Arbitrary Mapping Algorithm

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Introduction

Arbitrary Mapping Algorithm is a program to sort array values in a random order that is impossible to track using any logical procedure.

Background idea!

Not everything we do is logical. For example, your friend asked you to buy him a water bottle. You went to a shop and there are multiple same brand water bottles in a single row. What will you do? My guess is you will pick it randomly. Or let's think about a lottery draw, how they choose the winner? Random! So why not make our computer act like same we do. Computers are supposed to do most human work to make our life easier and this algorithm serves one of those purposes.

Implementation using java

```
1   Public static int[] MapArray ( int[] list ) {
2   int dataQuantity = list.length;
3   final int RANDOM_CONSTANT = (int)(Math.random()*dataQuantity);
4   int[] map = new int[dataQuantity];
5
6   for (int i=0; i<map.length; i++)
7   {
8   map [i] = 000;
9   }
10
11  for (int i=0; i<map.length; i++){
12  int index = (i+RANDOM_CONSTANT)%dataQuantity;
13  map [index] = list [i];
14  }
15  return map;
16  }//End MapArray
```

Implementation Analysis

Step 1: Store the list length into a variable

Step 2: Generate a random number (Range: minimum 0 to maximum step 1)

Step 3: Create a new array (Same size as the received list) and initialize it

Step 4: Create a for / while loop

for (int i=0; i<map.length; i++)

Step 5: Inside the loop - create random index on each iteration

int index = (i + step 2) % step 1;

Step 6: Inside the loop - assign the value of list [i] into map [step 5]

Map [step 5] = list [i];

Step 7: Return the new generated array