WEIRD ALGORITHM RECURSION

21 June 2021 16:05

Recursion

1. Base condition →
2. Recursive fun'

3→10→5→16→8→4→2→1 STOP

$$f(n) = \begin{cases} 1 & ; 1 \\ n/2 & ; n \in \text{even} \\ (3 \times n)+1 & ; n \in \text{odd} \end{cases}$$

weird (3)

10
weird (10)

5
weird (5)

16
weird (16)

8
weird (8)

```
void weird (ll n)
{
    //Base
    if (n == 1)
        return
    else if (n % 2 == 0)
    {
        cout << n/2 << " ";
        weird (n/2)
    }
    else
    {
        cout << (3 x n)+1 << " ";
        weird ((3 x n)+1);
    }
}
int main()
{
    // accepting
    cout << n << " ";
}
```

- decreasing

```
    cout << n << " ";
    weird(n)
}
```