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

int main() {
    char nonterm, prod[10], alpha[10], beta[10];
    int i, j = 0, k = 0;

    printf("Enter Non-Terminal (A): ");
    scanf(" %c", &nonterm);

    printf("Enter Production (A->Aα | β) without spaces: ");
    scanf("%s", prod);

    // prod example: AAb|c  meaning A -> A b | c

    // Separate alpha (Aα) and beta (β)
    for (i = 1; prod[i] != '\0'; i++) {
        if (prod[i] == nonterm) {               // Aα case
            i++;
            while (prod[i] != '|' && prod[i] != '\0')
                alpha[k++] = prod[i++];
        }
        if (prod[i] == '|') {                   // β case
            i++;
            while (prod[i] != '\0')
                beta[j++] = prod[i++];
        }
    }

    alpha[k] = '\0';
```

```
31      beta[j] = '\0';
32
33      printf("\nAfter Eliminating Left Recursion:\n");
34      printf("%c -> %s%c'\n", nonterm, beta, nonterm);
35      printf("%c' -> %s%c' | ε\n", nonterm, alpha, nonterm);
36
37      return 0;
38  }
```

Output

```
Enter Non-Terminal (A): A
Enter Production (A->Aα | β) without spaces: AA|b

After Eliminating Left Recursion:
A -> bA'
A' -> A' | ε


=== Code Execution Successful ===
```