

Information for Learners

Car sales showrooms sell new and previously owned cars. (Scenario 1). Breakdown recovery services operate fleets of specially engineered vehicles that are able to transport broken down cars and other vehicles from the site of a breakdown to a repair garage or other location. (Scenario 2)

Scenario 1

Indiana Motors is an established business with a car sales showroom that sells between 150 and 300 new and previously owned cars a year. Indiana Motors keeps detailed records of each car it stocks and sells. It also keeps records of the details about each of its customers when they buy a car.

When a customer requests a test drive of a car they are interested in buying, the details of the booking are entered onto an online calendar. This calendar is shared with the sales team who are then responsible for ensuring that a sales person is available to accompany the customer on the test drive.

As part of its marketing, Indiana Motors has a multimedia presentation that plays in a loop in the showroom. The multimedia presentation was created by the Sales Team at Indiana Motors and features many of the cars that are currently on sale in the showroom.

Scenario 2

Safe Breakdown is a breakdown recovery and vehicle repair service that is recommended by Indiana Motors. Safe Breakdown uses technology in all areas of the business and has recently introduced technology into the processes of vehicle tracking and parts tracking in its warehouse.

Safe Breakdown prides itself on how well it looks after its staff and operates a well-resourced headquarters building which includes a canteen and a staff shop. Each member of staff is provided with a payment card that they can use to pay for their purchases. The total cost of all purchases made by the employee is deducted from their wages at the end of each month.

Safe Breakdown handles a large quantity of personal data about clients on a daily basis and must be aware of legal restrictions on how it handles this data.

Dulcie works for Safe Breakdown as a vehicle recovery driver. To support her in her work, Dulcie is provided with a smartphone, which is used to pass on locations of breakdowns if she is out of the building. The Safe Breakdown Acceptable Use Policy states that Dulcie must keep her smartphone switched on and fully charged at all times and she makes sure that she keeps to this rule. Dulcie is also provided with a hands-free headphone set for use with the smartphone.

Preparation

To prepare for the examination, you should research the day-to-day workings of a car sales showroom and a breakdown and repair service.

This should include:

- the use of the hardware and software required to support the business function of the organisations;
- the design and use of forms to capture customer data;
- the benefits to be gained from the use of shared online calendars;
- how multimedia presentations may be used as part of the marketing process;
- the use of technology to track vehicles and stock;
- the use of technology to record purchases made by staff from the canteen and staff shop.

You should also research into:

- means by which data may be protected from accidental loss, and the reasons for doing so;
- moral and legal restrictions on how organisations gather, store and process personal data and how these may be complied with.

Key Information:

Scenario 1

Car sales, Sales team, customers, new and previously owned cars. detailed records, Car Database, Customer Database, Search for when bought cars, Bookings, online calendar, Shared calendar, Multimedia presentation of cars.

Scenario 2

Dulcie, breakdown recovery and vehicle repair service, vehicle tracking, parts tracking. Canteen and a staff shop, staff payment card, purchases deducted from their wages. personal data about clients, Data protection act. Smartphone. Breakdown location, GPS, Acceptable Use Policy, Hands free headphone.

Hardware:

possible hardware – PCs, Tablets, laptops, sensors (tracking cars, GPS, RFID), smartphone

Network: Wired network. Router to access the Internet including a Firewall to protect the network. A Wireless network may be needed for customers who may have phones and tablets. WLAN will need to be encrypted and secured with a password due to confidential information. A server could be used to manage the network databases and security. A media server could be used to stream presentations for the cars.

User security would give different permissions to Managers, staff and customer of what they can do. Read, Read Edit, Full access e.g. create new bookings. Bluetooth for headphones

Input Devices: Keyboard, Mouse, camera, microphone, touch screens, card readers (e.g. smart cards to pay for goods), sensors, accelerometer, GPS, RFID, scanner, digital camera

Output Devices: Monitor(VDU), Laser Printer, headphones, speakers, projector

Software:

Application Software

Database Customers– To keep customer records organised. Benefits – Multi-access to the data within the LAN. Can automatically generate letter and emails (Mail merge) to send to customers following rules about when they buy new cars.

Database Cars - To keep car records organised, allows customers to search for cars.

Features: Provides validation routines. Allows users to search and sort the data. Data can be imported and exported. Data entry forms to enable data to be kept up to date. Automatic generation of reports for performance in the gym. Create graphs and statistics to analyse the performance data.

Spreadsheet – for calculation. For example: wages and sales at the canteen and shop, Calculation for staff income. Profit/loss for the business. Benefits, Accurate calculation. Update automatically, Graphs.

Multimedia presentation: Car information: Animations, video, transitions, interaction, Menu, Sound, Music, voice over.

Diary software – to book test drives for customers. Shared with sales team. Email Reminders, schedule, colour code, sharing, online,

Mapping Software – tracking breakdowns and location of Dulcie

Systems Software

Utilities

Anti-Virus

File management

Data encryption

Backup software

Operating systems:

Windows, Linux, OSX, iOS, Android – to manage the network and computers

Data transfer:

Data Entry: Automatic capture from sensors for vehicle tracking, parts tracking in warehouse.

Data capture online form for customers to book test drives linked to a calendar.

Manual input of new customer and cars and parts

Automatic payment in canteen/shop using RFID (Fobs or smartcards)

Encrypted files of customer information (data protection)

Videos of cars from a camera or on memory sticks.

Music stored on memory stick/external HD

Video/ animation file formats: MP4, AVI, MOV, FLV or SWF

Music Formats: MP3, M4A, AAC

Data Validation: GIGO garbage in garbage out. Need to apply several rules to ensure data is sensible.

e.g. Range check on DOB, Format check on postcode, Character check on name (No numbers),

Data Verification – Double entry of email address or password.

Data Backup: Daily, weekly and backups of the data to ensure against data loss. Yearly archiving of data.

Backup Hardware: Cloud storage, Network attached storage, tape.

Backup stored securely in a fireproof safe or off site.

Communication with sales team via: email, calendar or social media

Diary Management: Coordinating test drives with clients and the sales team. Organising which sessions are allocated to which team member. Promoting the cars through email or letters from the database.

Health and Safety –

Issues – RSI, Visual problems, Muscle problems

Solutions: Regular Breaks away from computer, ergonomic workstation (Chair, foot rests), correct lighting, and eyes level with monitor.

Data Protection – No Exemption in the Garage

Data User – Data processed lawfully, Only relevant to purpose, Only used for specific purpose, Kept only as long as needed, Must be kept secure, Must be accurate and kept up to date, Not transferred outside EU

Data Subject – Know what data is held, See the data (can be a cost), have wrong data changed.

Computer Misuse – Gym must take precautions against Hacking and Viruses

Protection methods: Firewall to Internet, Anti-virus software, and data encryption. Ensure automatic updating to software to prevent vulnerabilities, ensure automatic updates to anti-virus to ensure PC's have the latest definitions. Ensure passwords are secure and complex, passwords not written down

Legal Implications: If your organisation is found to be in breach of the DPA, not only will you incur possible loss of business and brand damage but you could be subject to a penalty from The UK Information Commissioner's Office (ICO). Amongst its powers, the ICO can audit, issue enforcement notices, prosecute and issue fines of up to £500,000 and undertake proceedings that can lead to prison sentences.

Impact on customers: Loss of confidence in Gym, Identity theft, emotional damage

Impact on Sales team: loss of work, prosecution

Impact on Garage: Loss of image, loss of business - income, legal action, increased costs

Acceptable use policy:

Always have phone on, always being tracked. Must have phone charged.

School IT Website	Revision Notes, textbook, past papers
BBC Bitesize	www.bbc.co.uk/bitesize/gcse/ict/
Car database	www.motors.co.uk
Car tracking	http://heavy.com/tech/2016/09/top-best-gps-tracking-devices-for-cars-vehicle-monitoring-obdii-module/ https://www.youtube.com/watch?v=mjPhLukwO4g
Bluetooth headset	http://uk.pcmag.com/headphones-reviews/4561/guide/the-best-bluetooth-headsets-of-2017
RFID	http://www.makeuseof.com/tag/technology-explained-how-do-rfid-tags-work/ https://www.youtube.com/watch?v=CUZvgfAjh0
Online calendars	https://www.youtube.com/watch?v=ml1mCeKG28s
Car multimedia presentations	https://www.youtube.com/watch?v=TXcSmtb0KT4
Data protection act	https://www.youtube.com/watch?v=vHvd6HaPq_s

Components of RFID System (Hardware and Software)



BOOK A TEST DRIVE LIVE ONLINE NOW IN 4 EASY STEPS OR

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Use the form below to book your test drive with instant online confirmation.

Step 1
Vehicle

Step 2
Location & Date

Step 3
Personal Details

Step 4
Confirmation

Complete

Enter your town or postcode

Select a Dealership

- Dealership 1
137.00 miles
- Dealership 2
145.64 miles
- Dealership 3
151.81 miles
- Dealership 4
188.30 miles
- Dealership 5
192.05 miles
- Dealership 6
201.15 miles
- Dealership 7
221.29 miles

Select Date/Time

Dealership 1
Mercedes A Class

October 2013

Mo	Tu	We	Th	Fr	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

08:00 09:00 10:00 11:00 12:00 13:00
14:00 15:00 16:00 17:00 18:00 19:00

TestDrives2U®



First Name

Last Name

Email address

Message

Questions

1. Name 2 input and 2 output devices used by Indiana Motors, explaining the purpose of each.
2. Name one advantage and one disadvantage of using tablets with the customers.
3. Name three video file formats.
4. What is a transitions and effects in a video or presentation?
5. Explain how videos can be optimised for use on the internet?
6. What must the Garage do to comply with the Data Protection Act?
7. What are the implications of a data breach for garage?
8. The computers in Indiana Motors are connected to a LAN (Local area network) managed by a server. What are the benefits of using a LAN?
9. (RFID) could be used to track stock. Describe one advantage and one disadvantage of managing stock in this way.
10. Active GPS trackers are used to track cars. Describe one advantage and one disadvantage of managing cars in this way.
11. Design a Form for customers to complete to be able to book a test drive. Explain what controls are used on the form. Explain what validation rules the computer could apply and why they are important.
12. How would a member of the sales team access the online calendar? What permissions would they need for the calendar?
13. The Garage has a firewall between its LAN and the Internet. Describe the purpose of the firewall.
14. Data transfers are encrypted. What is data encryption and why is it necessary in this case?
15. Anti-Virus software is used within the Gym. Explain why it is essential that virus definitions are updated.
16. Explain what features of Multimedia software make it appropriate for designing a presentation.
17. Explain the advantages of using a shared Calendar for the garage and customers?
18. What is a smartcard? Why are they useful for payment in the cafe?
19. Explain 2 features of presentation software help produce high Multimedia presentations.
20. List one Input and one Output device that can help when designing Multimedia presentations. Give reasons for your answers.
21. What storage device could be used for storing video for the presentation?
22. What different music file types are there?
23. What are the advantages of using online calendars?
24. Why is it important to use high quality video when creating presentations?
25. What is an acceptable use policy and why is it necessary for Dulcie?
26. What is the correct email etiquette for when the garage contacts customers?
27. What features of a spreadsheet can help with staff wages and purchases.
28. How can a database be used to contact customers by letter or email?
29. Explain how the use of ICT by the Garage increases its efficiency as a business
30. Why is a hands-free headphone useful for Dulcie?
31. How can data be protected from accidental loss?
32. What is the difference between moral and legal restrictions?