* String Operations

| **Operator** | **Description** | **Example** |
| --- | --- | --- |
| + | Concatenates two strings | s3 = s1 + s2; |
| += | Appends one string to another | s1 += "world"; |
| == | Checks if two strings are equal | if (s1 == s2) |
| != | Checks if two strings are not equal | if (s1 != s2) |
| < | Checks if the first string is lexicographically less | if (s1 < s2) |
| > | Checks if the first string is lexicographically greater | if (s1 > s2) |
| <= | Checks if the first string is less than or equal | if (s1 <= s2) |
| >= | Checks if the first string is greater than or equal | if (s1 >= s2) |
| [] | Accesses character at specified index | char ch = s1[0]; |
| = | Assigns one string to another | s2 = s1; |

* String Functions:

| **Function** | **Description** | **Example** |
| --- | --- | --- |
| length() / size() | Returns the number of characters in the string | s.length(); or s.size(); |
| at(index) | Returns character at a given index (with bounds check) | s.at(2); |
| append(str) | Appends another string to the current string | s.append("world"); |
| substr(pos, len) | Returns a substring starting from pos with len chars | s.substr(1, 3); |
| find(str) | Finds the first occurrence of substring, returns index | s.find("lo"); |
| replace(pos, len, str) | Replaces len characters from pos with str | s.replace(0, 2, "Hi"); |
| insert(pos, str) | Inserts string at given position | s.insert(3, "abc"); |
| erase(pos, len) | Removes len characters from position pos | s.erase(1, 2); |
| clear() | Removes all characters from the string | s.clear(); |
| empty() | Returns true if string is empty | s.empty(); |
| compare(str) | Compares two strings lexicographically | s.compare("hello"); |
| stoi(str) | Converts string to integer | int n = stoi("123"); |
| to\_string(num) | Converts number to string | string s = to\_string(100); |