

1D and 2D barcodes

Background information

Barcodes have lots of uses. Manufacturers and retailers use barcodes to identify their products because they can be read quickly by scanners and the information automatically passed to a central computer system. Reading these barcodes allows shops and manufacturers to keep track of the location and numbers of each of their products. Barcodes are also used by parcel delivery companies to track parcels so they can see where a parcel is located and when it is delivered.



1D barcode



2D barcode or Quick Response (QR) code

Your task

1. Research 1D and 2D barcodes to find out the following:

(Record your responses in the table on the next page).

- a. How 1D and 2D barcodes work
 - b. The advantages and disadvantages of each type of barcode
 - c. The use of each type of barcode
2. Create 1D and 2D barcodes for some products as follows:
 - Choose a shop website and find 7 products they sell. Check that the products you choose have a product code and a unique webpage on the shop's website.
 - Complete the table on the worksheet with the following information:
 - item name
 - product code
 - a 1D barcode for the product code
 - the url of the product webpage
 - a 2D barcode for the product webpage

Useful information

- Use <https://barcode.tec-it.com/en/> to create 1D barcodes
- Use <https://www.qr-code-generator.com/> to create 2D barcodes

Task 1

1D and 2D barcodes research

1D barcode

How a 1D barcode works

Advantages of 1D barcodes

Disadvantages of 1D barcodes

Use of 1D barcodes

Task 1 (continued)

1D and 2D barcodes research

2D barcode

How a 2D barcode works

Advantages of 2D barcodes



Disadvantages of 2D barcodes

Use of 2D barcodes

Task 2

Below is an example of adding a product to the database.

Select seven products from your chosen retailer to create your 1D and 2D barcodes.

Item	Product code	1D Barcode	Website page url	2D Barcode
Input devices	123456QAC	 123456QAC	https://isaacomputerscience.org/concepts/sys_hard_input?examBoard=aqa&stage=gcse	

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