

## Subject type A

### Computer Programming

#### Final Exam - Part II - Programming exercises

**Exercise 1.** Write a program that reads from the standard input 100 integers representing postal codes of letters in a mailbox. An integer value is considered to represent a valid postal code if it has 5 digits. The first 2 digits represent the region; the last 3 digits represent the city/village in that region. The program must count how many different regions appear in the postal codes and how many letters are sent to each region.

Example:

```
24567
21167
24143
```

```
Region 24: 2 letters
Region 21: 1 letter
```

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**Exercise 2.** Write a program that reads a text of several lines until EOF (but not more than 30 lines). Then prints the lines transformed in the way described below.

The lines must be stored into an array of pointers: `char *line[30];`

Write a function that transforms a line (the line is passed as parameter) in the following way:  
if the last bit (least significant bit) of the last character in the line is 0, reverse the characters in that line (a line "one two" is reversed into "owt eno"); else if the last bit is 1, cut the last character off the line (a line "one two" is cut and becomes "one tw").