

## Question

HATFD1005

Longest Palindrome substring

code

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

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

```
void Longest_palindrome(char *s, char *res) {
```

```
    int long_len = 0;
```

```
    int n = strlen(s);
```

```
    for (int i = 0; i < n; i++) {
```

```
        int l = i, r = i;
```

```
        while (l >= 0 && r < n && s[l] == s[r]) {
```

```
            if (r - l + 1 > long_len) {
```

```
                long_len = r - l + 1;
```

```
                strncpy(res, s + l, long_len);
```

```
                res[long_len] = '\0';
```

```
            }
```

```
            l--;
```

```
            r++;
```

```
        }
```

```
        l = i, r = i + 1;
```

```
        while (l >= 0 && r < n && s[l] == s[r]) {
```

```
            if (r - l + 1 > long_len) {
```

```
                long_len = r - l + 1;
```

```
                strncpy(res, s + l, long_len);
```

```
                res[long_len] = '\0'; // Null terminate the result string
```

```
            }
```

```
            l--;
```

```
            r++;
```

```
        }
```

```
    }
```

```
}
```

```
int main() {
```

```
    char string[1000];
```

```
    char result[1000] = ""; // Buffer to store the result
```

```
    printf("Enter a string: ");
```

```
    scanf("%s", string);
```

```
    Longest_palindrome(string, result);
```

```
    printf("Longest Palindromic Substring: %s\n", result);  
  
    return 0;  
}
```

Test Case

Enter a string: babad

Longest Palindromic Substring: bab

Enter a string: aaccddbhs

Longest Palindromic Substring: aa