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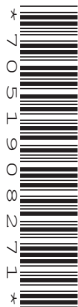
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LEVEL 1/2 CAMBRIDGE NATIONAL IN ICT

R001/01 Understanding Computer Systems

PRE-RELEASE CASE STUDY

JUNE 2018



INSTRUCTIONS TO TEACHERS

- This pre-release material may be given to candidates at any time after receipt by the Centre.

INFORMATION FOR CANDIDATES

- You **must** make yourself familiar with the pre-release material before you take the examination.
- You **must not** take notes into the examination.
- **A clean copy of this pre-release material will be given to you with the question paper.**
- You **must not** take this copy of the pre-release material into the examination.
- This document consists of **4** pages. Any blank pages are indicated.

Information for Learners

Competition between gyms is intense and so individual gyms are always looking for ways in which they can offer higher quality training. One way has been to employ personal trainers who work with individual members to achieve key fitness goals, such as weight loss or training for a particular event. (Scenario 1)

Administration Assistants can be employed to carry out many tasks, usually providing help in many areas within an organisation. They are often so central to the daily work of an organisation that sometimes they could be mistakenly identified as running that organisation on their own. (Scenario 2)

Scenario 1

Maes Knoll Gym is a recently established gym on the outskirts of a large town. There are already three other gyms within a five mile radius. The owner of the Gym is experimenting with ways that she can make her gym more appealing to potential members.

The Gym employs four personal trainers who each work with individual gym members to develop personalised training programmes to achieve specific training goals. Each personal trainer is given a laptop that they can use whilst in the Gym. The personal trainers typically use these to create training programmes with the trainers each being given an individual microphone, linked to their laptop, that they can use to record audio notes on the exercises being completed by gym members during training sessions.

At the moment, each laptop is a stand-alone device and so there is no central storage for the notes and other materials that are created by the personal trainers. Each personal trainer stores the notes and other materials on their own laptop computer. The owner of the Gym is concerned that this data is at risk and is considering different methods that could be introduced to protect this data.

The personal trainers organise group cycle rides around the local area for their clients. Each rider is given a Global Positioning System (GPS) enabled device to record their speed and distance travelled during a ride. This device attaches to a mount on the front of each rider's bike. The data from each device is downloaded by the personal trainers when a ride is completed and posted on a secure area of the Gym's website. Individual riders can use a personal login to access their data from the ride.

One of the personal trainers has been tasked with creating motivational videos. Each week, a new video is recorded and posted on the Gym's website.

Scenario 2

Mandy has just been employed as Administration Assistant at the Gym. As this is a new post, she has been given a budget to buy and install a computer system that meets the needs of her job. Mandy will be responsible for dealing with a number of different projects and so will organise her folder structure on this new computer system accordingly.

One of the first tasks she has been given is to create a system to store records about the members of the Gym. These records will need to be both easy to edit and to search.

The Gym has just employed a new yoga instructor and Mandy has been asked to draft an urgent press release about this new member of staff. This has to be checked by the owner of the Gym, who is currently on holiday in Australia. Once the owner has checked the press release and made any necessary changes, Mandy will have to send it to the local newspaper for publication.

The owner of the Gym wants to organise a meeting between herself and the new yoga instructor. Mandy has been asked to organise a suitable time slot for this meeting and inform both the yoga instructor and the owner of the Gym when and where the meeting will take place. The owner of the Gym has a history of forgetting meetings, so it has been suggested to Mandy that she should do what she can to ensure that the owner attends.

Preparation

In order to prepare for the examination, you should research into the use of technology to aid in the day-to-day work of a personal trainer working in a gym.

This should include:

- the advantages and disadvantages of allowing personal trainers to use mobile devices in a gym;
- a technical understanding of how GPS enabled devices use satellite signals to identify location;
- risks caused by using these devices;
- the hardware and software required to run a GPS tracking system;
- the use of software to keep records about members of a gym.

You should also research into:

- possible impacts should members' personal data be lost;
- how data and devices may be protected;
- methods by which networks may be created;
- how different factors influence the choice of computer systems and the peripheral hardware items that can be added to a computer system.

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