

Script started on 2020-11-10 16:34:34-0600

```
m_sadafl@ares:~$ pwd
/home/students/m_sadafl
m_sadafl@ares:~$ cat devdice.info
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Class: CSC121 W01
```

Lab: But How Would I Get...?
Level: 3.5

Description:

This program takes random values in the range from the user and prints out the dice-roll they need to make to get their desired range.

```
m_sadafl@ares:~$ cat devdice.tpg
Thought Provoking Questions:
```

- 1) A division is even when it is evenly divided by 2, which gives out an even number.
- 2) By using if else loop.
- 3) By placing || after the values and by using == to test if one value is equal to another.
- 4) By using boolean.
- 5) Bonus:

- a: By looping the loop over and over until the given condition is met.
- b: To test the other values.
- c: Because there is a lot of mathematical calculations involved in programming this code.

```
m_sadafl@ares:~$ cat devdice.cpp
#include <iostream>
#include <limits>
```

```
#include <cctype>

using namespace std;

int main (void)
{
    short min, max, adjust, remainder, quotient, start, end;
    char t;
    char yes_no;

    cout<< "\t\t\tWelcome to the Developer's Dice"
          "Program!!!\n";

    cout<< "Enter your desired range: ";
    cin >> t >> min >> t >> t >> max >> t;

    adjust = 0;
    start = min;
    end = max;

    do {
        if (min != 0)
        {
            remainder = static_cast<short>(max % min);
            quotient = static_cast<short>(max / min);
        }
        else
        {
            remainder = quotient = 1;
        }

        if (remainder == 0 && (quotient == 4 || quotient == 6 ||
            quotient == 8 || quotient == 10 || quotient == 12
            || quotient == 20 || quotient == 100))
        {

            cout<< "\nThank you!!! Calculating..... Done.\n";

            cout<< "\nYou can acheive a range of " << "["<< start <<
                "."<< "."<<end<<"]"<< " by rolling "
                <<min<< "d" <<quotient;
            if (adjust >= 0)
            {
```

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        cout<< '+';
    }
    cout<< adjust<< ".\n";

    adjust = 0;
}

else
{
    min--;
    max--;
    adjust++;

}

}

while (adjust != 0 && min >= 1);

if (min <= 1)
{
    min = start;
    max= end;
    adjust = 0;
    yes_no = 'y';

    do {
        if (min != 0)
        {
            remainder = static_cast<short>(max % min);
            quotient = static_cast<short>(max / min);
        }
        else
        {
            remainder = quotient = 1;
        }

        if (remainder == 0 && (quotient == 4 || quotient == 6
            || quotient == 8 || quotient == 10 ||
            quotient == 12 || quotient == 20 ||
            quotient == 100))
        {

            cout<< "\nThank you!!! Calculating..... Done.\n";

```

```

        cout<< "\nYou can acheive a range of " <<"["
            << start <<". "<<". "<<end<<"]"<<
            " by rolling " <<min<< "d" <<quotient;
        if (adjust >= 0)
        {
            cout<< '+';
        }
        cout<< adjust<< ".\n";

        adjust = 0;

    }

    else
    {
        min++;
        max++;
        adjust--;

        if (adjust % 10 == 0)
        {
            cout<< "Adjustment"<<adjust<<"reached, keep"
                " going? ";
            cin>> yes_no;
            cin.ignore(numeric_limits<streamsize>::max(),
                '\n');
        }
    }
    while (adjust != 0 && (tolower(yes_no) == 'y'));}

if (adjust !=0)
{
    cout<< "Cannot create [" <<start<<".. " <<end<<
        "]" with standard dice.\n";

}

    cout<< "\nThank you for using DDP!!\n";
    cout<< "\nEndeavor to have an enclosed day!\n";

    return 0;
}

m_sadaf1@ares:~$ CPP devdice

```

```
devdice.cpp***

m_sadafl@ares:~$ ./devdice.out
Welcome to the Developer's DiceProgram!!!
Enter your desired range: [5..38]

Thank you!!! Calculating..... Done.

You can acheive a range of [5..38] by rolling 3d12+2.

Thank you for using DDP!!

Endeavor to have an enclosed day!
m_sadafl@ares:~$
m_sadafl@ares:~$ ./devdice.out
Welcome to the Developer's DiceProgram!!!
Enter your desired range: [-1..20]

Thank you!!! Calculating..... Done.

You can acheive a range of [-1..20] by rolling 3d8-4.

Thank you for using DDP!!

Endeavor to have an enclosed day!
m_sadafl@ares:~$
m_sadafl@ares:~$ ./devdice.out
Welcome to the Developer's DiceProgram!!!
Enter your desired range: [1..21]

Thank you!!! Calculating..... Done.

You can acheive a range of [1..21] by rolling 4d6-3.

Thank you for using DDP!!

Endeavor to have an enclosed day!
m_sadafl@ares:~$
m_sadafl@ares:~$ ./devdice.out
Welcome to the Developer's DiceProgram!!!
Enter your desired range: [4..12]
Adjustment-10reached, keep going? y
```

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Adjustment-20reached, keep going? yes
Adjustment-30reached, keep going? definitely, yes!
Cannot create [4..12] with standard dice.

Thank you for using DDP!!

Endeavor to have an enclosed day!
m_sadafl@ares:~$
m_sadafl@ares:~$ ./devdice.out
Welcome to the Developer's DiceProgram!!!
Enter your desired range: [4..12]
Adjustment-10reached, keep going? no, thank you!
Cannot create [4..12] with standard dice.

Thank you for using DDP!!

Endeavor to have an enclosed day!
m_sadafl@ares:~$
m_sadafl@ares:~$ exit
exit

Script done on 2020-11-10 16:37:02-0600
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