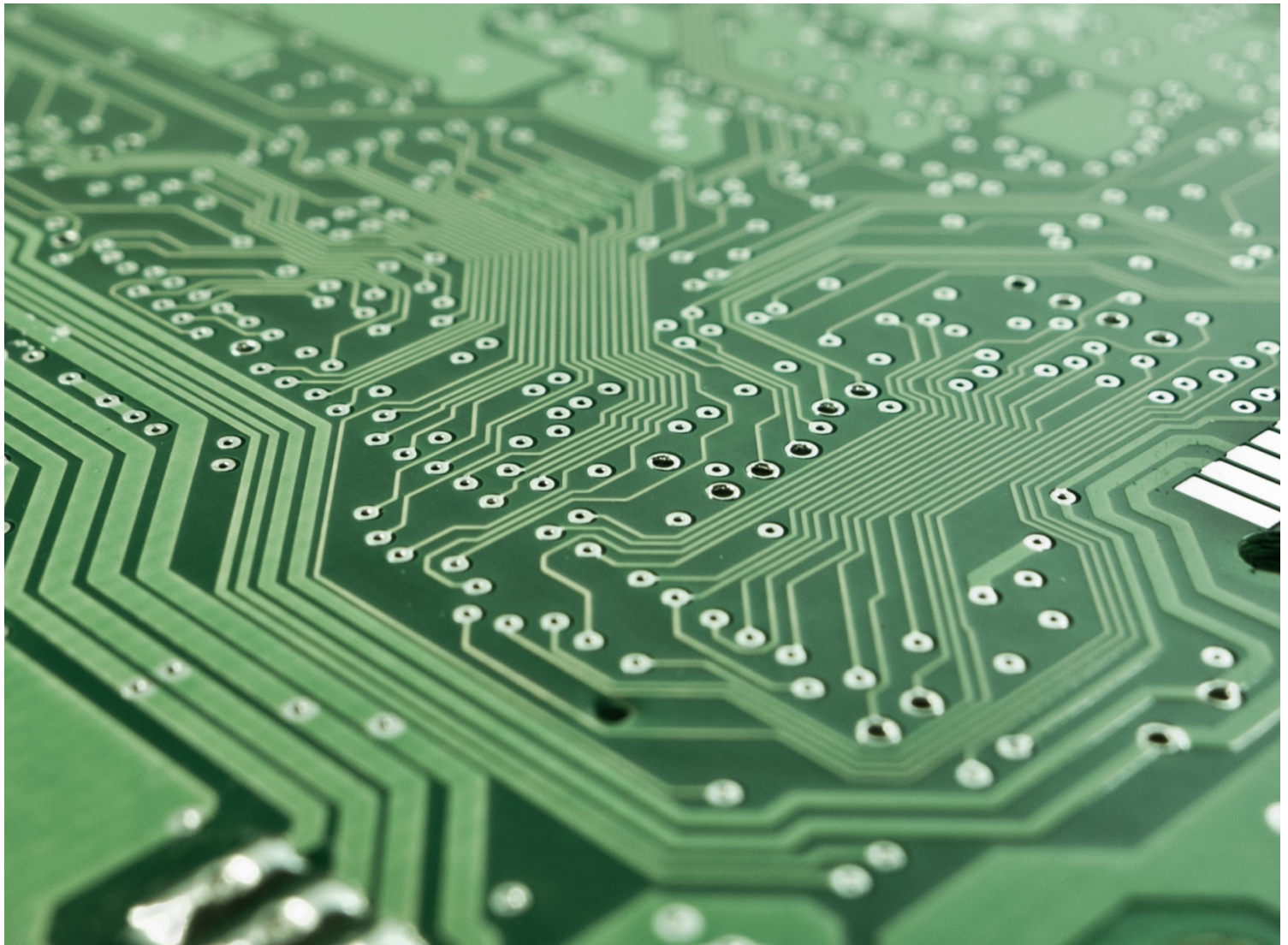


MANAGING DATA

PRACTICE TEST #1

APPLIED INFORMATION TECHNOLOGY UNIT 4



ATAR Survival Guide: Answer Key

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Question 3: Explain the purpose of data warehouses and data marts in relation to businesses and its customers. Include an example where possible. (6 marks)

Question 4: What is the purpose of data mining in relation to business? Include in your answer a few ways to which businesses collect data. (3 marks)

Question 5: John is setting up a small LAN network for his seafood shop in Bunbury. He has heard stories of hacking and DDoS attacks that could disrupt the ICT devices on his network. What are 4 ways John could protect the data on his network? (8 marks)

Question 8: Define a content management system. (2 marks)

Question 9: What is the purpose of the W3C? (2 marks)

Question 10: Dave owns a business that sells coffee. To better understand the needs of his customers he has decided to create an online survey for customers to fill out. What are some validation techniques Dave could use to ensure the accuracy and currency of his information? Provide a brief explanation. (8 marks)

End of Assessment

Answer Key

Question 1: What are the security techniques for managing data? Provide a short explanation for each (4 marks)

- Identifies Disaster Recovery Plan (1 mark)
- Explains a disaster recovery plan – A written or electronic document that outlines the processes to restore business computer operations in the event of a disaster. (1 mark)
- Identifies audit trail
- Explains audit trail – a written or paper log that records the step by step document history of a transaction (1 mark)

Question 2: What are the four types of backup techniques of archiving data? Include a brief explanation for each. (8 marks)

- Identifies Full backup (1 mark)
- Explains full backup – a backup that copies the entire contents, folders and files on a system to an external source. (1 mark)
- Identifies Incremental backup (1 mark)
- Explains incremental backup – a backup that copies all files that have been created or changed since the last full or incremental backup (1 mark)
- Identifies Differential backup (1 mark)
- Explains differential backup – a backup that copies all files that have been created or modified since the last full backup (1 mark)
- Identifies daily backup (1 mark)
- Explains daily backup – a backup that copies all files that have been created or modified on the day of the backup. Daily backups are frequent, performed once a day. (1 mark)

Question 3: Explain the purpose of data warehouses and data marts in relation to businesses and its customers. Include an example where possible. (6 marks)

- Defines data warehouse – a large database that holds all information required to analyse historical and current transactions (1 mark)
- Businesses – managers of data warehouses can access summaries of information as a whole – eg. Summaries about sale volumes (2 marks)
- Customers – access specific data regarding their own historical and current transactions – eg. Data about their most recent credit card transactions (2 marks)
- Defines data mart – a subset of a data warehouse that holds specific information regarding a specific function or operation of a business (1 mark)

Question 4: What is the purpose of data mining in relation to business? Include in your answer a few ways to which businesses collect data. (3 marks)

- Data mining is often collected through various ways such as credit card information, loyalty cards, focus groups, search engine queries and online browser cookies. (1 mark)
- Businesses use this data to generate characteristics of each customer and characteristics of customer groups (1 mark)
- Businesses use this information to better promote products that match a customer's perceived interests, resulting in higher sales (1 mark)

Question 5: John is setting up a small LAN network for his seafood shop in Bunbury. He has heard stories of hacking and DDoS attacks that could disrupt the ICT devices on his network. What are 4 ways John could protect the data on his network? (8 marks)

1 mark for identifying the security technique, 1 mark for further explanation of the security technique.

- Passwords – a combination of characters, digits and/or symbols used in combination with a username, ie an email, to access certain computer resources.
- Firewalls – software or hardware that monitor incoming and outgoing data packets of a network, and rejects any unauthorised data from entering or leaving a network.
- Biometrics – use of unique physical characteristics, ie an eyeball, voice, fingerprint, to act as an unlocking mechanism to access certain computer resources
- Digital signatures – An electronic code, created and authenticated using private and public key encryption, to verify the contents of an electronic document and its sender
- Digital certificates – An electronic passport, that uses private and public key encryption to transmit data securely between a user, computer or business.
- Encryption – the process of encoding a message using algorithms, to allow data to only be read by its sender and its intended recipient. Encryption uses a private key, known only by the sender and intended recipient, and a public key, obtained off the internet.
- Include any other reasonable answers

Question 6: Matt and Melissa are having an argument. Matt says Wikipedia is user generated content while Melissa disagrees. Who is right and why? (3 marks)

- Matt is right (1 mark)
- User generated content is web content that is created by a voluntarily contributor. (1 mark)
- Wikipedia is an open source website that allows users to create, edit and publish their own content – users are not paid therefore it is user generated content (1 mark)
- Accept other reasonable explanations

Question 7: What are 2 advantages and 2 disadvantages of user generated content? (8 marks)

Choose 2 out of the following advantages:

- Advantage 1: Cost savings – businesses do not have to pay employees to produce content.
- Advantage 2: Provides a valuable voice and feedback – critical in decision making processes such as using reviews to determine which restaurant to visit
- Advantage 3: Self policing – voluntary moderators can be appointed to regulate user generated content and remove any inappropriate content such as illegal or offensive content.
- Accept any other reasonable answers

Choose 2 out of the following disadvantages:

- Disadvantage 1: Issues with credibility – user generated content is often made by ordinary people who are not credited and may post content that is logically incorrect. Eg. Wikipedia facts are often an unreliable source as anyone can create the content.
- Disadvantage 2: Bias – user generated content is often bias with a very strong opinion about one side of a topic. Whereas employees could produce more balanced opinions about a topic.
- Disadvantage 3: Confusion over intellectual property – there is often a lot of confusion over who owns UGC, how it can be used and what it can be used for?
- Accept any other reasonable answers

Question 8: Define a content management system. (2 marks)

- A content management system is an online management tool that allows users to create, edit and publish content on the web (1 mark) without any knowledge of development tools or HTML (1 mark)

Question 9: What is the purpose of the W3C? (2 marks)

- The W3C consists of members, a full time employee and the public
- They work together to develop web standards to ensure accessibility and to ensure that the web evolves in one direction rather than multiple directions by rival groups

Question 10: Dave owns a business that sells coffee. To better understand the needs of his customers he has decided to create an online survey for customers to fill out. What are some validation techniques Dave could use to ensure the accuracy and currency of his information? Provide a brief explanation. (8 marks)

- Field Present check – checks if all compulsory fields have been filled out
- Field Length Check – checks if entered fields have not exceeded
- Range check – checks that numbers are in a defined range
- Format check – checks that no digits are entered in character only boxes and vice versa
- Check digit – Checks the validity of code numbers
- CAPTCHA – checks that information is entered by a user not a robot
- Accept any other reasonable answers

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