Diploma Programme
Programme du diplôme
Programa del Diploma

Information technology in a global society
Higher level and standard level
Paper 2 – article

Wednesday 7 November 2018 (morning)

1 hour 15 minutes

Instructions to candidates

• Do not open this booklet until instructed to do so.
• This booklet contains the article required for information technology in a global society higher level and standard level paper 2.

4 pages

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Theme: Business and employment

IT system: Digital keys and hotel room booking

Seaview Cottages is a medium-sized hotel business consisting of a main building with 24 rooms and 16 separate cottages, situated in the large grounds of a beachfront property in South Africa. According to Daniel, the owner, the success of the hotel has been largely due to the friendly and personalized service that they offer, as well as the modern facilities and beautiful location, see
5   **Figure 1**.

Figure 1: Beach resort in South Africa

The hotel serves a large number of international guests, who fly in at different times of the day. With the traditional metal key system, staff needed to be at the check-in desk for 24 hours a day, seven days a week to give guests the key to their room. To overcome this, *Seaview Cottages* has recently invested in a new mobile key system, called Digital Keys.

10   Digital Keys is based on a cloud platform. Guests can book via the hotel's website, or they can use well-known hotel booking sites. When they select the booking option, they are required to fill in the details, see **Figure 2**.

**Figure 2: Booking form for Seaview Hotel**   **Figure 3: Confirmation message**

[Sources: Figures 2 and 3 – With permission from LEAPIN Digital Keys
Figure 3 (floor plan) – Courtesy of SmartDraw Software]

Once their payment is approved, the guest will receive an email and a text message (SMS[1])
confirming the booking, with a link to the Digital Keys app[2] which gives instructions on how to

15   locate the room and their digital key, see **Figure 3**. Alternatively, if a guest wishes to make a
booking over the phone, Daniel can enter their details using a tablet and send them the receipt
and link to the Digital Keys app.

Sometimes guests do not book a room before they arrive at the hotel. For these guests, Daniel
has placed a desktop computer at the check-in desk, where they can access the hotel website

20   to book their room.

The Digital Keys technology consists of two parts. The first part is the hardware on the door of
each guest room. The second part is the Digital Keys app, which is used to generate the digital
key which is based on the dates of their stay at the hotel.

Turn over

Figure 4: The Digital Keys app interacting with the hardware in the door
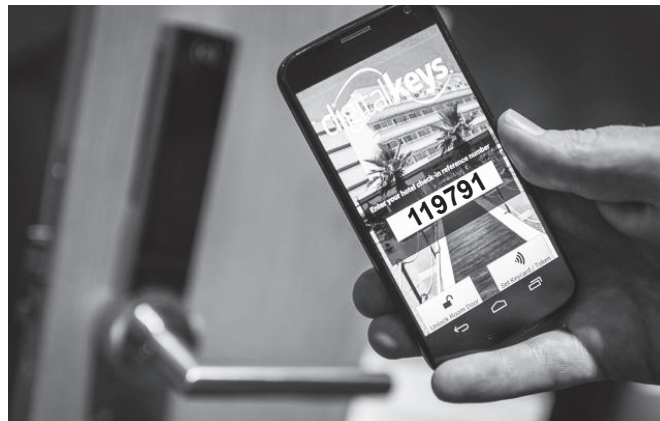
[Source: With permission from LEAPIN Digital Keys]

Once the guests receive the digital key on their smartphones, they need to hold the smartphone
25   close to the door lock and the door will open, see **Figure 4**.

Daniel was surprised at how easy it is to use Digital Keys, and he can already see the cost
savings. He particularly likes the efficient reports that can be generated, showing him room
occupancy and time of check-in. There is even a detailed report which shows every time the digital
key has been used. Using this information, Daniel plans to improve services to guests.

30   The housekeeping function is another feature that Daniel likes. This feature allows the cleaners
limited access to the booking information so that they only know which rooms have to be cleaned.

Daniel does not want the reputation of his company to be damaged by problems linked to the
introduction of new technologies.

[Sources: With permission from LEAPIN Digital Keys]

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1   SMS: Short Message Service
2   app: application software, typically a small, specialized programs downloaded
   onto mobile devices; apps can also run on the internet, on a computer, or on
   a cell/mobile phone or other electronic device