Exercise 2: NATO Alphabet [50 marks]

Problem Statement

The NATO alphabet is a set of code words assigned to English letters (as shown in Fig. 3) so that letter combinations can be pronounced and understood clearly.

A	B	C	D	E	F	G
ALFA	BRAVO	CHARLIE	DELTA	ECHO	FOXTROT	GOLF
H	I	J	K	L	M	N
HOTEL	INDIA	JULIETT	KILO	LIMA	MIKE	NOVEMBER
O	P	Q	R	S	T	U
OSCAR	PAPA	QUEBEC	ROMEO	SIERRA	TANGO	UNIFORM
V	W	X	Y	Z		
VICTOR	WHISKEY	XRAY	YANKEE	ZULU		

Figure 3. Letters and the assigned code words.

For example, to spell out the letter combination "TAN", instead of saying "T"-"A"-"N", we say "TANGO"-"ALFA"-"NOVEMBER". As another example, we spell out "AARON" as "ALFA"-"ALFA"-"ROMEO"-"OSCAR"-"NOVEMBER" instead of the individual letters.

In this exercise, you are given a string which is (possibly) a name spelt out in NATO alphabet. Your program should decrypt this string to find out what the name is.

Write on the skeleton file **nato.c** given to you. You must include the following function in your program:

- **`int decrypt(char name[])`**
  This function takes in a string **`name`**. It returns 0 if **`name`** cannot be decrypted using NATO alphabet. Otherwise, it returns 1 and the decrypted name in **`name`**.

You may define additional functions as needed. You may assume that the input is at most 100 characters long and contains only uppercase letters. Check sample runs for input and output format. Read the skeleton code for hints.

Sample Runs

Three sample runs are shown below with user input highlighted in **bold**.

```
Enter name in NATO alphabet: JULIETT
Decrypted name: J
```

```
Enter name in NATO alphabet: PANDAPO
The given name cannot be decrypted.
```

```
Enter name in NATO alphabet: ALFAALFAROMEOOSCARNOVEMBER
Decrypted name: AARON
```