two examples of well-known websites that have developed apps that people can use to access the information on their site.
 - News24, Facebook, etc.
19. Your mother complained that it takes a long time to log on to all the websites she is interested in to check for new content.
- Explain what RSS is and how it would help her in this context.
 - RSS is a web or news feed that automatically provides users with updated content or notifications of new content. This content can then be accessed from a central application without having to check each website separately.
 - Give three examples of situations where one can use RSS technology to keep track of new content.
 - To be alerted to new blog entries on blogs that you subscribe to.
To be informed of items that match the search criteria you have set to track searches on websites such as Google, Bing and Yahoo.
To keep track of new video clips on YouTube channels that you have subscribed to.
To be alerted to new music on iTunes.
To be alerted whenever your name or your company's name pops up in web searches.
To inform you of items that you are interested in appearing on online auction sites such as eBay etc.
20. Explain what SEO is and why it would be important to a company that has a website.
20. SEO is a strategy or technology used to obtain a high-ranking placement in the search results page of a search engine such as Google. SEO helps to make a site accessible to a search engine and to improve the chances of the site being found by the search engine.

21. The use of a RIA has become a feature of the Internet.
- a) Briefly describe what a RIA is.
 - a) A Rich Internet Application is a web application that is designed to deliver the functions and features of a traditional desktop application.
 - b) Give two examples of well-known RIAs.
 - b) Google Docs and Microsoft Office Live.
22. DNS is an example of a service that supports security on the Internet.
- a) Briefly describe what the DNS is.
 - a) The DNS (Domain Name System) is a central registry that keeps track of all the URLs on the Internet.
 - b) Which organisation is tasked with making sure that URLs are unique and can be trusted?
 - b) ICANN (Internet Corporation for Assigned Names and Numbers).
 - c) What do you have to do to 'own' a URL for your company or yourself?
 - c) In order to own a URL you need to register it (and pay a fee).
 - d) What is DNS poisoning and how does it work?
 - d) DNS poisoning is a hacking technique which involves gaining access to and changing data in the database of a DNS server. This means that a browser looking for a specific IP ends up with the IP address of another website (often a fake site).
23. SSL is a protocol used to ensure the security of communication and transactions on the Internet.
- Briefly describe how SSL works.
23. SSL (Secure Sockets Layer) relies on a trusted third party selling a digital certificate that is used to confirm the website is what it claims to be. The owner of the website has to register for the certificate which usually is only valid for a year and needs to be renewed. An SSL transaction can only take place if the URL and IP address of the site you are communicating with matches the ones registered in the certificate – and if the certificate has not expired.
24. Internet, intranet and extranet are terms commonly heard these days.
- a) Give a brief definition of the Internet.
 - a) The Internet is a worldwide computer network, consisting of devices, computers and networks connected to each other.
 - b) Describe what an intranet is and give an example of what it could be used for.
 - b) An intranet is an organisation's private network and is an Internet-like environment consisting of documents and resources relating to the organisation's business. An intranet is private and has restricted access only to authorised employees within the organisation. Resources that are shared can include files, documents and software applications such time sheets and the payroll system.
 - c) Describe what an extranet is and give an example of what it could be used for.

c) An extranet is when the information on an organisation's intranet is made available to other users outside the organisation such as suppliers and customers. Access is granted by means of a user name and password. For example, an extranet can be used to grant an organisation's clients access to certain areas of the organisation's intranet. This could be so that a client can browse the products on offer or have access to relevant documents for their business.

25. Web designers are in great demand across the world.

a) Describe the job of a web designer.

a) Web designers are responsible for the design, layout, coding and implementation of a website. They can also be involved with the maintenance and updating of an existing site.

b) Give two skills that a web designer should possess.

b) Software programming skills.
Graphic design skills.

26. Web authors sometimes perform the role of a web designer but they perform additional functions.

a) Describe some of the additional roles they perform compared to web designers by referring to two examples.

a) A web author is responsible for the content and images used on a website. They research, plan, write and edit the content to be used. Examples include producing new content and writing it in an interesting and relevant way, sourcing artwork and images to be used and maintaining and updating the website on a regular basis.

b) What alternative job title is used for web authors?

b) They are also referred to as web masters.

27. Graphic and multimedia designers require a degree or diploma in graphic design.

a) Briefly describe the job description of a graphic designer.

a) They produce graphics and layouts for items such as magazines, books, company logos, advertising, exhibitions and websites.

b) Briefly describe the job description of a multimedia designer.

b) They integrate audio, animation, graphics and video for use on CDs, DVDs, television programs and websites.

Module 3.3

The impact of technology on the global community – Activity

Activity

1. Give a description of the term 'globalisation'.
1. Globalisation refers to the global integration of economies cultures, ideas and groups.
2. List three global trends or factors driving globalisation.
2. The effective exchange of information, global trade and immigration and critical technologies such as communications and transport (especially air transport).
3. One of the advantages of globalisation is that it is not only large companies that have access to vast sums of venture capital. Even small companies can now gain access to funding via crowd-funding projects like Kickstarter.
Briefly explain what this means by referring to the concept of crowd-funding.
3. Crowd-funding refers to situations where groups of people pool their money together, often via the Internet and organisations like Kickstarter who then use this money for projects they feel have merit.
4. Give an example how or why you could use a service like Foursquare.
4. You 'check-in' online to a venue like a restaurant to let other people who use Foursquare know you are there.
5. What technology is commonly used to get directions to a destination?
5. GPS
6. What is the general reason for using a service such as Dropbox or SkyDrive?
6. To store/share files on the Internet.
7. We live in a 'Global Village'. Briefly explain what this means and what has enabled this trend.
7. Globalisation means that boundaries in terms of distance and time have been greatly reduced by access to high speed communication. In this way we become more a global community who share their culture and ideas.
8. Globalisation means greater access to markets across the world for a business.
Name and briefly describe the potential disadvantage of this trend.
8. Creating a profitable business in a competitive world means that you need to create a quality product as cheaply as possible and sell as much of it as you can.

9. List three items that a business would have to source in order to be profitable and successful in a global market.
9. Finding the cheapest suppliers of the parts you need.
Sourcing the cheapest labour to assemble products.
Finding the best (fastest and cheapest) way to sell that product wherever you can.
10. Outsourcing has become a term closely associated with globalisation especially with functions such as Help Lines.
Explain what outsourcing means in this context and why this has become so prevalent.
10. Outsourcing occurs when a company or organisation contracts out some their functions.
For example Help Line or Help Desk call centre functions can be run by another company. The person on the other end of the help line can be working from anywhere in the world. The aim is cost saving as because as it may be cheaper to hire another company to run it.
11. Countries like North Korea and China have attempted to control what information people receive via the Internet.
 - a) Why is it difficult to restrict or stop the free-flow of information via the Internet?
 - a) Any data that is transmitted electronically (such as via the Internet) is difficult to restrict or stop, so anybody can publish on the Internet to reach a global audience very easily .
 - b) Why do you think countries would try to restrict the flow of information via the Internet?
 - b) Free flowing information can have tremendous cultural, social and political impact as it provides the public with information they might not otherwise have access to. In addition it allows groups to form and express their opinions either in public or globally via the Internet.

Module 4.2

Database management – Activity

Activity

1. What is the basic purpose or function of a database management system (DBMS)?
 1. It is software that allows you to work with electronic databases.
 2. A DBMS is designed, amongst other things, to enable the user to create and edit a database structure as well as to perform queries on the database.

List two other typical functions or tasks that DBMSs allow a user to do.
 2. Add, edit and delete data in the database
Process the data in the database to extract information
3. What are the two main categories of DBMS?
 3. Desktop databases and Server DBMS
4. Would a desktop database system such as Microsoft Access be suitable for a system with hundreds or thousands of requests and commands from hundreds or thousands of clients at any given time? Briefly motivate your answer.
 4. No, desktop database software has relatively limited capabilities compared to a server DBMS which is designed for this purpose.
5. Describe the main difference between how a desktop database functions compared to a server DBMS.
 5. In a desktop database the tools that you need to work with the data are all included in a single application – and you need to start that application to be able to work with the database. By contrast, DBMS software is installed on the server and is never directly accessed by the user. We do not directly interact with the database but rather (as clients) make calls to the DBMS software. The DBMS acts an interface between us (the users of specific software and applications) and the actual database(s).
6. What is the general term given to the 'requests' or 'calls' made to a DBMS by its clients?
 6. Transactions
7. Explain how server DBMS software works.
 7. A server DBMS receives messages from client software over a network telling it what to do (usually in the form of text strings containing SQL commands). The server interprets the instruction and attempts to carry it out. It then sends the results back to the client (or sends back an error 'message' if it does not understand the command or is unable to execute the command).

8. Explain what a distributed database system is and how it might differ from other database systems from a user's perspective.
8. A distributed database is a system where parts of a database are spread (distributed) across servers in separate locations. However, from the end-user's perspective, they appear and work like a single database stored on a single server.
9. Give two sets of circumstances where a distributed database becomes necessary.
9. When the potential number of connected users becomes too large for a single server to cope with or when a business is spread over a large geographical area.
10. Give two potential problems in using a centralised database which cannot cope with the number of connected users and requests.
10. Slow network traffic because of the large volume of data being communicated
High data charges because of the large volume of data being communicated
The risk of the entire business shutting down if there are problems with the central database or the communications network
11. Why is security a more complex issue with a distributed database?
11. With a distributed database there are multiple servers, systems and ways to access the database and computers that it runs on. This means a higher level of risk and a much more complex task to ensure security of the system as a whole because you are effectively having to manage security for many servers and databases instead of just managing security on a single server and database.
12. Explain what data synchronisation is and why it is so critical in a distributed database system.
12. With a distributed database you have to make sure that the data on various servers with their databases are up-to-date and consistent with each other.
13. Name the two main models for ensuring data synchronisation in a distributed database system.
13. Duplication and Partitioning
14. Explain the difference between the two methods for ensuring data synchronisation in a distributed database system you gave in the previous answer.
14. In the duplication model, every separate site has a complete copy of the entire database. With partitioning, each site manages its own data and uploads the data to a central database in a scheduled batch process (e.g. the databases synchronise every night at 23:00).
15. What is the main advantage of using the duplication model or method for ensuring data synchronisation in a distributed database system?
15. The main advantage is that each separate site has a complete copy of the entire database.
16. Give the two main disadvantages of using the duplication model or method for ensuring data synchronisation in a distributed database system.
16. It can cause large amounts of data traffic and means that each site has to have enough storage to hold the entire database instead of just their own section.

17. Give two examples of widely used, open-source server-based DBMS.
17. PostgreSQL and MySQL
18. Give two examples of widely used desktop-based DBMS.
18. Base and Microsoft Access
19. List four of the broad key functions or duties of a DBA (database administrator).
19. Managing and maintaining the database (usually via the DBMS).
 - Setting up and maintaining users of the database and their access rights.
 - Performing routine maintenance on the database.
 - Implementing a good backup policy.
 - Installing and configuring software on additional servers, ensuring systems have enough storage and memory, etc.
20. What is Unix?
20. Unix is a server type of operating system that runs on many servers on the Web in particular.

Activity 1

1. Tuck Shop

Supplier	Item	
SupplierID	ItemName	
SupplierName	SupplierID	
ContactNumber	OrderUnit	The smallest quantity that may be ordered, e.g. 1 doz, 10 boxes.
DeliveryDay	UnitPrice	The cost of one unit e.g 1 pie, one sweet, one litre.
DeliveryCost		
PercDiscount		

Please note: This is one possible solution. Different fields may be provided. However, the two entities can only be *Supplier* and *Item*.

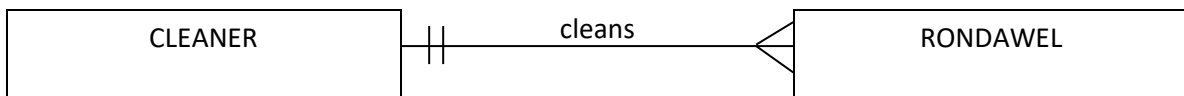
2. School trip

Activity		Learner
ActivityName		LearnerID
Date		Surname
PermissionType	E.g. Letter of consent; signed note; faxed letter	Name
Cost		RegisterClass
Duration		ContactNo
		EmergencyContact
		AmountPaid
		ActivityName

Please note: This is one possible solution. Different fields may be provided. However, the two entities can only be *Activity* and *Learner*.

Activity 2:

1. Vacation resort staff

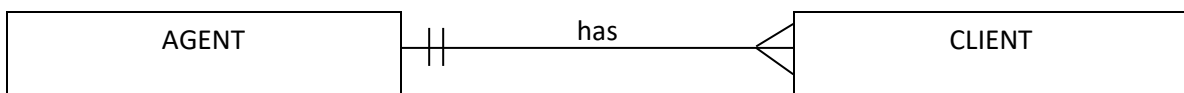


One cleaner can clean (are responsible for) many rondawels.

Cleaner
⌚ CleanerID (PK)
CleanerName
Gender
IDnumber
Cellphone

Rondawel
Number (PK)
NumRooms
NumBathrooms
NumDoubleBeds
NumSingleBeds
Fireplace
CleanerID (FK)

2. Travel agency



One agent can deliver services to many clients.

Agent
🔑 AgentID (PK)
AgentName
ContactDetails
Gender
IDnumber

Client
ClientID (PK)
ClientName
Gender
ContactDetails
AgentID (FK)

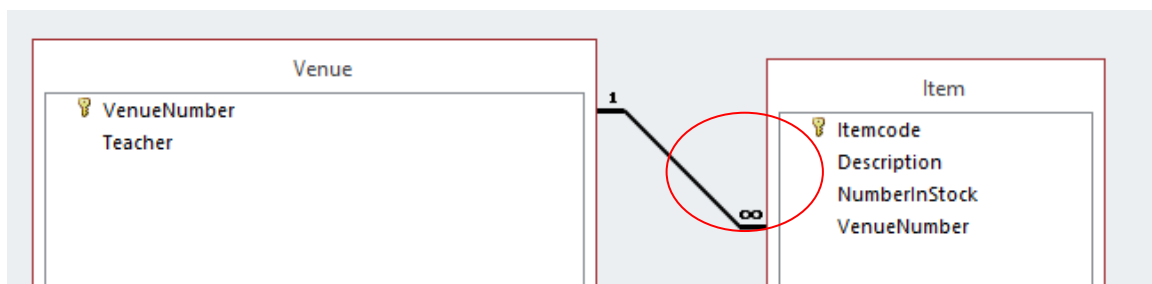
* Fields used to connect two tables are shaded

Activity 5

2. The **data type** of the fields which act as a link between two tables must be the same.
3. The **names** of the fields which act as a link between two tables do not have to be the same.
4. When you do not select the option to enforce referential integrity, the connection line looks as follows:

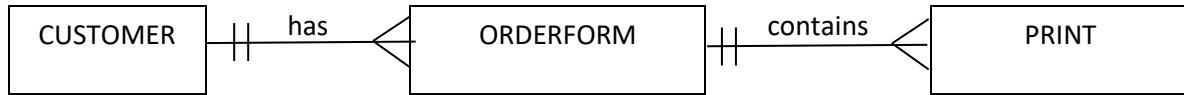


When you do select to enforce referential integrity, the connection line looks as follows:



Activity 7:

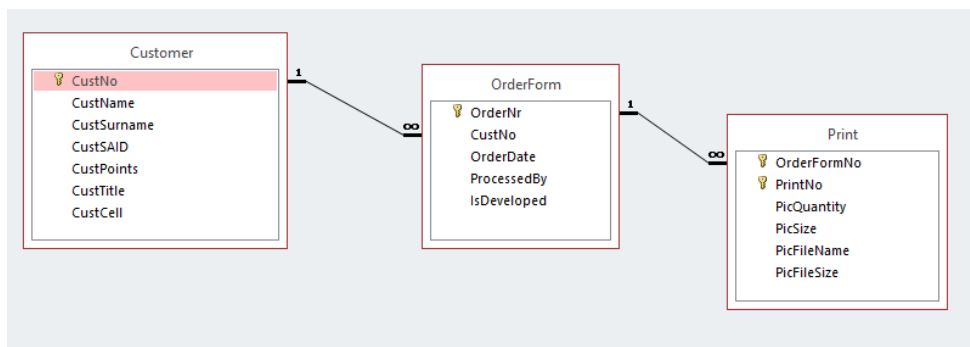
An ER diagram for the database HappySnappy.



One customer can place many orders, therefore one customer has many order forms.

One order form can contain orders for many different prints.

The relationship look as follows:



Number of prints requested on order form ORD0004

- Click on the + sign to the left of the field OrderNo in table OrderForm.
- Click inside the table which appears.

OrderNo	CustNo	OrderDate	ProcessedBy	IsDeveloped
ORD00001	CN187	08-Nov-10	CJ	<input type="checkbox"/>
ORD00002	CN431	01-Nov-10	Bongi	<input checked="" type="checkbox"/>
ORD00003	CN256	25-Oct-10	Clifford	<input type="checkbox"/>
ORD00004	CN062	11-Oct-10	Clifford	<input type="checkbox"/>

PrintNo	PicQuantity	PicSize	PicFileName	PicFileSize
1	2	5	Photo_108.jpg	4104
2	1	S	Photo_109.jpg	4070
3	1	S	Photo_110.jpg	4275
4	1	5	Photo_111.jpg	4223
5	1	5	Photo_112.jpg	4124
6	44	S	Photo_113.jpg	4161
7	1	4	Photo_114.jpg	4246
8	2	S	Photo_115.jpg	4158
9	1	J	Photo_116.jpg	4288
10	2	5	Photo_117.jpg	4257
11	1	J	Photo_118.jpg	4260
12	1	S	Photo_119.jpg	4276
13	2	S	Photo_120.jpg	4114
14	2	J	Photo_121.jpg	4080
15	1	4	Photo_122.jpg	4086
16	2	J	Photo_123.jpg	4123
17	2	J	Photo_124.jpg	4304
18	13	5	Photo_125.jpg	4249
19	1	5	Photo_126.jpg	4166
20	1	J	Photo_127.jpg	4264

Record: 1 of 21 | No Filter | Search

The table contains all the records from table Print which has ORD0004 as value in its foreign key (OrderFormNo). At the bottom of the table, the number of records in the table is displayed, in this case 21.

Number of orders for customer CN005

- Click on the + sign to the left of the field CustNo in table Customer.

There are 4 records in table OrderForm which has CN005 as value in the foreign key CustNo.

CN005	Riana	Anderson	5507044122012	1980 Mrs	0825944470
	OrderNo	OrderDate	ProcessedBy	IsDeveloped	
	ORD00151	25-Oct-10	Neels	<input type="checkbox"/>	
	ORD00353	07-Nov-10	Sue	<input type="checkbox"/>	
	ORD00383	25-Nov-10	Lerato	<input type="checkbox"/>	
	ORD01130	13-Oct-10	Bongi	<input type="checkbox"/>	
	*			<input type="checkbox"/>	
CN006	Nurudeen	Arendse	7108163664066	2991 Mrs	0827010494

Record: 1 of 4 | No Filter | Search

Activity 8 No 1

Learner			
LearnerID (PK)	LearnerSurname	LearnerGrade	LearnerClass
1	Smith, J	11	B
2	James, H	10	A
3	Mabunda, K	12	D

Award		
AwardID	AwardName	LearnerID (FK)
1	DuxAfrGr10	2
2	DuxBiologyGr11	1
3	DuxEngGr12	3
4	DuxHistGr12	3
5	BestLeadOperetta	3
6	Snr Victor Ludorum	1

Activity 8 No 2

Solution 1

Sport	
SportName	Teacher
LongDistance	Wood, A
Discuss	Wood, A
HighJump	Mbeki, G

Learner		
LearnerNo	LearnerName	SportName
1	Abrahamse, G	LongDistance
2	Adams, M	Discuss
3	Baloyi, H	LongDistance
4	Carter, J	Discuss
5	Chetty, R	LongDistance
6	Jacobson, S	Discuss
7	Jones, J	HighJump
8	Mahlanga, P	HighJump
9	Minnaar, J	Discuss
10	Pieterse, L	LongDistance
11	Simons, K	LongDistance
12	Stoffberg, P	HighJump
13	Yeye, K	LongDistance
14	Yssel, E	Discuss

Solution 2

One can easily make spelling mistakes with the names of the teachers and sports. Rather use numbers for the different types of sport. Generally there will be a table with the details of Teachers – so rather use the number of the teacher.

TblTeacher	
TeacherNo	TeacherName
1	Wood, A
2	Mbeki, G

TblSport		
SportNo	Sport	TeacherNo
1	LongDistance	1
2	Discuss	1
3	HighJump	2

TblAthlete		
LearnerNo	LearnerName	SportNo
1	Abrahamse, G	1
2	Adams, M	2
3	Baloyi, H	1
4	Carter, J	2
5	Chetty, R	1
6	Jacobson, S	2
7	Jones, J	3
8	Mahlanga, P	3
9	Minnaar, J	2
10	Pieterse, L	1

11	Simons, K	1
12	Stoffberg, P	3
13	Yeye, K	1
14	Yssel, E	2

Activity 9 No 1

Order		
OrderNo	OrderDate	ClientNo
100	01/04/2006	3423
200	12/04/2006	2313
300	13/04/2006	7865

OrderDetail					
OrderNo	ItemNo	ProductCode	Description	Quantity	UnitPrice
100	1	QW234	Ruler	34	2.30
100	2	YT567	A4 book	54	0.56
100	3	UH453	Sharpener	23	0.87
200	1	IU765	Pencil	12	1.30
200	2	HJ987	Compass	5	12.60
300	1	QW234	Ruler	22	2.30
300	2	VB876	Rubber	23	0.45

Activity 9 No 2

Tour		
TourDestination	NoOFDays	Cost
Cape Town	5	R3000
Sun City	3	R2500
Pilgrim's Rest	4	R2500

TourDetail					
TourDestination	DepartDate	GuideID	GuideName	ClientID	ClientName
Cape Town	2/3/2007	7	Bentley,J	VH08	Van Heerden,P
Sun City	3/3/2007	3	Jamieson,K	JN12	Jansen,H
Cape Town	9/3/2007	4	Munda,R	SL01	Small,H
Pilgrim's Rest	12/3/2007	3	Jamieson,K	MA23	Mabunda,J

Better solution:

Tour			
TourCode	TourDestination	NoOFDays	Cost
1	Cape Town	5	R3000
2	Sun City	3	R2500
3	Pilgrim's Rest	4	R2500

TourDetail					
TourCode	DepartDate	GuideID	GuideName	ClientID	ClientName
1	2/3/2007	7	Bentley,J	VH08	Van Heerden,P
2	3/3/2007	3	Jamieson,K	JN12	Jansen,H
1	9/3/2007	4	Munda,R	SL01	Small,H
3	12/3/2007	3	Jamieson,K	MA23	Mabunda,J

Activity 9 No 3

Client			
ClientNo	Client	ContactPerson	ContactTelno
1	Sparkles Pool Cleaners	C H Lorine	0862356787
2	Speedy Tyres	R Ubber	0842765598
3	Waltons Stationers	F Pen	0837761524

Order		
OrderNo	ClientNo	Total
1	1	R134.23
2	2	R521.24
3	3	R1042.42
4	1	R928.53

Please note: We have added a field ClientNo in table Client so that the name of a client does not have to be entered every time in table Order. Although Client can be used as key (and link between the two tables), it increases the chance that errors are made (spelling of name) and the data not linked.

