3. Distinct Characters Count (Java Stream)

In this challenge, use the Java *Stream*, *Predicate*, and *Function* to find the number of distinct characters in the given names which start with a given prefix. The complete implementation of *CharactersCount* class is given. It has the following two fields:

- *name* describes the name string.
- *distinctCharacterCount* describes the number of distinct characters.

Create the following two classes:

- *Filter* class with method *Predicate<String> nameStartingWithPrefix(String prefix)* that returns a predicate to check whether a name string starts with the given prefix or not.
- *Mapper* class with method *Function<String, CharactersCount> getDistinctCharactersCount()* that returns a mapper function to return a *CharactersCount* class object that correspond to the given name string.

The locked stub code in the editor validates the correctness of the *Filter* and *Mapper* classes implementation.

Constraints

- There exists at least one name for the given prefix.

▼ Input Format For Custom Testing

The only line of input contains the *prefix* string.

▼ Sample Case 0

Sample Input For Custom Testing

```
aa
```

Sample Output

```
"aaryanna" has 4 distinct characters.
"aayanna" has 3 distinct characters.
```

Explanation

For the given names ["aaryanna", "aayanna", "airianna", "alassandra", "allanna", "allannah", "allessandra", "allianna", "allyanna", "anastaisa", "anastashia", "anastasia", "annabella", "annabelle", "annebelle"], *"aaryanna"* and *"aayanna"* starts with the prefix *"aa"*.

- *"aaryanna"* has four distinct characters: *'a'*, *'n'*, *'r'*, and *'y'*.
- *"aayanna"* has four distinct characters: *'a'*, *'n'*, and *'y'*.