3 Questions Total Marks: 300.0

2 Programming Questions

1. Gift Vouchers + 100.0

2. Food Orders + 100.0

1 Approximate Question

3. Online Shopping + 100.0

Question 1 Max. Marks 100.00

Gift Vouchers

Company X, an air transport service provider decided to give gift vouchers to the passengers this festive season. But they cannot give the gift vouchers to everyone in the flight. So, they decided to give the vouchers to every K-*th* passenger in each of their flights.

Every passenger who is travelling has a unique Id. Now, the manager asked you to tell them how many gift vouchers will be required in total and who all will be getting the gift vouchers.

Neither you are provided with the exact data that how many flights will be there nor the Id's of the passengers that belong to a particular flight. Instead you are given M connections represented by two passenger Id's x and y that denote x and y belong to the same flight.

Now, every K-*th* passenger from each flight will get the gift voucher after ordering them in the increasing order of their Id's.

Input Format

The first line of the input contains three space-separated integers N, M, and K, the total number of passengers, the total number of connections and the number K as described in the above statement.
Then M lines follow, each line contains two space-separated integers x and y denoting that x and y belong to the same flight.

Output Format

In the first line of the output print the total number of passengers getting the gift vouchers.
In the next line of the output print space-separated Id's of the passengers getting the gift vouchers in the increasing order.

Constraints

$1 \leq N \leq 10^5$
$1 \leq M \leq min(10^6, N * (N-1))$
$1 \leq K, x, y \leq N$

Sample Input

```
6 3 2
1 4
5 4
3 6
```

Sample Output

```
2
4 6
```

Explanation

$[1, 4, 5]$ belong to the same flight, passenger with Id 4 will get the voucher. $[3, 6]$ belong to the same flight, passenger with Id 6 will get the voucher. $[2]$ belong to the same flight, no one will get the gift voucher as there is only 1 passenger.

Note: Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 2.0 sec(s) for each input file
Memory Limit: 256 MB
Source Limit: 1024 KB
Marking Scheme: Marks are awarded if any testcase passes
Allowed Languages: Java, Java 8

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Java 8 (oracle 1.8.0_131) Save

```java
/* IMPORTANT: Multiple classes and nested static classes are supported */

/*
 * uncomment this if you want to read input.
//imports for BufferedReader
import java.io.BufferedReader;
import java.io.InputStreamReader;

//import for Scanner and other utility classes
import java.util.*;
*/

// Warning: Printing unwanted or ill-formatted data to output will cause the test cases to fail

class TestClass {
    public static void main(String args[] ) throws Exception {
        /* Sample code to perform I/O:
         * Use either of these methods for input

        //BufferedReader
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        String name = br.readLine();                // Reading input from STDIN
        System.out.println("Hi, " + name + ".");    // Writing output to STDOUT

        //Scanner
        Scanner s = new Scanner(System.in);
        String name = s.nextLine();                 // Reading input from STDIN
        System.out.println("Hi, " + name + ".");    // Writing output to STDOUT

        */

        // Write your code here

    }
}
```

1:1

Press Ctrl/Command+Spacebar for autocomplete suggestions (accuracy dependent on connection stability).

Provide custom input

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