

```
Script started on 2020-10-03 07:40:06-0500
m_sadaf1@ares:~$ pwd
/home/students/m_sadaf1
m_sadaf1@ares:~$ cat To.info
Name: Madiha Sadaf
Class: CSC121 W01
```

```
Project: To meet or not to meet? That is the question!
Option: yes/no loop and different inputs for yes/no.
Level: 2
Level: +1
Level: +1
Total Level: 4
```

Description:

This program determines whether the room being used for meeting is in violation of fire law regulations regarding maximum occupancy.

```
m_sadaf1@ares:~$ cat To.tpq
Thought Provoking Questions:
```

- 1) Short data type. Percentage is a double data type.
- 2) 3 branches.
- 3) 4 to 5 tests.
- 4) The rounding formula rounds the percentage to the nearest number and outputs that number as the percentage value instead of a decimal.

```
m_sadaf1@ares:~$ cat To.cpp
#include <iostream>
#include <cmath>
```

```
using namespace std;
```

```
int main (void)
{
```

```
    short P1, P2, rem;
    double total;
    char yes_no;
```

```
    cout<< "\t\t\tWelcome to the Room Capacity Program!!!\n";

    cout << "\nWould you like to use the program? ";
    cin >> yes_no;
    cin.ignore(numeric_limits<streamsize>::max(), '\n');
    while ( toupper(yes_no) == 'Y' )
    {

        cout<< "How many people can this room hold? ";
        cin>> P1;

        cout<< "How many people have arrived for the meeting? ";
        cin>> P2;

        total = 100.0 * P2 / P1;

        cout<< "\n\nYou've used up almost " << round(total) <<
            "% of your room's capacity!\n";

        if (P2 <= P1)
        {
            cout<< "\nHowever, I pronounce this meeting LEGAL!"
                " Proceed with the congregation!\n";
            rem = static_cast<short>(P1 - P2);
            cout<< "\n(BTW, you have room for " <<rem<<
                " more poeple...)\n";
        }

        else

        {
            cout<< "\nThis meeting is ILLEGAL!"
                " Proceed with caution!\n";
        }

        cout << "\n\nWould you like do it again? ";
        cin >> yes_no;
        cin.ignore(numeric_limits<streamsize>::max(), '\n');
    }
    cout<< "\n\nThank you for using the RCP!!!\n";

    cout<< "\nEndeavor to have a tremendous day!\n";

    return 0;

}
```

```
m_sadafl@ares:~$ CPP To
To.cpp***

m_sadafl@ares:~$ ./To.out
Welcome to the Room Capacity Program!!!

Would you like to use the program? yup
How many people can this room hold? 30
How many people have arrived for the meeting? 20

You've used up almost 67% of your room's capacity!

However, I pronounce this meeting LEGAL! Proceed with the congregation!

(BTW, you have room for 10 more poeple...)

Would you like do it again? yes
How many people can this room hold? 50
How many people have arrived for the meeting? 51

You've used up almost 102% of your room's capacity!

This meeting is ILLEGAL! Proceed with caution!

Would you like do it again? yEs
How many people can this room hold? 20
How many people have arrived for the meeting? 11

You've used up almost 55% of your room's capacity!

However, I pronounce this meeting LEGAL! Proceed with the congregation!

(BTW, you have room for 9 more poeple...)

Would you like do it again? nah

Thank you for using the RCP!!!

Endeavor to have a tremendous day!
```

```
m_sadafl@ares:~$ exit
exit

Script done on 2020-10-03 07:42:06-0500
```