Exercise 167:-

7. Given a string s, find the length of the longest substring without repeating characters.

Program:-
```python
def length_of_longest_substring(s: str) -> int:
    char_map = {}
    left = 0
    max_length = 0
    for right in range(len(s)):
        if s[right] in char_map:
            left = max(char_map[s[right]] + 1, left)
        char_map[s[right]] = right
        max_length = max(max_length, right - left + 1)
    return max_length
s = "abcabcbb"
print(length_of_longest_substring(s))
```
Output:-

```
C:\Users\afree\PycharmProjects\pythonProject\.venv\Scripts\python.exe C:\Users\afree\PycharmProjects\pythonProject\0.py
3

Process finished with exit code 0
```

Time complexity:-O(n,m)