

Find the index of First Occurrence in a String

Input: haystack = "sadbutsad", needle = "sad"

Step 1: Iterate through haystack to check index where needle's first character matches haystack's character at any index.

```
for (int i = 0; haystack.length(); i++) {
    if (haystack.charAt(i) == needle.charAt(0)) {

```

Step 2 → int start = i;

this can be

our answer which needs to be validated if all start++ indices characters matches with needles characters

int n = 0; ← needle's start

Step 3 → Put a condition so that start < haystack.length()

and n < needle.length and

also check if

```
haystack.charAt(start++) == needle.charAt(n++);
```

Step 4 → ~~if~~ ~~i~~ is answer if n becomes equal to needle.length();

Base condition:

1) if needle.length() > haystack.length()
return -1;

2) finally for all other conditions return -1;