C++ String Built-in Functions

1. Capacity Functions
2. size() / length(): Returns the number of characters in the string.
3. max_size(): Returns the maximum possible number of characters the string can hold.
4. capacity(): Returns the size of the storage space currently allocated for the string.
5. resize(n): Resizes the string to contain n characters.
6. empty(): Checks whether the string is empty.

7. shrink_to_fit(): Reduces the capacity to fit the current size.

8. Element Access Functions

9. operator[]: Access character at a given index.
10. at(index): Access character at given index with bounds checking.
11. front(): Access first character.
12. back(): Access last character.

13. data() / c_str(): Returns pointer to the underlying character array.

14. Modifiers

15. assign(): Assigns new content to the string.
16. append(): Adds content at the end of the string.
17. push_back(): Adds a single character at the end.
18. insert(pos, str): Inserts a string at specified position.
19. erase(pos, len): Removes characters from position pos of length len.
20. replace(pos, len, str): Replaces part of the string with another string.
21. swap(): Swaps content with another string.

22. pop_back(): Removes last character.

23. Iterators

24. begin(): Returns iterator to beginning.
25. end(): Returns iterator to end.
26. rbegin(): Returns reverse iterator to end.
27. rend(): Returns reverse iterator to beginning.
28. cbegin(): Returns const iterator to beginning.

29. cend(): Returns const iterator to end.

30. Other Useful Functions

31. find(str): Returns position of first occurrence of substring.
32. rfind(str): Returns position of last occurrence of substring.
33. substr(pos, len): Returns substring starting from pos of length len.

34. compare(str): Compares two strings.
35. copy(char* s, len, pos): Copies substring into a C-style array.
36. resize(n, char): Resizes string to n, filling new positions with char.
37. clear(): Clears the content of the string.