

### #How to check strength of a password

A password is said to be strong if it satisfies the following criteria:

A Password must contain at least one lowercase English character.

It should have at least one uppercase English character.

It must have at least one special character.

The special characters are: !@#\$%^&\*()-+

Its length should be at least 8.

It should contain at least one digit.

For example,

Given a string, find its strength. Let a strong password is one that satisfies all above conditions.

A moderate password is one that satisfies first three conditions and has length at least 6.

Otherwise password is weak.

Input : "Music of mind @1"

Output : Strong

Input : "Abc!@12"

Output : Moderate

### CODE

```
// C++ program to check if a given password is
// strong or not.
#include <bits/stdc++.h>
using namespace std;

void printStrongNess(string& input)
{
    int n = input.length();

    // Checking lower alphabet in string
    bool hasLower = false, hasUpper = false;
    bool hasDigit = false, specialChar = false;
    string normalChars = "abcdefghijklmnopqrstuvwxyz1234567890 ";
    "vwxyzABCDEFGHIJKLMNPQRSTUVWXYZ1234567890 ";

    for (int i = 0; i < n; i++) {
        if (islower(input[i]))
            hasLower = true;
        if (isupper(input[i]))
            hasUpper = true;
        if (isdigit(input[i]))
            hasDigit = true;

        size_t special = input.find_first_not_of(normalChars);
        if (special != string::npos)
            specialChar = true;
    }
}
```

```
}
```

```
// Strength of password
cout << "Strength of password:-";
if (hasLower && hasUpper && hasDigit &&
    specialChar && (n >= 8))
    cout << "Strong" << endl;
else if ((hasLower || hasUpper) &&
    specialChar && (n >= 6))
    cout << "Moderate" << endl;
else
    cout << "Weak" << endl;
}
```

```
// Driver code
int main()
{
    string input = "GeeksforGeeks!@12";
    printStrongNess(input);
    return 0;
}
```

**output:**

Strength of the password:-Strong

The screenshot shows a web browser window with the URL [https://www.onlinegdb.com/online\\_c++\\_compiler](https://www.onlinegdb.com/online_c++_compiler). The page features a sidebar on the left with navigation links: "OnlineGDB beta", "code. compile. run. debug. share.", "IDE", "My Projects", "Classroom new", "Learn Programming", "Programming Questions", "Sign Up", and "Login". Below these are social media icons for Facebook and Twitter, and a "50.8K" badge. The main area displays a C++ program in a dark-themed editor. The code defines a function `printStrongNess` that checks the strength of a password based on the presence of lowercase letters, uppercase letters, digits, and special characters. The `main` function uses this function to check the password "GeeksforGeeks!@12". The output console at the bottom shows the result: "Strength of password:-Strong". The program finished with exit code 0.

```
1 // C++ program to check if a given password is
2 // strong or not.
3 #include <bits/stdc++.h>
4 using namespace std;
5 void printStrongNess(string& input)
6 {
7     int n = input.length();
8     // Checking lower alphabet in string
9     bool hasLower = false, hasUpper = false;
10    bool hasDigit = false, specialChar = false;
11    string normalChars = "abcdefghijklmnopqrstuvwxyz1234567890 ";
12    string vwxzyABCDEFGHIJKLMNQRSTUUVWXYZ1234567890 ";
13    for (int i = 0; i < n; i++) {
14        if (islower(input[i]))
15            hasLower = true;
16        if (isupper(input[i]))
17            hasUpper = true;
18        if (isdigit(input[i]))
19            hasDigit = true;
20        size_t special = input.find_first_not_of(normalChars);
21        if (special != string::npos)
22            specialChar = true;
23    }
24    // Strength of password
25    cout << "Strength of password:-";
```

Strength of password:-Strong

...Program finished with exit code 0  
Press ENTER to exit console.

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Language C++

main.cpp

```
18         if (isdigit(input[i]))
19             hasDigit = true;
20         size_t special = input.find_first_not_of(normalChars);
21         if (special != string::npos)
22             specialChar = true;
23     }
24     // Strength of password
25     cout << "Strength of password:-";
26     if (hasLower && hasUpper && hasDigit &&
27         specialChar && (n >= 8))
28         cout << "Strong" << endl;
29     else if ((hasLower || hasUpper) &&
30             specialChar && (n >= 6))
31         cout << "Moderate" << endl;
32     else
33         cout << "Weak" << endl;
34 }
35 // Driver code
36 int main()
37 {
38     string input = "Music In Mind!124";
39     printStrongNess(input);
40     return 0;
41 }
42
```

Input

Strength of password:-Strong

...Program finished with exit code 0

Press ENTER to exit console.