homework2

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In this report I want to show the program with the aid of which we can transfer the number from base 10 to base 4.

PythonIcon.png

Figure 1: Anaconda?

PYTHON ARRAY

```
ans = "" #string that would be the answer at the end
c = 450 #this is static: c doesn't change
a = 450 #this is dynamic: a will change
b = 2 #this is base
e = 0 #this is the exponent: e will change

    while b**e<c: #run the program until base in power of
    the exponent won't be bigger than our initial number
    that should converted
        x=a%(b**(e+1)) #take number from var a which
        changes every time because of division and divide
        by base in power of sum exponent
        y=x/(b**(e)) #take the result from x and divide by
        the base in power of the exponent
        ans=str(y)+ans #add the answer to ans string
        a=a-x #subtract t
        e=e+1 #increase exponent by 1
print ans #this will print converted answer
```

Output:

```
>>> 111000010
```

So if we convert 450 from base 10 to base 4 we will get the output 111000010