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Diploma Programme
Programme du diplôme
Programa del Diploma

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

19 May 2023

Zone A afternoon | **Zone B** morning | **Zone C** morning

1 hour 15 minutes

Instructions to candidates

- Do not open this booklet until instructed to do so.
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2223 – 9232

3 pages

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Theme: Business and employment, environment, home and leisure

IT system: QR codes, global positioning systems (GPS)

Electric transportation is increasingly becoming part of our lives. With the aim of combatting climate change and improving air quality in cities, more people are choosing to use electric scooters (e-scooters). Companies such as *CityScoots*, who provide e-scooters for hire, can be found in most major cities.

Justine is a new customer with *CityScoots*. Before hiring an e-scooter, she must download the app[1] and complete an online registration form where she provides her bank account details and other information. Once registered, each time she wants to hire an e-scooter she must scan its QR code[2] (see **Figure 1**). At the end of her journey, Justine must leave the scooter and scan the QR code again. This action results in the cost of her journey being deducted from her bank account. The cost of the journey is calculated based on its duration.

Figure 1: The *CityScoots* e-scooter and app

Customers can also use the *CityScoots* app to locate the nearest e-scooter by looking at the map on their cellphone (mobile phone). The app also provides possible routes to reach the e-scooter and its remaining battery life (see **Figure 2**).

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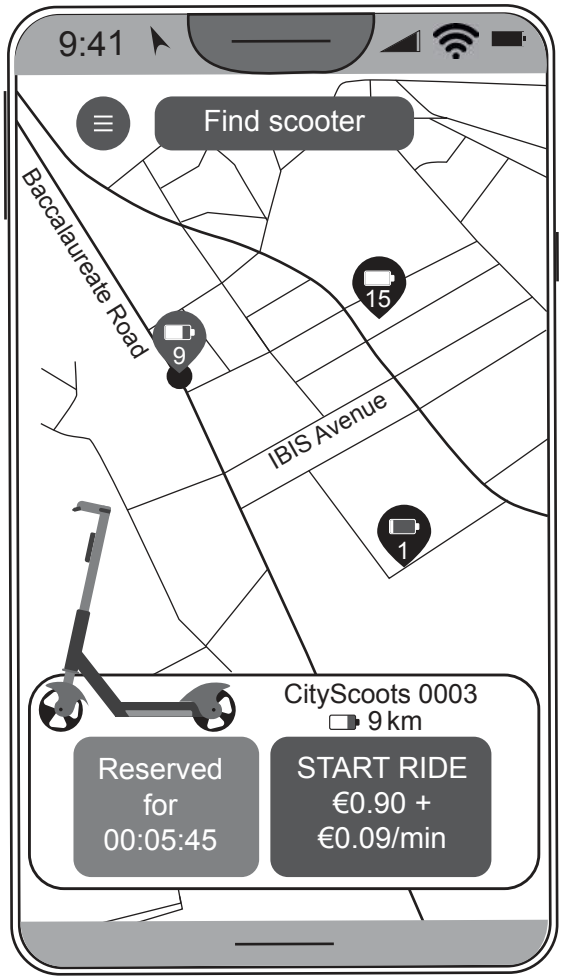
Figure 2: Locating an e-scooter



As e-scooters have become more popular, the number of accidents has increased. In many
15 cases, the scooter rider who caused the accident has not been identified. Some riders just abandon the e-scooter at the side of the road.

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[1] app: small specialized program run on mobile devices, the internet, a computer or other electronic device

[2] QR code: a machine-readable optical label that contains information about the item to which it is attached

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