# Print final z given xyz

Take in **x**, **y**, **z** as integer inputs from the user,

a. If **x is greater than or equal to 20** and **z is less than 100** then **add 200 to the value of z.**

b. If **x is greater than or equal to 10**, or **y is less than 50** Then **add 100 to the value of z.**

In the end print the final value of **z** as an integer output.

psudo code

```
if ( x >= 20 && z < 100 ) {
    z = z + 200;
} else if ( x >= 10 || y < 50 ) {
    z = z + 100;
}
```

Note:- && operator works when both cond$^n$ are true

|| operator works when any one of the cond$^n$ is true.

Code

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();
    int z = scn.nextInt();

    if ( x >= 20 && z < 100 ) {
        z = z + 200;
    } else if ( x >= 10 || y < 50 ) {
        z = z + 100;
    }
    System.out.println(z);
}
```

# Print if divisible by both 3 and 4

```
int n = scn.nextInt();
```

n = 15

check for divisibility

- n % 3 == 0
- n % 4 == 0

Code

```
public static void main(String[] args) {
    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");
    }
}
```

# Print z and x divisible by 3

If **x** was divisible by **3**, the program checked the value of **y**.

If **y** was greater than or equal to **200**, the program added **10** to the value of **z**.

If **y** was greater than or equal to **100** but less than **200**, the program added **5** to the value of **z.**

If **y** was greater than or equal to **50** but less than **100**, the program added **4** to the value of **z**.

If **y** was less than **50**, the program added **1** to the value of **z.**

On the other hand, if **x** was not divisible by **3**, the program also checked the value of **y**.

If **y** was greater than or equal to **200**, the program added **3** to the value of **z**.

If **y** was greater than or equal to **100** but less than **200**, the program added **2** to the value of **z.**

If **y** was less than **100**, the program added **1** to the value of **z.**

Finally, the program added **10** to the value of **z** and printed the final value of **z.**

Can you write a program to perform these operations using your programming skills?

code

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();
    int z = scn.nextInt();

    if ( x % 3 == 0 ) {

        if ( y >= 200 ) {
            z += 10;
        } else if ( y >= 100 ) {
            z += 5;
        } else if ( y >= 50 ) {
            z += 4;
        } else {
            z += 1;
        }

    } else if ( x % 3 != 0 ) {

        if ( y >= 200 ) {
            z += 3;
        } else if ( y >= 100 ) {
            z += 2;
        } else {
            z += 1;
        }

    }

    z += 10;
    System.out.println(z);
}
```

int a = 5;

Compilation exception
↳ syntax exception

Runtime exception
↳ logic exception

⇒ Characters , (char)

↳ all char are surrounded by single quotes.

ex:- 'A', 'b', '+', '2', '4' etc.

⇒ String :- collection of characters

Syntex

String s = "ABCDE";

= "a+*Bz4";

= "a"

# ⇒ Input a String

```
String str = scn.nextLine(); // "abc_XYZ_eFg"
String str = scn.next();     // abc
```

Input

1) "abc_XYZ_eFg"

2) "abcd"

→ Inbuilt functions :- (indexing)

range of String is same as range of int $2^{31}-1$

String str = "abcdefg";

0 1 2 3 4 5 6

1) str.length(); // 7 (return int)

2) str.charAt(6); // 'g' (return char)

7 // exception

↳ String Index Out Of Bound Exception

→ Input a char

input string

↳ char c = scn.next().charAt(0);

## Grade the student-2

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    char ch = scn.next().charAt(0);

    switch(ch) {
        case 'A':
            System.out.println("Excellent!");
            break;
        case 'B':
            System.out.println("Well done!");
            break;
        case 'C':
            System.out.println("You passed!");
            break;
        case 'F':
            System.out.println("Better luck next time!");
            break;
        default:
            System.out.println("Invalid grade");
    }
}
```

```java
import java.io.*;
import java.util.*;

public class Main {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        System.out.println("Please enter a number : ");
        int n = scn.nextInt();
        System.out.println("Now please enter a char : ");
        char c = scn.next().charAt(0);


        System.out.println("inputed number is : " + n);
        System.out.println("inputed char is : " + c);
    }
}
```

```
Finished in 182 ms
Please enter a number :
Now please enter a char :
inputed number is : 5
inputed char is : a
```

stdin

```
5
a
```