Java DSA Module 1 Lecture 12

Monday, October 10, 2022 7:58 PM

Weekly Test discussion

Print if divisible by both 3 and 4

Problem | Submissions | Leaderboard | Discussions

You will be given an integer input and you have to

print "Divisible by 3 and 4" if the given integer is divisible by both 3 and 4

print "Not Divisible" if the given integer is not divisible by both 3 and 4.

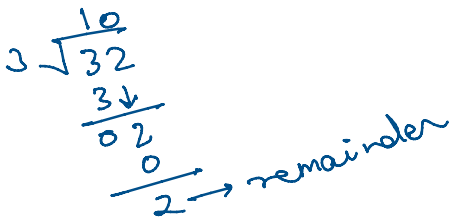
```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
if(n%3 == 0 && n%4==0){
    System.out.println("Divisible by 3 and 4");
}else{
    System.out.println("Not Divisible");
}
```

Sample Input 0

```
32
```

Sample Output 0

```
Not Divisible
```



Humans and Aliens

locked

Problem | Submissions | Leaderboard | Discussions

Take in the count of aliens and humans as integer inputs and then,

If the count of humans is zero then print "Humans vanished".

or If the count of humans is less than aliens, then aliens remaining = aliens - humans

or if the count of humans is equal to greater than aliens, then print "Humans are living"

And in the end after checking the above conditions(whether any conditon matches or not),you also have to print the final count of the aliens remaining in the next line.

```
Scanner scn = new Scanner(System.in);
int humans= scn.nextInt();
int aliens = scn.nextInt();

if(humans == 0){
    System.out.println("Humans vanished");
}else if(humans < aliens){
    aliens = aliens - humans;
}else if(humans >= aliens){
    System.out.println("Humans are living");
}
```

Sample Input 0

```
200
10
```

Sample Output 0

```
Humans are living
10
```

```
}else if(humans >= aliens){
    System.out.println("Humans are living");
}
System.out.println(aliens);
```

x y and character

locked

Problem | Submissions | Leaderboard | Discussions

Take x and y as an integer input.

Take a character as a character input.

Then print the sum of x and y as an integer output if the character is an upper case alphabet,

or print the difference of x and y as an integer output if the character is a lower case alphabet,

otherwise if the entered character is neither upper case and nor the lower case character, the print the remainder when x is divided by y as an integer output.

```
Scanner scn = new Scanner(System.in);
int x = scn.nextInt();
int y = scn.nextInt();
char ch = scn.next().charAt(0);

if(Character.isUpperCase(ch)){
    System.out.println(x+y);
}else if(Character.isLowerCase(ch)){
    System.out.println(x-y);
}else{
    int rem = x % y;
    System.out.println(rem);
}
```

Sample Input 0

```
100
20
a
```

Sample Output 0

```
80
```

'b' + 2 → 'd' → output

↳ "ddd"

'x' + 2 → 'z' → 'zzz'

Sequence of character

```
Scanner scn = new Scanner(System.in);
char ch = scn.next().charAt(0);
if(Character.isLowerCase(ch)){
    ch+=2;
}else{
    ch+=2;
}
```

str = "000"

```
}else{
    ch+=2;
}
String str = "";
for(int i = 1; i <=3 ; i++){
    str+=ch;
}
System.out.print(str);
```

ch+2 M → 'O'

ch = ch+2 = 'O'

i = 1 2 3 4

str = str + ch

'O' 'O'

str = (str + ch) + 'O'

("OO" + 'O')

str = str + ch

= "OOO"

Jump 2 steps to right and print final string

locked

Problem | Submissions | Leaderboard | Discussions

Take in a character as a character input, then jump two steps to the right and reach a final character.

For eg. if the input character is 'a' then after jumping two steps, the final character is 'c'.

if the input character is 'D' then after jumping two steps, the final character is 'F'.

. Once you reach the final character, make a string of length equal to three such that each character of the string contains the final character.

In the end, print the final string.

Input Format

For each test, a character will be given as an input.

Classwork Questions-

97 99 101 103

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

98 100 102

Problem | Submissions | Leaderboard | Discussions

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

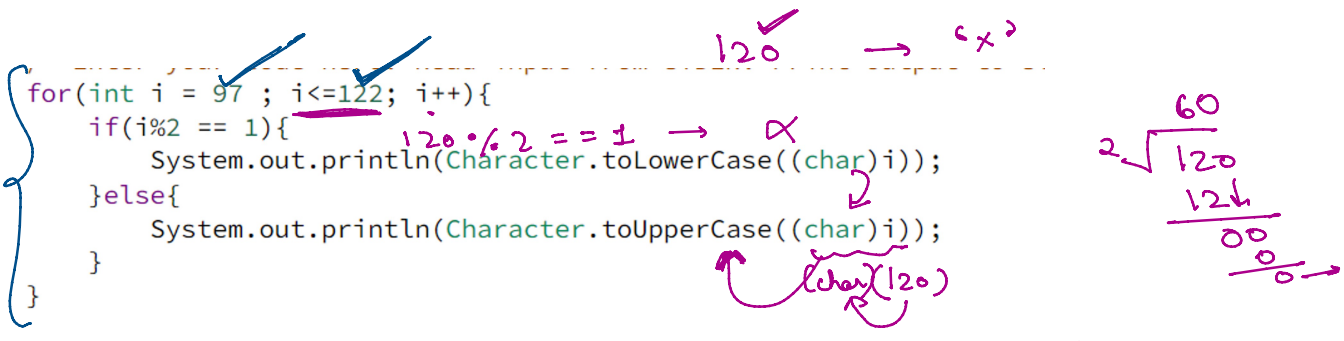
```
for (int i = 97 ; i ≤ 122 ; i++)
    if (i % 2 == 1) //odd
        print ( Character.toLowerCase ((char) i))
    else → //even
        print ( "" . toUpperCase ((char)(i)) → "B")
```

'a' = 97.

'b' = 98

120 → 'x'

```java
for(int i = 97 ; i<=122; i++){
    if(i%2 == 1){
        System.out.println(Character.toLowerCase((char)i));
    }else{
        System.out.println(Character.toUpperCase((char)i));
    }
}
```




```java
/* Enter your code here. Read input
char ch1 ='a';
char ch2 = 'B';
for(char i = 1; i<=26; i++){
    if(i%2 == 0) // even
    {
        System.out.println(ch2);
        ch2+=2;
    }else{
        System.out.println(ch1);
        ch1+=2;
    }
}
```

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

Problem | Submissions | Leaderboard | Discussions

Input Format

No input will be given

```
for(char ch = 'a' ; ch < 'z'; ch+=2){
    System.out.println(ch);
}
```

97 — 122

i % 2 == 1 → odd

Syso ( )

1 → 26 → odd value → print

'a' 'c' 'e' 'g' 'i' 'k' ---- 'z'

Print z, y, x.... till 26 characters

```
for(char ch ='z'; ch>='a' ; ch--){
    System.out.println(ch);
}
```

Print "even" or "odd" from a list of integers

Problem | Submissions | Leaderboard | Discussions

First take n as an integer input. → n

(for i = 1 → n) → int num = scn.nextInt();

Then you will be given n integers as integer inputs and each time you have to print "even" if the number is an even number and "odd" if the number is an odd number.

num =

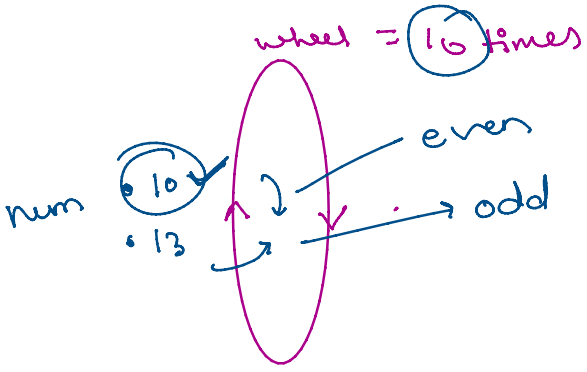
num % 2 == 0

↳ print even

else print odd

Input Format

For each test case, You will be given an integer n of int data-type in the first line, After this you will be given n integers each of int data-type in separate lines.



3 → n

10

13 → num → for loop

14

Sample Output 0

even

odd

even

```
odd
even
```

```java
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
for(int i = 1 ; i <= n ; i++){
    int num = scn.nextInt();
    if(num % 2 == 0){
        System.out.println("even");
    }else{
        System.out.println("odd");
    }

}
```

Sample Input 1

```
5
10
13
14
11
100
```

Sample Output 1

```
even
odd
even
odd
even
```

for ( ) taking .

for (if → even
else → oda)

Int = scn.nextInt();

Double = scn.nextDouble();

float = scn.nextFloat();

String = scn.next(); → "Hello friends";

String = scn.nextLine(); → "Hello friends";

char = scn.next().charAt(0);