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Hi Kerri, I have found your contact from one of my friends, Do you have job openings for HireArt or Scale AI for a coding Specialist? I am looking for a job, and I have experience in.....

Assessment Question:

Question 1:

Two children, Jack and Mary, have devised an intriguing game. In this game, Jack sends a message to Mary. He ingeniously encodes the message in a manner that only Mary can decipher. He achieves this by reversing the letters within each word of the message. (However, each word stays in its original position). Additionally, he optionally adds one or more spaces at the message's beginning, end, and between each pair of words.

Put yourself in Mary's shoes. You have just received the encoded string and your mission is to decode it. Your task involves reversing each word, eliminating any unnecessary spaces at the beginning and end of the message, and ensuring that there is a maximum of only one space between any two words. Your final objective is to return the decoded string. Write the decode_message function that does this.

Example 1

Input: encoded_str = " olleH | epoh uoy era gniod llew"

Output: "Hello I hope you are doing well"

Example 2

Input: encoded_str = "ssendoog"

Question 2:

A group of n children is playing a game in which they are standing in a straight line. Each child has a hoop on the floor to stand in.

There are exactly as many hoops as children, hence n in total. On their shirts, each child has a number.

The game starts when the captain calls out a random number k.

Each child then moves to the next hoop on their right, wrapping around to the leftmost hoop when they reach the rightmost hoop.

This process is repeated k times.

Your task is to simulate this game by writing the function `rotateArray`. As input, you are given the number of children n, the value of k, and an array arr containing the numbers written on the children's shirts in their original order from left to right. The function must return an array containing the new arrangement of the children after they have completed the moves. Example 1
Input:

- n=5
- k=2
- arr = 12345

Output:

- 45123

Explanation:

- The value of k is 2, so each child moves 2 positions to the right in the line. The first child with number 1 moves to the position of number 3, the second child with number 2 moves to the position of number 4, and so on. The last two children with numbers 4 and 5 "go off" at the right end of the line and reappear at the left end in positions 1 and 2, respectively. Example 2

Input:

- n=3
- k = 1
- Arr = 8 9 10

Output:

- 10 8 9

Interview Questions:

Question 1:

We are in a flower garden. The garden is represented as a collection of flame names. We are trying to keep similar flowers close together, and we went to see what the farthest apart pair of

the same flower are. Write a function that takes in a garden and returns the longest distance between any two flowers of the same type If no such distance exists, return -1.

Example:

Garden: | Ivy | Rue | Ivy | Yew | Rue | Dock | Iris | Rue | Lily |

Positions: 0 1 2 3 4 5 6 7 8

The longest distance is between Rue (position 1 and position 7), resulting in distance 6.

Test cases: garden_1 = ["Ivy", "Rue", "Ivy", "Yew", "Rue", "Dock", "Iris",
"Rue", "Lily"] garden 2 = ["Rose"] garden_3 = ["Ivy", "Rue", "Yew", "Arun",
"Dock", "Iris", "Lily", "Reed", "Rose"]
garden 4 = ["Sage", "Rose", "Sage", "Reed", "Sage", "Lily", "Sage", "Iris", "Dock", "Sage",
"Yew", "Rue",
' , "Ivy"]
garden_5 = ["Dock", "Arum", "Yew", "Rue", "Ivy", "Ivy", "Rue", "Yew", "Arum", "Dock", "Iris",
"Lily", "Reed", "Rose", "Sage", "Dock"] garden_6 = ["Rose",
"Rose", "Rose", "Rose", "Rose"] garden_7 = ['Iris',
"Iris"]
max_distance (garden_1) => 6
max_distance (garden 2) => -1
max distance (garden _3) => -1

```
package FlowerMaximumDistance;
```

```
import java.util.HashMap;
import java.util.Map;

public class FlowerMaximumDistance {
    public static int maxDistance(String [] garden){
        Map<String, Integer> mapofGarden=new HashMap<>();
        int i=0;
        int maxDistance=-1;
        for(String s: garden){

            if(mapofGarden.containsKey(s)){
                int difference= i-mapofGarden.get(s);
                if(maxDistance<difference)
                    maxDistance=difference;
                i++;
                continue;
            }
            mapofGarden.put(s,i);
            i++;

        }

    }
}
```

```

        return maxDistance;
    }

    public static void main(String[] args) {
        String[] garden1={"Ivy", "Rue", "Ivy", "Yen"
                        , "Rue", "Dock"
                        , "Iras",
                        "Rue", "Lay"};
        String[] garden2={"Rose"};
        System.out.println(maxDistance(garden1));
        System.out.println(maxDistance(garden2));
    }
}

```

Question 2:

You are going on a camping trip, but before you leave you need to buy groceries. To optimize your time spent in the store, instead of buying the items from your shopping list in order, you plan to buy everything you need from one department before moving to the next.

Given an unsorted list of products with their departments and a shopping list, return the time saved in terms of the number of department visits eliminated.

Example:

```

products = [
    ["Cheese",      "Dairy"],
    ["Carrots",     "Produce"],
    ["Potatoes",    "Produce"],
    ["Canned Tuna", "Pantry"],
    ["Romaine Lettuce", "Produce"],
    ["Chocolate Milk", "Dairy"],
    ["Flour",       "Pantry"],
    ["Iceberg Lettuce", "Produce"],
    ["Coffee",      "Pantry"],
    ["Pasta",       "Pantry"],
    ["Milk",        "Dairy"],
    ["Blueberries", "Produce"],
    ["Pasta Sauce", "Pantry"]
]

```

```
list1 = ["Blueberries", "Milk", "Coffee", "Flour", "Cheese", "Carrots"]
```

For example, buying the items from list1 in order would take 5 department visits, whereas your method would lead to only visiting 3 departments, a difference of 2 departments.

Produce(Blueberries)->Dairy(Milk)->Pantry(Coffee/Flour)->Dairy(Cheese)->Produce(Carrots) = 5 department visits

New: Produce(Blueberries/Carrots)->Pantry(Coffee/Flour)->Dairy(Milk/Cheese) = 3 department visits

```
list2 = ["Blueberries", "Carrots", "Coffee", "Milk", "Flour", "Cheese"] => 2
```

```
list3 = ["Blueberries", "Carrots", "Romaine Lettuce", "Iceberg Lettuce"] =>
```

```
0 list4 = ["Milk", "Flour", "Chocolate Milk", "Pasta Sauce"] => 2 list5 =
```

```
["Cheese", "Potatoes", "Blueberries", "Canned Tuna"] => 0
```

All Test Cases:

```
shopping(products, list1) => 2
```

```
shopping(products, list2) => 2
```

```
shopping(products, list3) => 0
```

```
shopping(products, list4) => 2
```

```
shopping(products, list5) => 0
```

Complexity Variable:

n: number of products

```
package Shopping;

import java.util.*;

public class Shopping1 { public static int shopping(String[][] products,
String[] shoppingList) {
    Map<String, String> productMap= new HashMap<>();
    for(String [] product: products) {
        String item= product[0] ;
        String department=product[1];
        productMap.put(item,department);
    }

    int needTovisit=0;

    Set<String> visitedDepartment= new HashSet<>();
    String lastvisitedDepartment=null;
```

```

        for(String itemToPurchase: shoppingList) {
            if(productMap.containsKey(itemToPurchase)){
                visitedDepartment.add(productMap.get(itemToPurchase));
            }

            if(!productMap.get(itemToPurchase).equals(lastvisitedDepartment)){
                needTovisit++;
            }
            lastvisitedDepartment=productMap.get(itemToPurchase);
        }
        return needTovisit-visitedDepartment.size() ;
    }

    public static void main(String[] args) {

        String[][] products = {
            {"Cheese", "Dairy"}, {"Carrots", "Produce"}, {"Potatoes", "Produce"}, {"Canned Tuna", "Pantry"}, {"Romaine Lettuce", "Produce"}, {"Chocolate Milk", "Dairy"}, {"Flour", "Pantry"}, {"Iceberg Lettuce", "Produce"}, {"Coffee", "Pantry"}, {"Pasta", "Pantry"}, {"Milk", "Dairy"}, {"Blueberries", "Produce"}, {"Pasta Sauce", "Pantry"}};

        String [] list1 = {"Blueberries", "Milk", "Coffee", "Flour", "Cheese", "Carrots"};
        String[] list2 = {"Blueberries", "Carrots", "Coffee", "Milk", "Flour", "Cheese"};
        String[] list3 = {"Blueberries", "Carrots", "Romaine Lettuce", "Iceberg Lettuce"};
    }
}

```

```

        String[] list4 = {"Milk", "Flour", "Chocolate Milk", "Pasta Sauce"};
        String[] list5 = {"Cheese", "Potatoes", "Blueberries", "Canned Tuna"};
        System.out.println(shopping(products, list1));
        System.out.println(shopping(products, list2));
        System.out.println(shopping(products, list3));
        System.out.println(shopping(products, list4));
        System.out.println(shopping(products, list5));
    }
}

```

Question 3:

We are working on a security system for a badged-access room in our company's building.

Given an ordered list of employees who used their badge to enter or exit the room, write a function that returns two collections:

All employees who didn't use their badge while exiting the room they recorded an enter without a matching exit (All employees are required to leave the room before the log ends.)

All employees who didn't use their badge while entering the room they recorded an exit without a matching enter. (The room is empty when the log begins.)

9 18 Each collection should contain no duplicates, regardless of how many times a given employee matches the criteria for belonging to it.

records = {

```

    {"Paul", "enter"},
    {"Pauline", "exit"},
    {"Paul", "enter"},
    {"Paul", "exit"},
    {"Martha", "exit"},
    {"Joe", "enter"},
    {"Martha", "enter"},
    {"Steve", "enter"},
    {"Martha", "exit"},
    {"Jennifer", "enter"},
    {"Joe", "enter"},
    {"Curtis", "exit"},
    {"Curtis", "enter"},
    {"Joe", "exit"},
```

```
{"Martha", "enter"},  
 {"Martha", "exit"},  
 {"Jennifer", "exit"},  
 {"Joe", "enter"},  
 {"Joe", "enter"},  
 {"Martha", "exit"},  
 {"Joe", "exit"},  
 {"Joe", "exit"}  
}
```

Expected Output: [[Paul, Steve, Curtis, Joe], [Pauline, Martha, Curtis, Joe]]

```
records1={  
    {"Paul", "enter"},  
    {"Paul", "exit"}  
}
```

Expected Output: [[], []]

```
records2={  
    {"Paul", "enter"},  
    {"Paul", "enter"},  
    {"Paul", "exit"},  
    {"Paul", "exit"}  
}
```

Expected Output: [[Paul], [Paul]]

```
records3={  
    {"Raj", "enter"},  
    {"Paul", "enter"},  
    {"Paul", "exit"},  
    {"Paul", "exit"},  
    {"Paul", "enter"},  
    {"Raj", "enter"}  
}
```

Expected Output: [[Raj, Paul], [Paul]]

```
package EmployeeEnterExit;

import java.util.*;

public class EmployeeEnterExit {

    public static List<List<String>> listOfEmployees(String[][] records) {
        List<List<String>> result = new ArrayList<>();
        List<String> exitRecords = new ArrayList<>();
        List<String> entryRecords = new ArrayList<>();
        Set<String> recordChecker = new HashSet<>();
        for (String s[] : records) {
            String name = s[0];
            String status = s[1];

            if (status.equals("enter")) {
                if (recordChecker.contains(name)) {
                    entryRecords.add(name);
                    exitRecords.remove(name);
                }
            } else {
                entryRecords.add(name);
                recordChecker.add(name);
            }
        } else if (status.equals("exit")) {
            if (recordChecker.contains(name)) {
                entryRecords.remove(name);
                recordChecker.remove(name);
            }
        } else{
            exitRecords.add(name);
        }

    }
    result.add(removeDuplicates(entryRecords));
    result.add(removeDuplicates(exitRecords));
    return result;
}
```

```
public static List<String> removeDuplicates(List<String>
    duplicateStrings) {
    List<String> nonDuplicateString= new ArrayList<>();
    for(String s: duplicateStrings) {
        if(!nonDuplicateString.contains(s)) {
            nonDuplicateString.add(s);
        }
    }
    return nonDuplicateString;
}

public static void main(String[] args) {
    String[][] records = {

        {"Paul", "enter"},  

        {"Pauline", "exit"},  

        {"Paul", "enter"},  

        {"Paul", "exit"},  

        {"Martha", "exit"},  

        {"Joe", "enter"},  

        {"Martha", "enter"},  

        {"Steve", "enter"},  

        {"Martha", "exit"},  

        {"Jennifer", "enter"},  

        {"Joe", "enter"},  

        {"Curtis", "exit"},  

        {"Curtis", "enter"},  

        {"Joe", "exit"},  

    };
}
```

```

        {"Martha", "enter"},  

        {"Martha", "exit"},  

        {"Jennifer", "exit"},  

        {"Joe", "enter"},  

        {"Joe", "enter"},  

        {"Martha", "exit"},  

        {"Joe", "exit"},  

        {"Joe", "exit"}  
  

    };  

String[][] records1={  

    {"Paul", "enter"},  

    {"Paul", "exit"}  

};  
  

String[][] records2={  

    {"Paul", "enter"},  

    {"Paul", "enter"},  

    {"Paul", "exit"},  

    {"Paul", "exit"}  

};  
  

String[][] records3={  

    {"Raj", "enter"},  

    {"Paul", "enter"},  

    {"Paul", "exit"},  

    {"Paul", "exit"},  

    {"Paul", "enter"},  

    {"Raj", "enter"}  

};  
  

    System.out.println(listOfEmployees(records));  

    System.out.println(listOfEmployees(records1));  

    System.out.println(listOfEmployees(records2));  

    System.out.println(listOfEmployees(records3));  

}
}

```

Question 4:

You are working on a logic game made up of a series of puzzles. The first type of puzzle you settle on is "sub-Sudoku", a game where the player has to position the numbers 1..N on an NN matrix.

Your job is to write a function that, given an NxN matrix, returns true if every row and column contains the numbers 1..N

The UI for the game does not do any validation on the numbers the player enters, so the matrix can contain any signed integer.

```
grid1 = [[2, 3, 1],  
[1, 2, 3], [3, 1,  
2]] numbers  
1,2,3)  
-> True (A grid of size 3: every row and column contains the
```

```
grid2 = [[1, 2, 3],  
[3, 2, 1],  
[3, 1, 2]] contain the numbers  
1,2 and 3.  
-> False (The first column is missing the value 2. It should  
Similarly, the second column is missing the value
```

Question 5:

```
1 /*
2 You are with your friends in a castle, where there are multiple rooms named
3 after flowers. Some of the rooms contain treasures - we call them the
4 treasure rooms.
5
6 Each room contains a single instruction that tells you which room to go to
7 next.
8
9 *** instructions_1 and treasure_rooms_1 ***
10
11 lily* ----- daisy sunflower
12           |     |   |
13           v     v   v
14 jasmin --> tulip* violet* ----> rose* -->
15           ^     |     ^
16           |     |     |
17           ----- iris -----
```

16 * denotes a treasure room, e.g., rose is a treasure room, but jasmin isn't.

17

18 This is given as a list of pairs of (source_room, destination_room)

19

```
20 instructions_1 = [
21     ["jasmin", "tulip"],
22     ["lily", "tulip"],
23     ["tulip", "tulip"],
24     ["rose", "rose"],
25     ["violet", "rose"],
26     ["sunflower", "violet"],
27     ["daisy", "violet"],
28     ["iris", "violet"]
```

```
-- ]
29 ]
30
31 treasure_rooms_1 = ["lily", "tulip", "violet", "rose"]
32
33 Write a function that takes two parameters as input:
34 * a list containing the treasure rooms, and
35 * a list of instructions represented as pairs of (source_room,
36   destination_room)
37 and returns a collection of all the rooms that satisfy the following two
38 conditions:
39 * at least two *other* rooms have instructions pointing to this room
40 * this room's instruction immediately points to a treasure room
41
42 filter_rooms(instructions_1, treasure_rooms_1) => ["tulip", "violet"]
43 * tulip can be accessed from rooms lily and jasmin. Tulip's instruction
44   points to a treasure room (tulip itself)
45 * violet can be accessed from daisy, sunflower and iris. Violet's instruction
46   points to a treasure room (rose)
47
48 Additional inputs
49
50 treasure_rooms_2 = ["lily", "jasmin", "violet"]
51
52 filter_rooms(instructions_1, treasure_rooms_2) => []
53 * none of the rooms reachable from tulip or violet are treasure rooms
54
55 *** instructions_2 and treasure_rooms_3 ***
56
```

```

53 *** instructions_2 and treasure_rooms_3 ***
54
55 lily -----      -----
56      |          |
57      v          v   |
58 jasmin --> tulip ---> violet*--^
59
60 instructions_2 = [
61     ["jasmin", "tulip"],
62     ["lily", "tulip"],
63     ["tulip", "violet"],
64     ["violet", "violet"]
65 ]
66
67 treasure_rooms_3 = ["violet"]
68
69 filter_rooms(instructions_2, treasure_rooms_3) => [tulip]
70 * tulip can be accessed from rooms lily and jasmin. Tulip's instruction
    points to a treasure room (violet)
71
72 All the test cases:
73 filter_rooms(instructions_1, treasure_rooms_1)      => ["tulip", "violet"]
74 filter_rooms(instructions_1, treasure_rooms_2)      => []
75 filter_rooms(instructions_2, treasure_rooms_3)      => [tulip]
76
77 Complexity Analysis variables:
78 T: number of treasure rooms
79 I: number of instructions given
80 */

```

```

import java.util.*;

public class CastleTreasureFinder {

    public static List<String> filterRooms(String[][] instructions, String[] treasureRoom) {
        // Map to hold the count of incoming instructions for each room

        List<String> treasureRooms= Arrays.asList(treasureRoom);
        Map<String, Integer> incomingCount = new HashMap<>();
        Map<String, String> immediateDestination = new HashMap<>();

        for (String[] instruction : instructions) {
            String source = instruction[0];

```

```
String destination = instruction[1];
immediateDestination.put(source, destination);
if(!source.equals(destination))
    incomingCount.put(destination,
incomingCount.getOrDefault(destination, 0) + 1);
```

```

}

List<String> validRooms = new ArrayList<>();

for (String room : incomingCount.keySet()) {

    if(incomingCount.containsKey(room)) {
        if (incomingCount.get(room) >= 2) {
            if (treasureRooms.contains(immediateDestination.get(room))) {
                validRooms.add(room);
            }
        }
    }
}

return validRooms;
}

public static void main(String[] args) {
    String[][] instructions1= {{"jasmin", "tulip"},  

    {"lily","tulip"},  

    {"tulip","tulip"},  

    {"rose", "rose"},  

    {"violet", "rose"},  

    {"daisy", "violet"},  

    {"iris", "violet"}};

    String [][] instruction2={  

        {"jasmin","tulip"},  

        {"lily","tulip"},  

        {"tulip", "violet"},  

        {"violet", "violet"}  

    };

    String [] treasureRooms={"lily", "tulip", "violet", "rose"};  

    String[] tressureRoom2={"lily","jasmine","violet"};  

    String[] treasureRoom3= {"violet"};  

  

    System.out.println(filterRooms(instructions1,treasureRooms));
    System.out.println(filterRooms(instructions1,tressureRoom2));
    System.out.println(filterRooms(instruction2,treasureRoom3));
}
}

```

Question 6:

```
1 /*
2 We are developing a new board game, Thrilling Teleporters.
3
4 The board consists of consecutive squares from 0 to last_square, some of the spaces also contain Teleporters, which are given
5 as comma delimited strings "from,to".
6
7 The game is played as follows:
8 1. Each turn, the player rolls a die numbered from 1 to die_sides.
9 2. The player moves forward the rolled number of squares.
10 3. The player stops at last_square if they reach it.
11 4. If the player finishes on a square with a teleporter, they are moved to where the teleporter points.
12
13 Note: Only one teleporter is followed per turn.
14 A sample board with last_square 20 the following teleporters might look like this conceptually.
15 teleports1 = ["3,1", "4,2", "5,10"]
16
17     +---+
18     v   |
19 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
20     ^   |   ^
21     +---+ +-----+
22
23 Write a function that returns a collection of the possible squares a player can move to in a single turn, given the following
24 inputs:
25 - A collection of teleporter strings
26 - The number of sides on the die
27 - The square the player starts on
28
29 Example:
30 With a 6-sided die, starting at square 0 with a board ending at square 20 (as pictured above)
31
32 Rolling a 1, 2 or 6 have no teleporters so they end at that square.
33 Rolling a 3 goes to 1, rolling a 4 goes to 2, rolling a 5 goes to 10.
34 The possible outcomes are, in order of die roll, are [1, 2, 1, 2, 10, 6].
35 If we remove the duplicates, the answer is [1, 2, 10, 6]
36 destinations(teleports1, 6, 0, 20) => [1, 2, 10, 6]
37
38 Additional Inputs:
39 teleports2 = ["5,10", "6,22", "39,40", "40,49", "47,29"]
40 teleports3 = ["6,18", "36,26", "41,21", "49,55", "54,52",
41             "71,58", "74,77", "78,76", "80,73", "92,85"]
42 teleports4 = ["97,93", "99,81", "36,33", "92,59", "17,3",
43             "82,75", "4,1", "84,79", "54,4", "88,53",
44             "91,37", "60,57", "61,7", "62,51", "31,19"]
45 teleports5 = ["3,8", "8,9", "9,3"]
46
47 Complexity Variable:
48 B = size of the board
49 Note: The number of teleporters, T, and the size of the die, D, are bounded by B.
50
51 All Test Cases:
52 (output can be in any order)
53
54         "91,37", "60,57", "61,7", "62,51", "31,19"};
55     String [] teleports5 = {"3,8", "8,9", "9,3"};
56 }
57 }
```

Question 7:

-Sapkota

remotedesktop.google.com/access/session/c0e71ae4-b11a-2f73-aeb4-a740effc1e87

Reminder: Your Scale AI interview | Karat^

x Karat^ | Scale AI Interview

karatstudio.karat.io/interview/f8492ebf-c2cb-451e-aec5-05dbc5cc228c/candidate?um=true

Run Ctrl + enter

LANGUAGE: Java THEME: Light AUTO BRACKETS: Auto ON FONT: Medium

1 /*

2 You are a developer for a university. Your current project is to develop a system for students to find courses they share with friends. The university has a system for querying courses students are enrolled in, returned as a list of (ID, course) pairs.

3

4 Write a function that takes in a collection of (student ID number, course name) pairs and returns, for every pair of students, a collection of all courses they share.

5

6

7 Sample Input:

8

9 enrollments1 = [

10 ["58", "Linear Algebra"],

11 ["94", "Art History"],

12 ["94", "Operating Systems"],

13 ["17", "Software Design"],

14 ["58", "Mechanics"],

15 ["58", "Economics"],

16 ["17", "Linear Algebra"],

17 ["17", "Political Science"],

18 ["94", "Economics"],

19 ["25", "Economics"],

20 ["58", "Software Design"],

21]

22

23 Sample Output (pseudocode, in any order):

Type here to search

Search

sb-Sapkota

remotedesktop.google.com/access/session/c0e71ae4-b11a-2f73-aeb4-a740effc1e87

Reminder: Your Scale AI interview is scheduled for 10:00 AM UTC on May 22, 2024.

Karat^ | Scale AI Interview

karatstudio.karat.io/interview/f8492ebf-c2cb-451e-aec5-05dbc5cc228c/candidate?

Run Ctrl + enter ⏪ ⏩ LANGUAGE: Java THEME: Light AUTO BRACK:

```
110     \ 23, "Economics"),
111     {"58", "Software Design"}
112 };
113
114 String[][] enrollments2 = {
115     {"0", "Advanced Mechanics"},
116     {"0", "Art History"},
117     {"1", "Course 1"},
118     {"1", "Course 2"},
119     {"2", "Computer Architecture"},
120     {"3", "Course 1"},
121     {"3", "Course 2"},
122     {"4", "Algorithms"}
123 };
124
125 String[][] enrollments3 = {
126     {"23", "Software Design"},
127     {"3", "Advanced Mechanics"},
128     {"2", "Art History"},
129     {"33", "Another"},
130 };
131
132 }
133
134 }
```

Type here to search



The screenshot shows a Java code editor interface with the following code:

```
102 import java.io.*;
103 import java.util.*;
104 import javafx.util.Pair;
105
106 public class Solution {
107     public static void main(String[] args) {
108         String[][] enrollments1 = {
109             {"58", "Linear Algebra"}, {"94", "Art History"}, {"94", "Operating Systems"}, {"17", "Software Design"}, {"58", "Mechanics"}, {"58", "Economics"}, {"17", "Linear Algebra"}, {"17", "Political Science"}, {"94", "Economics"}, {"25", "Economics"}, {"58", "Software Design"}};
110     }
111
112     String[][] enrollments2 = {
113         {"0", "Advanced Mechanics"}, {"0", "Art History"}, {"1", "Course 1"}, {"1", "Course 2"}, {"2", "Computer Architecture"}, {"3", "Course 1"}, {"3", "Course 2"}, {"4", "Algorithms"}};
114 }
```

The code defines a `Solution` class with a `main` method. It initializes two `String` arrays, `enrollments1` and `enrollments2`, containing various course names and their corresponding values.