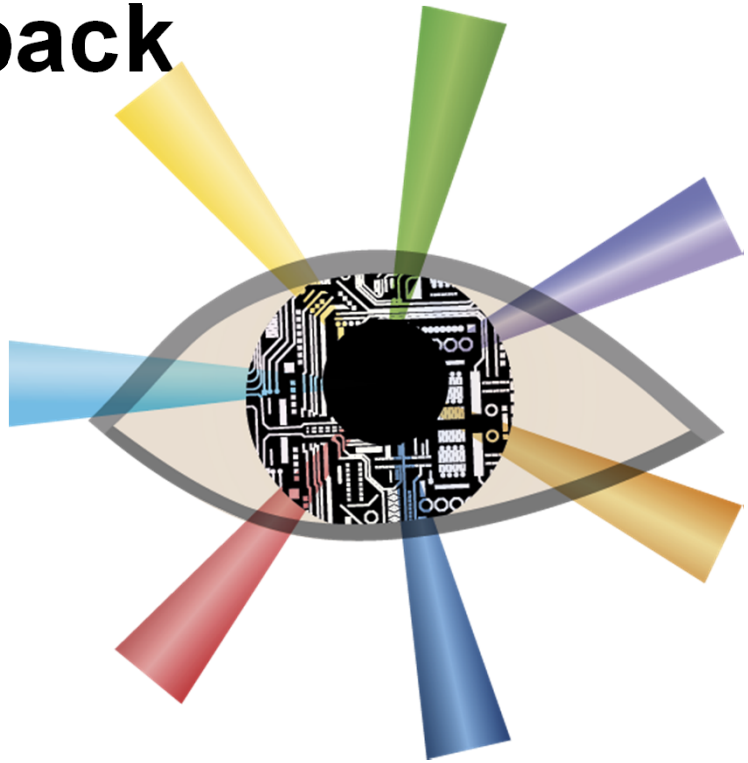
BTEC Nationals in Information Technology

Planning for external assessments and feedback on previous series

Covering Units 11 and 14



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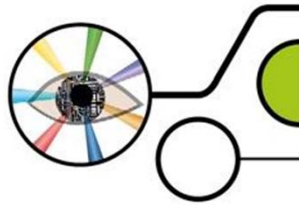
Activity - Getting to know you



Using Pinterest pin a series of ‘things’ that explain:

- Who you are – what makes you ‘you’
- Your teaching experience
- Your approaches to Teaching

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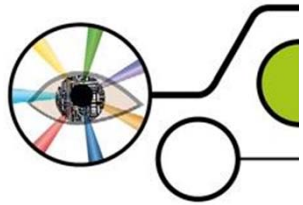
Aims for the day



- Consider teaching, learning & assessment approaches and share practice within the externally assessed units
- Receive feedback from the previous external assessment series
- Consider learner responses to specific questions and/or tasks
- Share practice in planning for externally assessed units
- Identify common issues
- Have the opportunity to ask questions
- Have the opportunity to network

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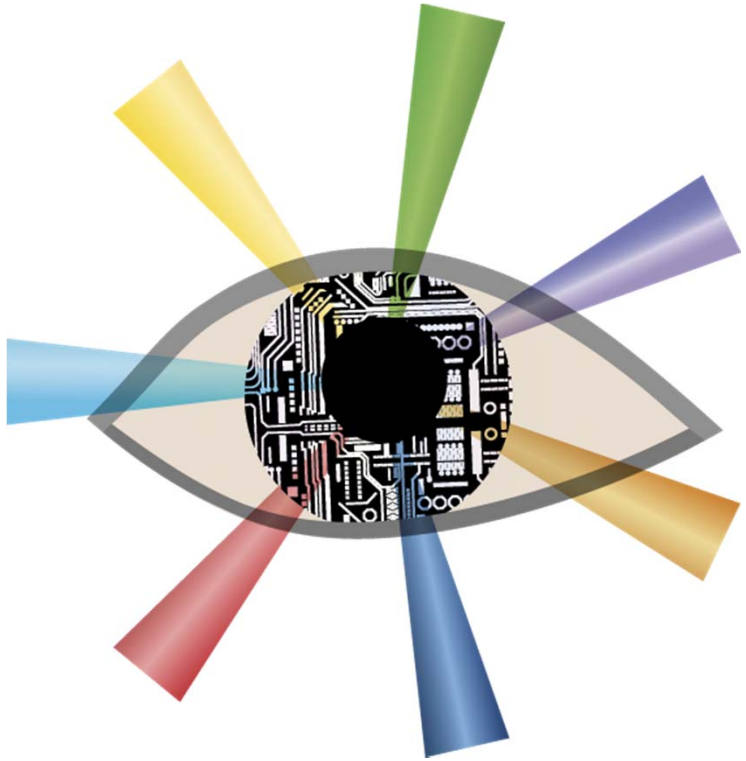
Externally assessed units

Structure



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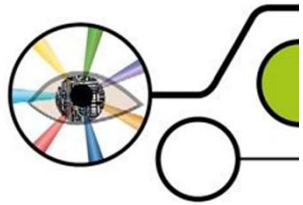
Unit 11



Unit 11: Cyber Security and Incident Management

- Purpose
- Externally assessed task
- Supervised period 30 April–21 May

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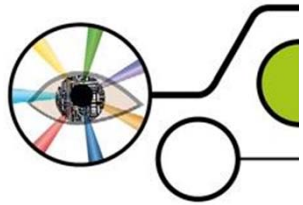
Unit 14



Unit 14: IT Service Delivery

- Purpose
- Externally assessed task
- Supervised period 23 April–14 May

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Curriculum planning

Qualification size	Unit 1	Unit 2	Unit 11	Unit 14
Certificate		M		
Extended Certificate	M	M		
Foundation Diploma	M	M		
Diploma	M	M	M	
Extended Diploma	M	M	M	M

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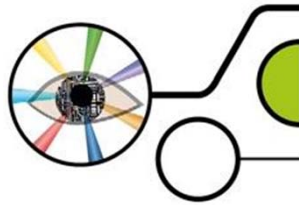
Planning for external assessment



Discussion activity

- You have a new member of staff joining your IT team.
- They are new to BTEC – only taught GCSE and A Level.
- What advice would you give them when they are planning for external assessment?

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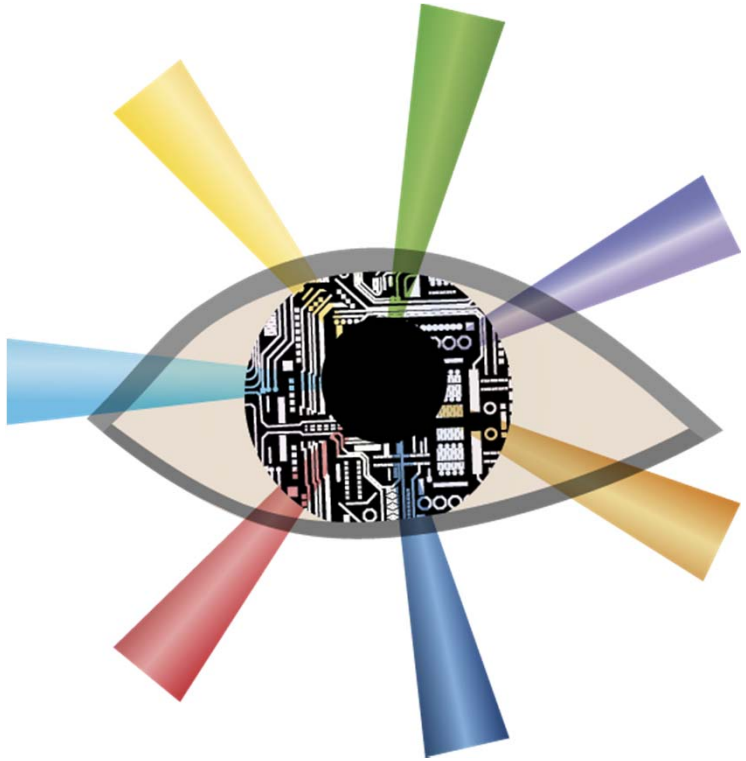
Unit 11: Cyber Security and Incident Management



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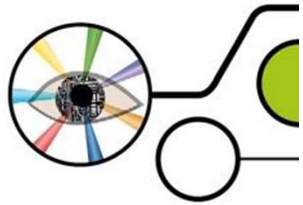
Unit 11



Structure of the exam:

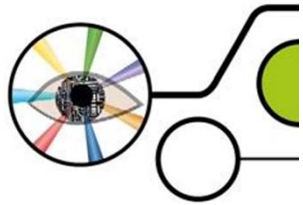
Part A

- Scenario
- Activity 1 - Risk assessment
- Activity 2 – Cyber security plan
- Activity 3 – Management report

Part B

- Same scenario
- Details of a security incident
- Activity 4 – Forensic incident analysis
- Activity 5 – Security report

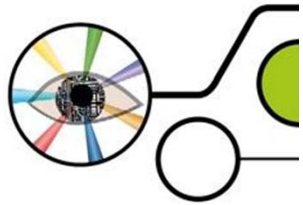
Unit 11



Part A

- 43 marks, 5 hours to complete.
- Task 1 – Risk assessment:
  - Template provided.
  - Approx. 1.5 hours, 8 marks.
- Task 2 – Cyber security plan:
  - Template provided.
  - Approx. 2.5 hours, 20 marks.
- Task 3 – Management report:
  - No template.
  - Approx. 1 hour, 12 marks.

Unit 11



Part B

- 37 marks, 4 hours to complete.
- Part A materials are not allowed in the Part B exam.
- Scenario includes evidence from a security incident.
- Task 4 – Incident analysis:
  - Template provided.
  - Approx. 2 hours, 14 marks.
- Task 5 – Security report:
  - Approx. 2 hours, 20 marks.

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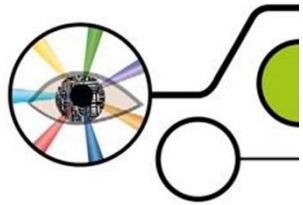

Resources available:

- specification
- original SAM
- Sample Mark Learner Work for the original SAM
- additional SAM
- administrative support guide
- templates.

Useful websites:

- www.arstechnica.com
- www.theregister.co.uk
- www.cybrary.it
- www.cybersecuritychallenge.org.uk

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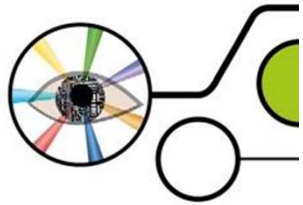
Unit 11



Overall performance of the unit

Positives:

- Some coped well with content, requirement and degree of difficulty.
- Most coped well with the scenario.

Negatives:

- Learners had default answers divined from the spec that weren't correct for this scenario
- Learners had mixed fortunes excelling on one more than the other of the tasks.

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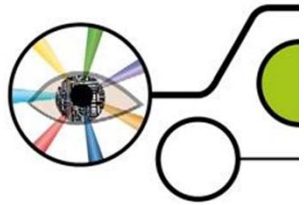
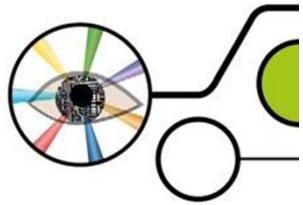
Activity 1 – Risk assessment of the networked system

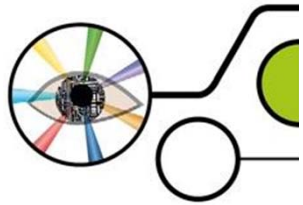


Threat number.	1
Threat title.	Unauthorised Physical Access
Probability.	Unlikely
Potential size of loss / impact level.	Generally around either Minor or Moderate. However I'd say more towards moderate, depends on the situation really.
Risk severity.	Low.
Explanation of the threat in context.	Generally speaking this is when a person, who is unauthorised, is able to access secure and confidential data. This could possibly result in a massive loss of data if said person had malicious intentions. This would have a heavy loss on income as well, due to trust lost from customers who would move to another trustworthy company. Again, the threat risk level would be low. Due to the security measures to actually access the building (card scanners at the door) are pretty complex, this would most likely stop an intruder.

Activity 1 – Risk assessment of the networked system



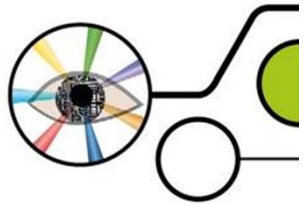
Threat number.	1
Threat title.	Attack via Wi-Fi connection
Probability.	Very likely
Potential size of loss / impact level.	Major
Risk severity.	Extreme
Explanation of the threat in context.	The office is placed on the 19th floor of a 20 storey building with a restaurant and coffee bar above the office and a bar-café on the roof. There is also a gym and art gallery on the lower floors. This results in many visitors that will be walking around the company offices. An unauthorised user or hacker, can connect to the company Wi-Fi and use automated scanners to find any open ports or software vulnerabilities in the network. The unauthorised user or hacker will use open ports to connect to the network where he can access company files or plant malware such as spyware. This will grant the hacker full access to the BCTAA network where he can cause permanent damage to the company.



Activity

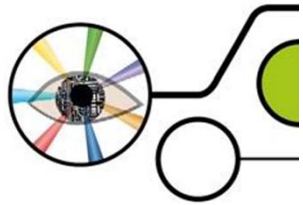
- Work in small groups.
- Using the additional SAM, complete the risk assessment.
- Review the mark scheme.

Activity 2 – Cyber security plan



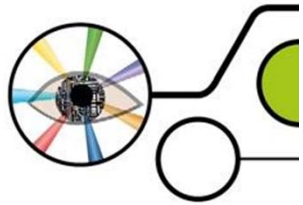
- This activity requires learners to produce a cyber security plan based on their risk assessment from Activity 1. A template is provided for learners to complete.
- As with Activity 1, the great majority of learners used the template correctly. Those who could not or would not do so were likely to gain lower Technical Language marks.
- Although the threats dealt with Activity 2 should be the same ones that are risk assessed in Activity 1, marking of Activity 2 is independent of Activity 1. This means that an erroneous estimate of threat severity or overemphasis on generic risks does not directly affect the marking. Although having a number of non-cyber security threats was disadvantageous for the reasons given for Activity 1.

Activity 3 – Management report



- Technical Language must be suitable
- Report must be laid out correctly
- Assessment of the protection methods must be appropriate
- Rationale must be present

Activity 4 – Forensic incident analysis



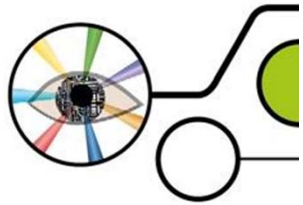
Positives:

- Most coped well with filling in the template
- Most coped well with the scenario.

Negatives:

- Method of acquiring the evidence
- Inability to complete the template
- ‘Stock’ answers
- Lack of a conclusion

Activity 5– Management report on security improvements

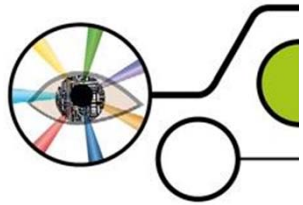


Positives:

- Good answers concentrated on the mistakes made.
- Most coped well with the scenario.

Negatives:

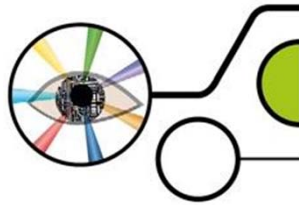
- Less good answers had a mixture of mistakes, statements about the system, and possible solutions.



Activity – Conclusion writing

- You are a new superhero – you've just discovered your power.
  - Write a conclusion as to how that power could lead to your downfall
  - Suggest a method that could be used to alleviate the downfall or stop it altogether.

Unit 11



Top tips for the unit

- Teach students how to use the templates.
- Teach students how to set out a formal report
- Relate answers to the scenario (Specific threats)
- “Teach the Spec not the SAM”
- Understand how to craft a holistic conclusion
- Be familiar with the exam admin.

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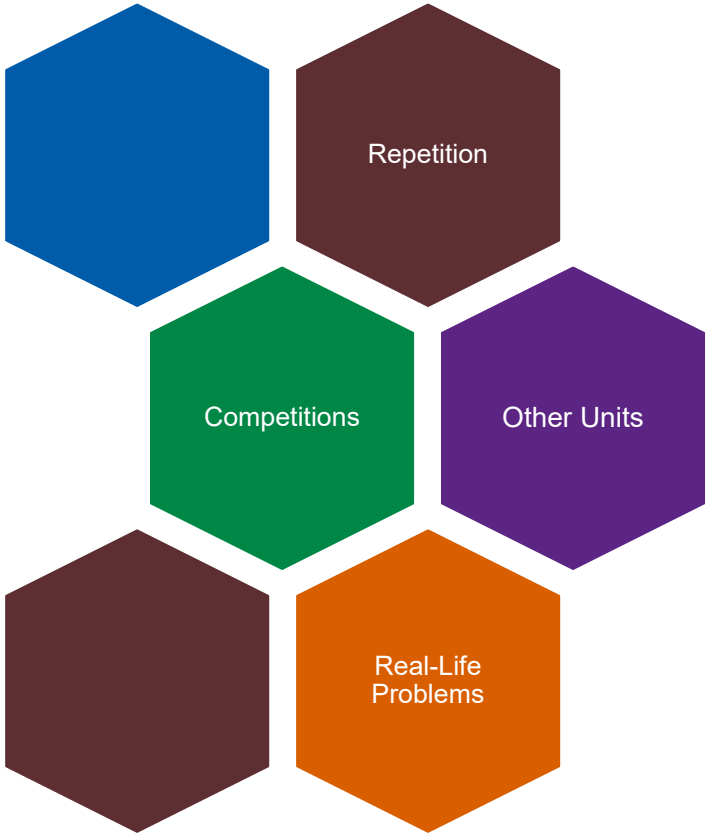
Activity



How else could you teach it?

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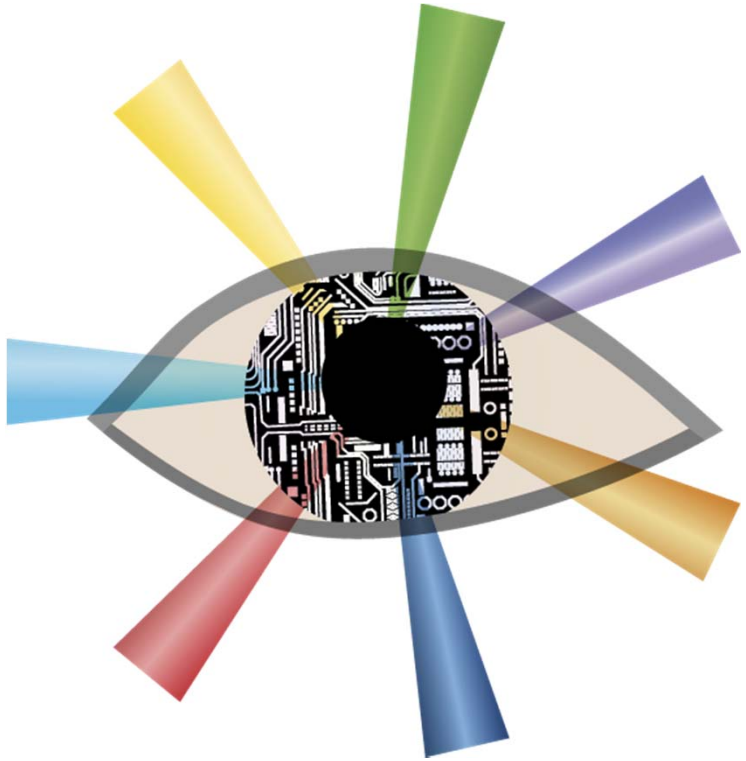
Unit 14: IT Service Delivery



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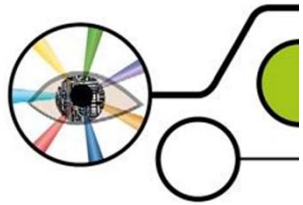
Unit 14



Overall performance of the unit

Positives:

- Overall performance was good.

Negatives:

- Blank responses evident
- Activity 5 weakest
- Lack of legislation discussed
- Scenario relevance sometimes not evident

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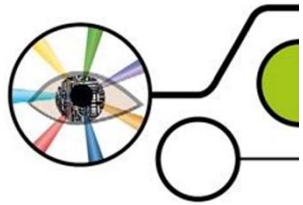
Unit 14



Structure of the exam

Part A

- Preparatory research task – 3 hours.
- Completed before Part 5, two weeks prior to Part B.

Part B

- Task-based assessment – 8 hours.
- Completed with assessment period – 3 weeks.

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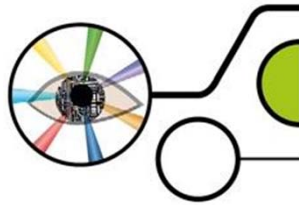
Unit 14



Part A

- Scenario.
- Research to focus on service requirements for sector/industry.
- SAM/additional SAM.

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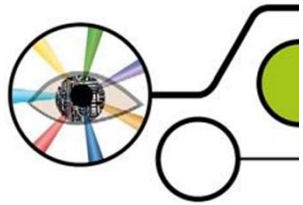
Unit 14



Part B – 8 hours, 68 marks.

- **Task 1** – Outline IT strategy:
  - template
  - 1 hour, 8 marks.
- **Task 2** – IT service catalogue:
  - template
  - 1 hour, 8 marks.

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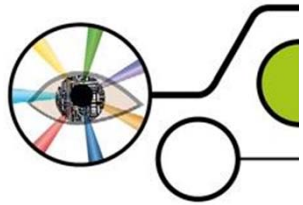
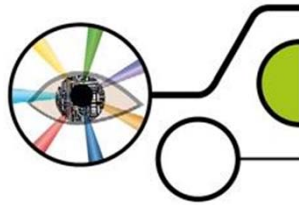
Unit 14



Part B, cont.

- **Task 3** – Design an IT service delivery solution:
  - three different methods of presentation
  - 3 hours, 20 marks.
- **Task 4** – Management report evaluating the solution:
  - report format
  - 1 hour 30 mins, 12 marks.
- **Task 5** – IT service management implications report:
  - template
  - 1 hour 30 mins, 16 marks.

Activity 1 and 2



Organisational Needs	
IT Service Requirements	**Explanation of priority (high, medium or low)**
Buckton Construction is a civil engineering company with one main head office and multiple remote sites. They require an enormous range of different IT services to maintain basic operations. Once the company has a project tender it can accept it shall hand out contracts to its staff, so they can begin work. Head office controls the sites and how they operate. It allocates materials and runs the legal site of operations.	
Site and Office Communication	**High** – This is a major priority as it ensures that everyone can communicate with the rest of the office and sites. Without this service, there would be no way to establish the progress of a site or be able to have a direct conversation with site managers. Office users would also not be able to make phone calls, this would seriously undermine the operations of the business and impact on their ability to order supplies, speak with clients and internally speak with other staff members
PCs	**High** – PCs are required to allow office staff to do their job. They are required to access stored information and input more data. They are also used to design and review building diagrams and blueprints. Without the use of PCs, there would be few alternatives to allow mainstream office tasks to continue.
Printers	**Medium** – Printers are required when hard copies of documents need to be printed. In a modern world, this is less important now as most documents are emailed and viewed digitally. However, in a construction company these documents may need to be printed and sent to the sites on occasion when there is a need to review blueprints and legal documents on site.

Activity 3

Learners are required to design an IT service delivery solution that meets the needs of the organisation.

Hardware and Software Service Options

Laptops

The laptops will have high end CPU as they will need to be able to run multiple programmes at the same time, high end batteries as they will need to last at least a full working day without running out of charge. It will be able to run CAD software in high definition smoothly also.

Phones

Physically sturdy, touch screen phones. So, if they are dropped won't break and are easy to send quick emails on.

Microsoft Office

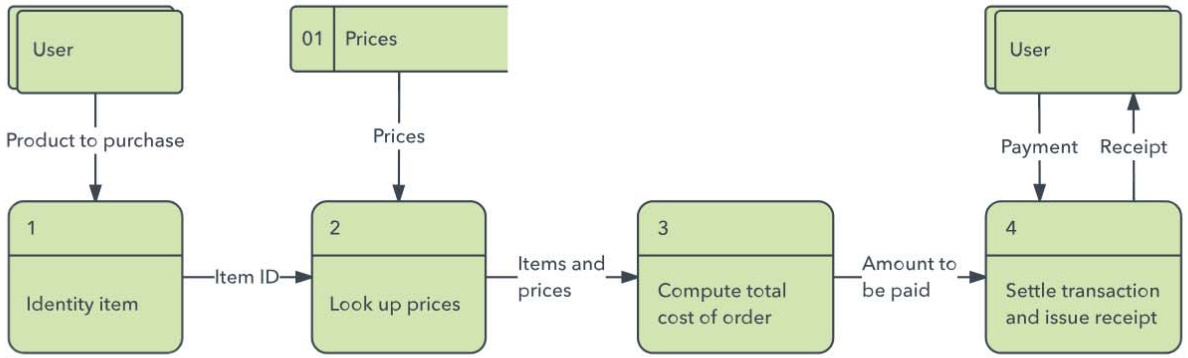
Word, Excel, Outlook.

Computer Aided Design (CAD) Software

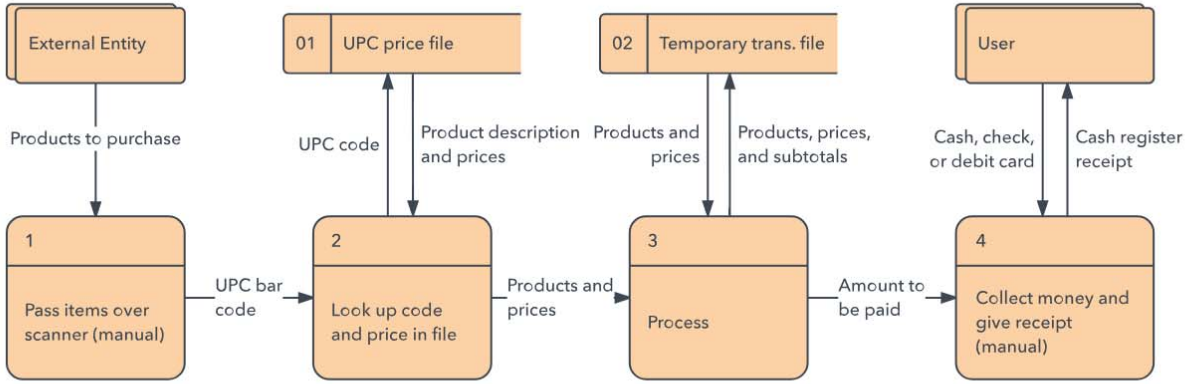
This software will be oriented around building and structure design as that is what civil engineers produce.

Activity

What is the difference between the Logical and Physical DFDs?



Logical DFD



Physical DFD

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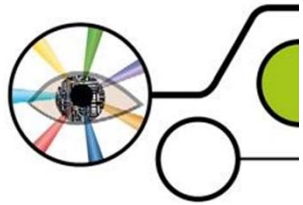
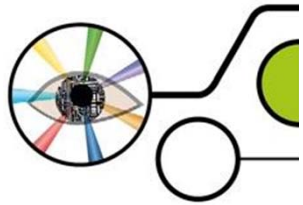
Activity 4



Learners are required to evaluate the appropriateness of their IT service delivery solution for the requirements of the organisation, by reviewing requirements and making recommendations to discuss if the system recommended is effective and appropriate for the needs of the organisation. The learners should compare the recommended system to the initial organisation requirements, will it enable all staff to undertake their job roles more effectively, and are there any limitations. The evaluation report should recommend solutions to any limitations.

Activity 5

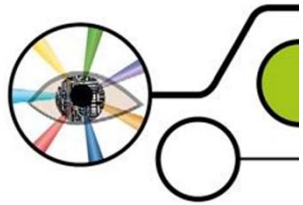


Learners are required to analyse the implications of managing IT service delivery for the requirements of the organisation, by considering how the implications will affect the organisation.

Learner Example:

Implementing your solution and delivering the organisation's services and products
There will be 4 main changes to the new solution for the network. Firstly, the communication between staff is now implemented through the use of modern technology. They will each be allocated mobile devices, each device is dependent on the personal's role in the organisation. Each member of staff on the construction site will receive these. To prevent data from being taken out of the organisation and or copied they have to return the device each day before they are able to log out. The mobile devices are provided by a 3rd party company and the network manager is in charge to ensure the devices are set up for each user along with having to make sure the 3rd party doesn't have access to any data. The mobile devices serve multiple purposes some of which is related to other changes made to the organisation's infrastructure. The other purposes are as followed but not limited to being able to now access the central storage straight from their mobile devices. This means they are able to update records and access files that may be needed in real time. They are now also able to work together with collaborative working so when they use the devices to write reports, they are able to work on the reports together and thus save time and money.

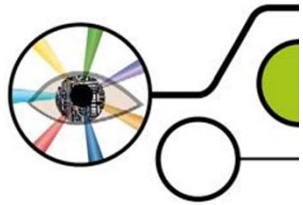
Unit 14



Top tips for the unit

- Use SAMs and SMLW to prepare for assessment.
- Be familiar with file management, set-up and templates.
- Relate to scenario and understand sector.
- Practise with case studies and familiarise with business structures, visits and work experience.

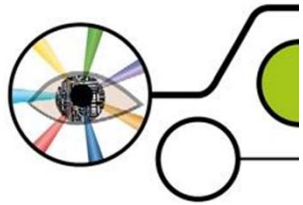
Unit 14



Top tips for the unit

Discuss with other delegates your top tips for the units.

Review - Aims for the day



- Consider teaching, learning & assessment approaches and share practice within the externally assessed units
- Receive feedback from the previous external assessment series
- Consider learner responses to specific questions and/or tasks
- Share practice in planning for externally assessed units
- Identify common issues
- Have the opportunity to ask questions
- Have the opportunity to network

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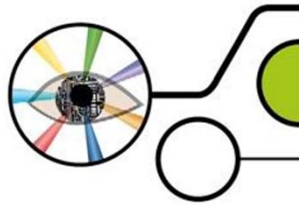
Tour of the website



BTEC Level 3 NQF Information Technology (2016) qualification page:

https://qualifications.pearson.com/en/qualifications/btec-nationals/information-technology-2016.html

BTEC key documents:

http://qualifications.pearson.com/en/about-us/qualification-brands/btec/delivering-btec/key-documents.html

Edexcel Online:

https://www.edexcelonline.com/Account/Login.aspx

MyBTEC:

https://mybtec.pearson.com/MyBTEC/Home/Home#/

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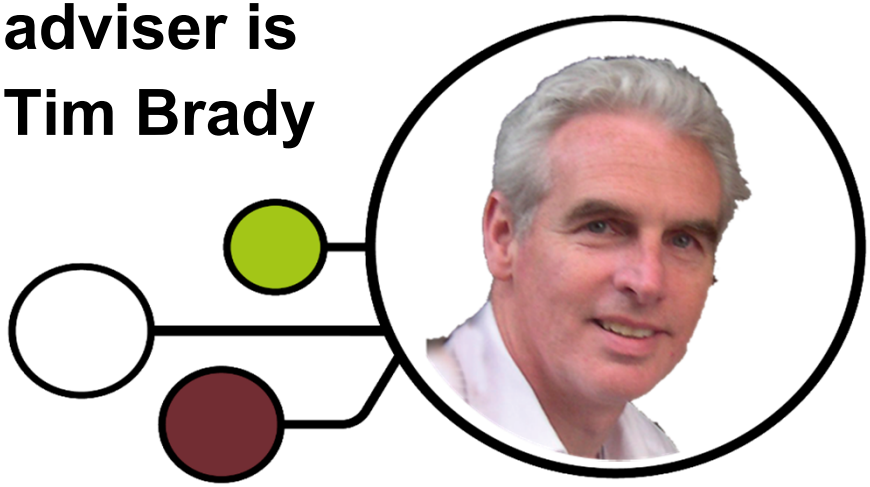
Step-by-step support available online, by phone or in person

Your subject adviser is Tim Brady



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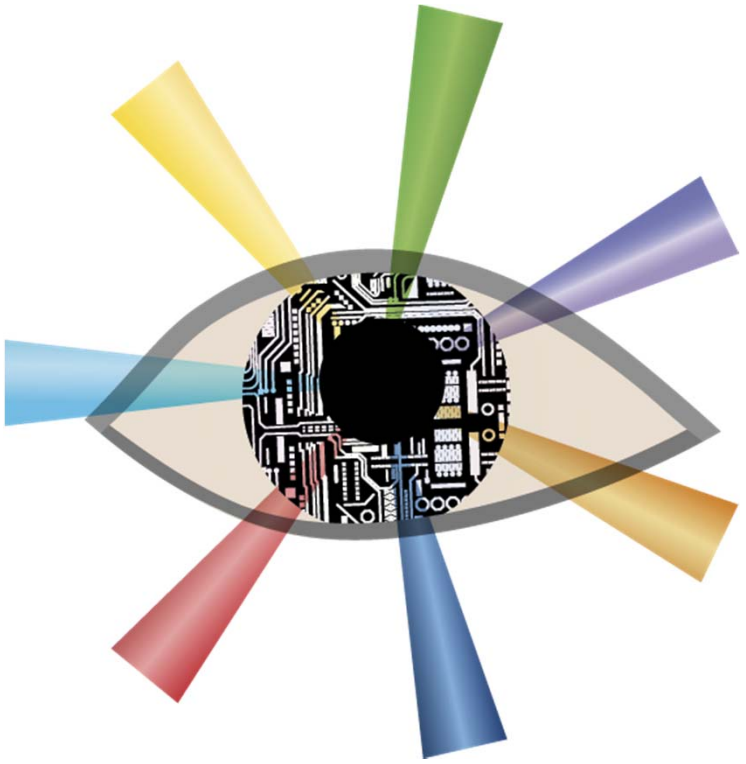
Please complete the evaluation form included in your pack before you leave today.

You will also be emailed a link to the evaluation form after the event today if you haven't had time to complete it. You can also access it here:

[insert link]

THANK YOU!



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