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Номер по списку: 27

Тема: Знакомство с языком МИКРОЛИСП.
Отображение программ из МИКРОЛИСПа в C++.

Лабораторная работа N1
Вариант: 18.09.1999

Распечатка файла bit-count.cpp

```
#include "mlisp.h"
```

```
double dd=18;  
double mm=9;  
double yyyy=1999;
```

```
double even__bits(double n);  
double odd__bits(double n);  
double bit__count(double n);  
double report__results(double n);  
/*  
double even__bits(double n) {  
return ((n == 0) ? 1 : ((remainder(n, 2) == 0) ?  
even__bits(quotient(n, 2)) : odd__bits(quotient(n, 2))));  
}
```

```
double odd__bits(double n) {  
return ((n == 0) ? 0 : ((remainder(n, 2) == 0) ?  
odd__bits(quotient(n, 2)) : _infinity));  
}  
*/
```

```
double even__bits(double n){  
return ((n == 0) ? 1 :  
((remainder(n, 2) == 0) ? even__bits(quotient(n,  
2)) :
```

```

        odd__bits(quotient(n, 2))));
    }

double odd__bits(double n){
    return ((n == 0) ? 0 :
        ((remainder(n, 2) == 0) ? odd__bits(quotient(n,
2)) :
        even__bits(quotient(n, 2))));
}

double bit__count(double n) {
    return (n == 0 ? 0
        : remainder(n, 2) + bit__count(quotient(n, 2)));
}

double report__results(double n) {
    display("Happy birthday to you!\n\t");
    display(n);
    newline();
    display("\teven?\t");
    display((even__bits(n) == 1) ? "yes" : "no");
    newline();
    display("\todd?\t");
    display((odd__bits(n) == 1)? "yes" : "no");
    newline();
    display("bit__count = ");
    n = bit__count(n);
    return n;
}

int main() {
    display(report__results((dd * 1000000) + (mm * 10000)
+ yyyy));
    newline();
    std::cin.get();
    return 0;
}

```

Скриншот запуска на C++

```
Happy birthday to you!
18091999
even?    yes
odd?     no
bit__count = 14
Program ended with exit code: 0
```

Скриншот запуска на Лиспе

```
Happy birthday to you!
31122020
even?    no
odd?     yes
bit-count = 13
>
```

```
#include "mlisp.h"
double dd=18;
double mm=9;
double yyyy=1999;
```

```
double even__bits(double n);
double odd__bits(double n);
double bit__count(double n);
double report__results(double n);
```

```
double even__bits(double n){
    return (n == 0) ? 1 :
    (remainder(n, 2) == 0) ? even__bits(quotient(n, 2)) :
    true ? odd__bits(quotient(n, 2)) :
    _infinity;
}
```

```
double odd__bits(double n){
    return ((n == 0) ? 0 :
    ((remainder(n, 2) == 0) ? odd__bits(quotient(n,
2)) :
    even__bits(quotient(n, 2))));
}
```

```
double bit__count(double n) {  
    return (n == 0 ? 0  
        : remainder(n, 2) + bit__count(quotient(n, 2)));  
}
```

```
double report__results(double n) {  
    display("Happy birthday to you!\n\t");  
    display(n);  
    newline();  
    display("\teven?\t");  
    display((even__bits(n) == 1) ? "yes" : "no");  
    newline();  
    display("\todd?\t");  
    display((odd__bits(n) == 1)? "yes" : "no");  
    newline();  
    display("bit__count = ");  
    return bit__count(n);  
}
```

```
int main() {  
    display(report__results((dd * 1000000) + (mm * 10000)  
+ yyyy));  
    newline();  
    std::cin.get();  
    return 0;  
}
```