

Used Car Sale

Andy Crane

Difficulty: Difficult

IS CHANGE FINAL	
Year	1992
Model	Audi
Color	Silver
Condition	Great
Price	\$1534
Mileage	160K
Features	4WD, Cruise control
Seller	Iris Stevenson

WE KOSHER SEVEN	
Year	1998
Model	Lexus
Color	Black
Condition	Poor
Price	\$7142
Mileage	121K
Features	Remote entry, 2 door
Seller	Waylon Erikson

AT CENTRAL CONTROL	
Year	1988
Model	Porsche
Color	Silver
Condition	Perfect
Price	\$38213
Mileage	11K
Features	Convertible, Manual, CD player, Leather seats
Seller	Al Thompson

SO CLUNKY FRONT	
Year	1992
Model	Subaru
Color	White
Condition	Fair
Price	\$1658
Mileage	284K
Features	4WD, Sunroof
Seller	Sheldon Oliver

DA MONKEY ROUND	
Year	1995
Model	Corvette
Color	Beige
Condition	Fair
Price	\$8489
Mileage	128K
Features	Sunroof, CD player
Seller	Donnie Anderson

MY DINGBAT LILAC	
Year	2004
Model	BMW
Color	Red
Condition	Great
Price	\$58480
Mileage	19K
Features	Heated seats, Cruise control
Seller	Mary Yarbough

NO DIRECT LOCAL	
Year	2001
Model	Acura
Color	Silver
Condition	Great
Price	\$2253
Mileage	71K
Features	Heated seats, CD player
Seller	Noel Ogden

AN OBLONG SOUND	
Year	1991
Model	Corvette
Color	Beige
Condition	Fair
Price	\$9501
Mileage	344K
Features	Remote entry, CD player
Seller	Alison Nichols

?? ?????? ????????	
Year	2001
Model	Audi
Color	Red
Condition	Great
Price	\$39903
Mileage	20K
Features	Convertible, 2 door, 4WD, Leather seats, sunroof, CD player
Seller	Louis Emond

IF GRAMPA SCORED	
Year	1993
Model	Porsche
Color	Beige
Condition	Poor
Price	\$4498
Mileage	390K
Features	Manual, Remote entry, CD player
Seller	Ira Fairfield

BY TRIBAL COUNCIL	
Year	2004
Model	Acura
Color	Silver
Condition	Excellent
Price	\$13294
Mileage	11K
Features	Manual, CD player, Leather seats, SUV
Seller	Betty York

You receive a whole bunch of used car listings, and each one has a mysterious code phrase at the top, except for the final listing which just has a bunch of question marks. The code word that should go here is the solution.

The phrase in front of each car description corresponds to the attributes of the car listing. We want to find the missing phrase corresponding to the last car.

The first thing to notice is the initials of the person selling the car give the first of the three words. After this, it helps to make up a spreadsheet with each of the listings and see what similar listings have in common among the code words.

The second word is entirely numbers, using a base 26 format with the letters (A = 0, B = 1, ... BA = 26, BB = 27, ..., BAA = $26^2 = 676$). The first 3 characters (or 4 if that word is 7 letters long) correspond to the price, the next is the year (counting backwards from the current year), and the final 2 are the miles (in 1000s).

The third word consists of the non-numeric attributes of the car. The final character is the color (L = silver, T = white, D = Beige, N = Black, C = Red). The next to last character is condition (A = Great, N = Fair, E = poor, I = Excellent, O = Perfect). The third to last character is make of the car (C = Acura, N = Audi, L = BMW, U = Corvette, V = Lexus, R = Porsche, O = Subaru). All remaining characters at the start of the final word correspond to the attributes. (S = Remote, O = CD, U = SUV, C = Manual, N = Leather seats, L = Heated seats, I = Cruise control, T = Convertible, F = 4WD, E = 2 door, R = Sunroof). The ordering of the letters is consistent and there are enough data points to find the characteristics corresponding to the final car listing.

Putting it all together for the car listing with the missing code phrase:

LE = Louis Emonds

CHAT = \$39903

E = 2001

AU = 20K miles

FRONTE = 4wd, sunroof, CD, leather seats, convertible, 2 door

NAC = Audi, great condition, red

LE CHATEAU FRONTENAC

HINTS:

- Numbers can be represented several different ways. For example, 2000 could be written as CYY, AC, or F.
- The second code word corresponds to all numbers.
- A = 0, B = 1, C = 2, ... AA = 26, AB = 27, ... AAA = 676