

Case Check:-

`next()` Method: A method of the Scanner class that finds and returns the next complete token from this scanner.

Usage: To read the next word (token) from the user.

Ex:- `String word = in.next();`

`trim()` Method: A method of the String class that returns a string whose value is this string with any leading and trailing whitespace removed.

Usage: To remove any leading and trailing white space from a string.

Ex:- `String trimmed = word.trim();`

`charAt()` Method: A method of the String class that returns the character at the specified index.

Usage: To get the character at a specific index from a string.

Ex :- `char ch = trimmed.charAt(0);`

Character Comparison: Using relational Operator to compare character values.

Usage: To check if a character falls within a specific range of ASCII values.

```
Ex: if (ch >= 'a' && ch <= 'z') {  
    System.out.println("lower case");  
}  
else {  
    System.out.println("Upper case");  
}
```

Algorithm:-

1. Initialize the Scanner

2. Read Input:

Read a character input from the user.

Use `in.next()` to read the next token as a string.

3. Use `trim()` to remove any leading and trailing whitespace from the string.

4. Use `charAt(0)` to extract the first character from the trimmed string.

5. Check Case At (0) to extract the first character from the trimmed string

6. Check case:

If the character is between 'a' and 'z' it is a lowercase letter.

7. Otherwise it is an uppercase letter.

8. Print the Result.

9. Print the character itself.