4 A telephone number with 13 characters is input. The first character is a '+', followed by a 2-digit country code, for example:

+20xxxxxxxxxx where 20 is the country code and x is a digit between 0 and 9 inclusive.

The algorithm includes checks for the country codes: 44 for the UK and 20 for Egypt.

(a) Write an algorithm using pseudocode to:

- input the telephone number
- extract the 2-digit country code
- output the matching country
- output 'Unknown' if there is no matching country.

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(b) Explain how you could change the algorithm to repeatedly prompt for the telephone number until the number entered is 13 characters in length.

Any code used must be fully explained.

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