6.
```c
#include <stdio.h>
#include <string.h>

int main() {
    char s[100];
    int c = 0;
    printf("Enter a binary string: ");
    scanf("%s", s);
    for (int i = 0; s[i+1]; i++)
        if (s[i]=='0' && s[i+1]=='0') c++;
    printf(c==1 ? "Belongs to the language\n" : "Does NOT belong\n");
}
```

Output:

Enter a binary string: 101001

Belongs to the language

=== Code Execution Successful ===

7.
```c
#include <stdio.h>
#include <string.h>

int main() {
    char str[100];
    printf("Enter a string: ");
    scanf("%s", str);

    int len = strlen(str);
    int valid = 1;
```

```c
    // Must be at least "ab"
    if (len < 2 || str[0] != 'a' || str[len-1] != 'b')
        valid = 0;
    else {
        for (int i = 1; i < len - 1; i++) {
            if (str[i] != 'a' && str[i] != 'b') {
                valid = 0;
                break;
            }
        }
    }

    if (valid)
        printf("The string belongs to the language.\n");
    else
        printf("The string does NOT belong to the language.\n");

    return 0;
}
```

Output:

Enter a string: aab

The string belongs to the language.

=== Code Execution Successful ===


```c
8.#include <stdio.h>
#include <string.h>

int main() {
```

```c
    char s[100];
    printf("Enter a binary string: ");
    scanf("%s", s);

    int len = strlen(s);

    if (len >= 4 && s[0]=='0' && s[1]=='0' && s[len-2]=='1' && s[len-1]=='1')
        printf("Accepted: String belongs to the language.\n");
    else
        printf("Rejected: String does not belong to the language.\n");

    return 0;
}
```

Output:

Enter a binary string: 0011

Accepted: String belongs to the language.

=== Code Execution Successful ===

9.
```c
#include <stdio.h>
#include <string.h>

int main() {
    char s[100];
    printf("Enter a string: ");
    scanf("%s", s);

    int len = strlen(s), i, a_count = 0, valid = 1;
    for (i = 0; i < len; i++) {
```

```c
        if (s[i] != 'a' && s[i] != 'b') {
            valid = 0;
            break;
        }
    }
    for (i = 0; i < len; i++)
        if (s[i] == 'a') a_count++;

    if (valid && a_count >= 2)
        printf("The string belongs to the language.\n");
    else
        printf("The string does NOT belong to the language.\n");

    return 0;
}
```

Output:

Enter a string: baab

The string belongs to the language.

=== Code Execution Successful ===

10.
```c
#include <stdio.h>
#include <string.h>

int main() {
    char s[100];
    int i, ok = 1;
    printf("Enter a string: ");
    scanf("%s", s);
```

```c
    for (i = 0; s[i]; i++) {
        if (s[i] != 'a' && s[i] != 'b') {
            ok = 0;
            break;
        }
    }

    if (ok)
        printf("The string belongs to the language.\n");
    else
        printf("The string does NOT belong to the language.\n");

    return 0;
}
```

Output:

Enter a string: aababb

The string belongs to the language.

=== Code Execution Successful ===