Loop notes 2

🕐 Created	@January 27, 2023 8:52 PM
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```cpp
#include <iostream>
using namespace std;
int main()
{

    int n, b = 0, l;
    cin >> n;
    while (n > 0)
    {
        l = n % 10;
        b = b * 10 + l;
        n = n / 10;
    }
    n = b;
    cout << n;
}
```

Algorithm to reverse a number

```cpp
#include <iostream>
#include <cmath>
#include <chrono>
using namespace std;
int main()
{

    int n, p = 1;
    cin >> n;
    // while (p <= n)
    // {
    //     cout << p << " ";
    //     p = p * 2;
    // }

    for (int i = 0; i <= n; i++)
    {
        int r = pow(2, i);
        if (r <= n)
        {
```

```cpp
            cout << r << " ";
        }
        else
        {
            break;
        }
    }
}
```

Algorithm to find all powers of 2 less then n

```cpp
#include <iostream>
#include <cmath>
using namespace std;
int main()
{
int n, p = 1;
cin >> n;
while (n % 2 == 0)
{
    n = n / 2;
}

if (n == 1)
{
    cout << "YES";
}
else
{
    cout << "NO";
}

// for (int i = 0; i <= n; i++)
// {
//     int r = pow(2, i);
//     if (r == n)
//     {
//         cout << "YES";
//         break;
//     }
//     else
//     {
//         cout << "NO";
//         break;
//     }
// }

}
```

```cpp
#include <iostream>
#include <cmath>
using namespace std;
int main()
{

    int n, p = 1;
    bool found = false;
    cin >> n;
    for (int i = 0; i <= n; i++)
    {
        int r = pow(2, i);
        if (r == n)
        {
            found = true;
            break;
        }
    }

    if (found == true)
    {
        cout << "YES";
    }
    else
        cout << "NO";
}
```

```cpp
#include <iostream>
#include <cmath>
using namespace std;
int main()
{

    int n, cnt = 0;
    cin >> n; //1
    while (n > 0)
    {
        cnt++;  //4
        n = n / 10;
    }
    cout << cnt;
}
```