

Print a, c, e... till the characters are less than z

Print a, c, e... till the characters are less than z, where each character is printed in a separate line.

a
c
e
g
i
k
m
o
q
s
u
w
y

a
c
e
g
i
:
:

?

< z

ch += 2.

ch = 'a'

< z

```
✓ for(int i = 0; i < 26; i += 2 ){  
    System.out.println((char)('a' + i ));  
}
```

```
1 import java.io.*;  
2 import java.util.*;  
3  
4 public class Solution {  
  
    public static void main(String[] args) {  
        for(char ch = 'a' ; ch < 'z' ; ch += 2){  
            System.out.println(ch);  
        }  
    }  
}
```

Print a, B, c, D, e, F, g..... 26 characters

Print a, B, c, D, e, F, g..... 26 characters where each character should be printed in a separate line.

Sample Output 0

a
B
c
D
e
F
g
H
i
J
k
L
m
N
o
P
Q
R
s
T
u
v
w
X
y
Z

a B c D e F g H i J Z
↑ ↑ ↑ ↑ ↑ ↑ ↑
0 1 2 3 4 5 6 25

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         for(int i = 0; i < 26; i++){
8             if(i%2 == 0){//smallcase
9                 System.out.println((char)('a' + i));
10            }else{//capitalcase
11                System.out.println((char)('A' + i));
12            }
13        }
14    }
15 }
```

a
B
c

i = 2.

$$\frac{'a' + i}{97 + 2} = \textcircled{99}$$

2 < 26.

i = d 0 < 26
X
2 'a' + 0
 97 + 0 = 97

1 < 26 ✓

'A' + 1
65 + 1 = 66

$ch = 'a' \text{ } 'b'$

$i = 0$
1

$0 < 26$

$0 \% 2 = 0 \neq 1$

$1 < 26$

$1 \% 2 = 1$ ✓

a

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         // for(int i = 0; i < 26; i++){
8         //     if(i%2 == 0){//smallcase
9         //         System.out.println((char)('a' + i));
10        //     }else{//capitalcase
11        //         System.out.println((char)('A' + i));
12        //     }
13        // }
14
15        char ch = 'a';
16        for(int i = 0; i < 26; i++){
17            if(i % 2 == 1){
18                System.out.println((char)(ch - 'a' + 'A'));
19            }else{
20                System.out.println(ch);
21            }
22            ch++;
23        }
24
25
26
27 }
```

z y x . . . b a

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         for(char ch = 'z' ; ch >= 'a' ; ch--){
8             System.out.println(ch);
9         }
10    }
11 }
```

GKSTR15 Print_Even

for (st=0 ; 0 <= n ; st += 2)

Problem

Submissions

Leaderboard

Discuss

Given a integer n , print all **even** numbers from 0 till n (including, if even)

Sample Input 0

10

Sample Output 0

0
2
4
6
8
10

$n = 10$

0
2
4
6
8
10

$n = 9$

0
2
4
6
8



```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9         for(int i = 0; i <= n; i += 2){
10             System.out.println(i);
11         }
12     }
13 }
```

```

1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9         for(int i = 0; i <= n; i += 2){
10             System.out.println(i);
11         }
12     }
13 }

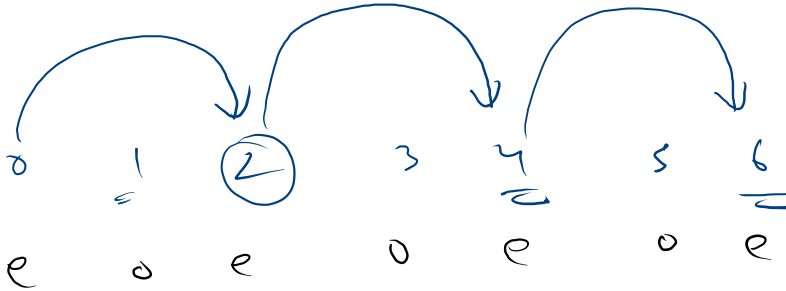
```

$i = 0$

$$\begin{array}{r} 0 \\ + 2 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 2 \\ + 2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 4 \\ + 2 \\ \hline 6 \end{array}$$



7 8 9 ...
 o e

Print Alternate Elements of a String

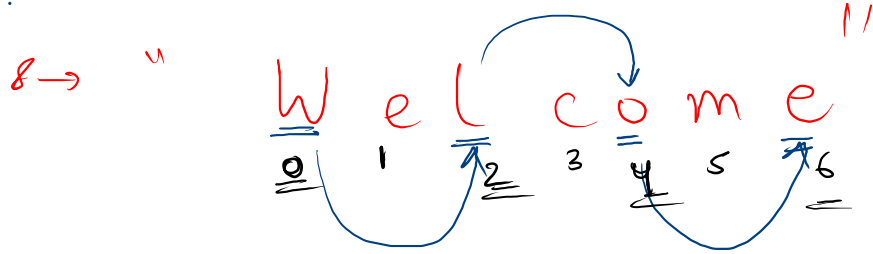
Sonu is a computer science student who is working on a project that involves processing text data. He has been asked to write a program that will take a **string** as input and output every other character of that string, starting with the first character. John is excited to work on this problem because he knows that it will require him to use his programming skills to solve a real-world problem. He knows that the program he writes will be able to take a string as input, such as `abcdefg`, and output the alternate characters, `aceg`. John is confident that he can write a solution to this problem and is eager to get started.

Sample Input 0

geekster

Sample Output 0

gese



gese

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         String s = scn.next();
9
10        for(int i = 0; i < s.length(); i += 2){
11            System.out.print(s.charAt(i));
12        }
13    }
14 }
```

8 → "Welcome"
0 1 2 3 4 5 6

i = 0 0 < 7 ✓
2 < 7 ✓
4 < 7 ✓
6 < 7 ✓

W l c e

8 < 7

Reverse a string.

8 → g e e k s t e r
0 1 2 3 4 5 6 7

→ r e t s k e e g
7 6 5 4 3 2 1 0
↑
> 0

len = (8) → n

last idx = 7 = n-1

87 = n-1 ≥ 0

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         String s = scn.next();
9
10        for(int i = s.length()-1; i >= 0; i--){
11            System.out.print(s.charAt(i));
12        }
13    }
14 }
```


nth power of 2

Problem

Submissions

Leaderboard

Discussions

Meet John, a computer science student who is working on a project for his algorithms class. One of the tasks he has been assigned is to write a function that takes in an integer **n** and returns the **nth power of 2**. For example, if **n** is **3**, the function should return **8** because **2** to the power of **3** is **8**.

Constraints

$0 \leq n \leq 30$

Output Format

Print the **nth power of 2** as an

Sample Input 0

3

Sample Output 0

8

$$\begin{aligned} 2^3 &= 2 \times 2 \times 2 = 8 \\ &= \textcircled{1} \times 2 \times 2 \times 2 = 8 \\ 2^4 &= 1 \times 2 \times 2 \times 2 \times 2 = 16 \end{aligned}$$

ans = 1

2 2 2

2

4

8

→ n=3

ans = ~~1~~ ~~2~~ ~~4~~ ~~8~~

i = ~~1~~

~~2~~

3 ✓

4

1 ≤ 3 ✓

2 ≤ 3 ✓

3 ≤ 3 ✓

4 ≤ 3 ✗

ans = 2 * 2

ans = 2 * 2

ans = 4

ans = 4 * 2

ans = 8

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9
10        int ans = 1;
11        for(int i = 1; i <= n; i++){
12
13            ans = ans * 2;
14        }
15        System.out.println(ans);
16    }
17 }
```

$$2^3 = 2 \cdot 2 \cdot 2 = \underline{1 \cdot 2 \cdot 2 \cdot 2}$$

$$\underline{n=3}$$

$$ms = \cancel{1} \cancel{2} \cancel{4} \textcircled{8}$$

```

1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9
10        int ans = 1;
11        for(int i = 1; i <= n; i++){
12            ans = ans * 2;
13        }
14        System.out.println(ans);
15    }
16 }
17 }

```

$$\begin{array}{l}
 i = 1 \\
 2 \\
 3 \\
 4
 \end{array}
 \begin{array}{l}
 \boxed{1 \leq 3} \checkmark \\
 \textcircled{2 \leq 3} \checkmark \\
 \textcircled{3 \leq 3} \checkmark \\
 \textcircled{4 \leq 3} \times
 \end{array}$$

Print powers of 2 less than n

Imagine you are a computer science teacher and one of your students, Ben, is learning about loops and control structures. You decide to give him a problem to work on as practice.

The problem is as follows: Ben needs to write a program that takes in an integer **n** as input and prints out all the **powers of 2** that are less than **n**. For example, if **n** is **10**, the program should print out 1, 2, 4, and 8.

Sample Input 0

20

Sample Output 0

1 2 4 8 16 ,

$\forall i \in \{1, 2, \dots, n\}$

$< n$

eg-

$n = 10$

1	2	4	8	...
2^0	2^1	2^2	2^3	

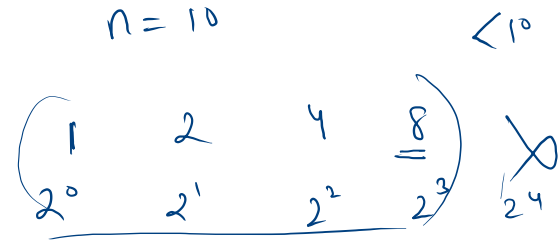
$n = 20$

1	2	4	8	16	...
2^0	2^1	2^2	2^3	2^4	

```

1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt();
9
10        for(int i = 1; i < n; i *= 2){
11            System.out.print(i + " ");
12        }
13    }
14 }
15 }

```



$i = 1$

2
4
8
16

$1 < 10$

$2 < 10$

$4 < 10$

$8 < 10$

$16 < 10$ b

1 ... 2 ... 4 ... 8 ...