

HASH Function:

- convert the 3 char's to their 3 ASCII codes
(giving 3 int's, all between 65 to 90, inclusive)
- multiply those 3 numbers together
(giving a number between $65*65*65=274,625$ through $90*90*90=729,000$)
- use the famous "division-remainder" algorithm to get homeAddress
(i.e., use the remainder **(the % operator)** from dividing step #2 result by MAX_N_HOME_LOC)
(giving a number between 0 and MAX_N_HOME_LOC – 1, inclusive)
- return that as the homeAddress

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

Country Code	DRP (not ID)	3 ASCII codes	Multiplied together	Home Address
MEX	12	77 * 69 * 88	467,544	4
CHN	23	67 * 72 * 78	376,272	12
JPN	13			0
USA	6			15
FRA	19			0
BEL	27			4
GBR	2			12
HTI	9			4
VEN	14			12
NIC	10			18
POL	20			0
YEM	30			17
EGY	1			11
LBN	3			8
IND	15			12
OMN	16			14
DEU	24			0
SOM	11			9
WSM	7			17
KEN	17			10
XVI	4			4
QAT	5			0
ZWE	18			10
RUS	8			10
TCA	29			0
ATA	21			0

This structure is NOT in memory – it's just a worksheet to determine HOME ADDRESS (based on HashFunction)