# Question1- superheroes

A team of superheroes is being assembled for a mission. Each superhero has a specific power, represented by the characters s, t, i, f, or x. Each team must consist of exactly one superhero skilled in each power.

Given a string powers, where each character represents a superhero's power, determine the maximum number of teams that can be formed. Each superhero can be part of only one team.

**Input Format:**

* A single string powers of length n (1 ≤ n ≤ 500,000), where each character belongs to the set {s, t, i, f, x}.

**Output Format:**

* Print a single integer denoting the maximum number of complete teams that can be formed.

**Example Input and Output:**

**Example 1:**

Input:

powers = "stifxstifx"

Output:

2

Explanation: The string contains two sets of all required powers. Two teams can be formed: stifx and stifx.

**Example 2:**

Input:

powers = "stifxstifxfxx"

Output:

2

Explanation: There are three superheroes with power x, but only two superheroes with power f. Hence, only two complete teams can be formed.

**Example 3:**

Input:

powers = "stix"

Output:

0

Explanation: Since at least one power is missing (f), no team can be formed.

# Question2 - The Perfect Orchestra

An orchestra needs musicians skilled in different instruments to perform a symphony. Each musician is skilled in exactly one instrument, represented by the characters v, d, p, g, or k. A complete orchestra must have one musician for each instrument.

Given a string skills, where each character represents a musician’s skill, determine the maximum number of orchestras that can be formed. Each musician can only play in one orchestra.

**Input Format:**

* A single string skills of length n (1 ≤ n ≤ 500,000), where each character belongs to the set {v, d, p, g, k}.

**Output Format:**

* Print a single integer denoting the maximum number of complete orchestras that can be formed.

**Example Input and Output:**

**Example 1:**

Input:

skills = "vdpgkvdpgk"

Output:

2

Explanation: The string contains two sets of all required skills. Two orchestras can be formed: vdpgk and vdpgk.

**Example 2:**

Input:

skills = "vdpgkvdpgkk"

Output:

2

Explanation: There are three musicians skilled in k, but only two musicians skilled in g. Hence, only two complete orchestras can be formed.

**Example 3:**

Input:

skills = "vdpg"

Output:

0

Explanation: Since at least one instrument is missing (k), no orchestra can be formed.

# Question3 – School Team

The School of Excellence is conducting a team-building activity. Each student is skilled in exactly one subject, represented by the characters p, c, m, b, or z.

Given a string skills where each character denotes a student's skill, your task is to determine the maximum number of complete teams that can be formed, following these rules:

1. A team consists of exactly 5 students, each skilled in one of the five subjects (p, c, m, b, z).
2. Each student can be part of only one team.
3. If any subject is missing or insufficient in number, fewer teams can be formed.

**Input Format:**

* A single string skills of length n (1 ≤ n ≤ 500,000) where each character belongs to the set {p, c, m, b, z}.

**Output Format:**

* Print a single integer denoting the maximum number of complete teams that can be formed.

**Example Input and Output:**

**Example 1:**

Input:

makefile

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skills = "pcmbzpcmbz"

Output:

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2

Explanation: The string has two sets of all required skills. Two teams can be formed: pcmbz and pcmbz.

**Example 2:**

Input:

makefile

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skills = "pcmbzmpcmbzz"

Output:

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1

Explanation: There are at least 2 students skilled in z but only one student in c. Therefore, only one complete team can be formed.

**Example 3:**

Input:

makefile

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skills = "pcmp"

Output:

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0

Explanation: Since at least one subject is missing (b, z), no team can be formed.