SAYNUM BOY

JAVA CONDITIONS AND IF STATEMENTS

PRESENTATION

@REALLYGREATSITE

TRIP CONDITIONS NO.1

OPARATOR

เงื่อนไขทางคณิตศาสตร์

- มากกว่า : *A>B*
- น้อยกว่า : *A<B*
- น้อยกว่า เท่ากับ : *A<=B*
- มากกว่า เท่ากับ : *A>=B*
- เท่ากับ : *A==B*
- ไม่เท่ากับ : *A!=B*

TABLE OF CONTENT

01 IF ELSE

02 SHORT HAND IF ELSE

03 SWITCH

```java
public class Example01Java {
    Run | Debug
    public static void main(String[] args){
        int a=3,b=8;
        if(a<=b){
            System.out.print(s: "Hello World");
        }
    }
}
```

IF

```
if(condition){
 --->DO THIS
}
```

ถ้า condition เป็นจริงจะทำคำสั่งตรง

--->DO THIS

เด็กชายสายน้ำไม่ได้กล่าวไว้

AUG 2022

ลองเทียบดูเล่นๆ

JAVA_VS_PYTHON

```java
public class Example01Java {
    Run | Debug
    public static void main(String[] args){
        int a=3,b=8;
        if(a<=b){
            System.out.print(s: "Hello World");
        }
    }
}
```

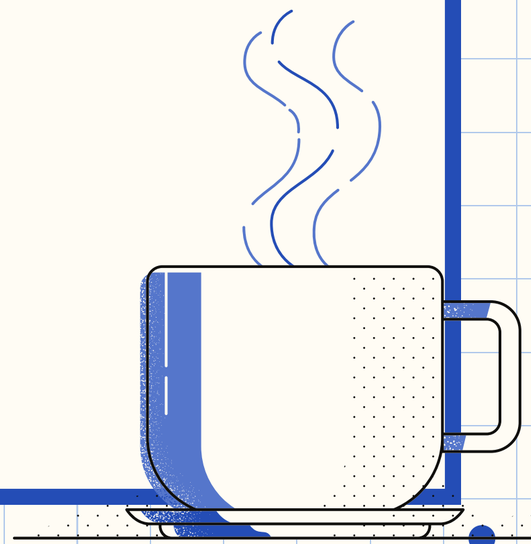
```python
a=3
b=8
if a<=b :
    print("Hello world")
```

```java
import java.util.Scanner;;

public class Example02Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input Number: ");
        Scanner txt = new Scanner(System.in);
        int number = txt.nextInt();
        String oddOrEven = new String();
        if(number % 2 == 0){
            oddOrEven = "even";
        }
        else{
            oddOrEven = "odd";
        }
        System.out.println(number + " is " + oddOrEven + " number.");
    }
}
```

IF...ELSE

```
if(condition){
 --->DO THIS
}
else{
 --->OR DO THIS
}
```



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JAVA_VS_PYTHON

```java
import java.util.Scanner;;

public class Example02Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input Number: ");
        Scanner txt = new Scanner(System.in);
        int number = txt.nextInt();
        String oddOrEven = new String();
        if(number % 2 == 0){
            oddOrEven = "even";
        }
        else{
            oddOrEven = "odd";
        }
        System.out.println(number + " is " + oddOrEven + " number.");
    }
}
```

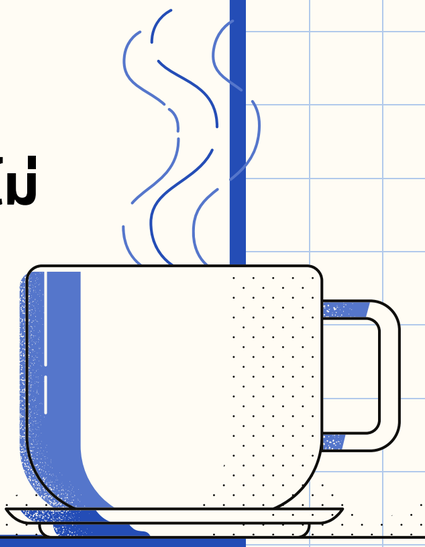
```python
number = int(input("input number: "))
if number%2==0 :
    oddOrEven = "even"
else :
    oddOrEven = "odd"
print(number,"is",oddOrEven,"number.")
```

```java
import java.util.Scanner;

public class Example03Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input number A: ");
        Scanner txt = new Scanner(System.in);
        int a = txt.nextInt();

        System.out.print(s: "Input number B: ");
        txt = new Scanner(System.in);
        int b = txt.nextInt();

        if(a>b)
        System.out.println(x: "a>b");
        else if(a<b)
        System.out.println(x: "a<b");
        else
        System.out.println(x: "a=b");
    }
}
```

IF...ELSE

```
if(condition)
 --->DO THIS
else if(other condition)
 --->OR DO THIS
else
 --->DO ME!!! PLS!!!
```

ถ้าหากมีเพียง 1 คำสั่งสามารถไม่ใส่ "{...}" ก็ได้



เด็กชายสายน้ำไม่ได้กล่าวไว้
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JAVA_VS_PYTHON

```java
import java.util.Scanner;

public class Example03Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input number A: ");
        Scanner txt = new Scanner(System.in);
        int a = txt.nextInt();

        System.out.print(s: "Input number B: ");
        txt = new Scanner(System.in);
        int b = txt.nextInt();

        if(a>b)
        System.out.println(x: "a>b");
        else if(a<b)
        System.out.println(x: "a<b");
        else
        System.out.println(x: "a=b");
    }
}
```

```python
a = int(input("input number A: "))
b = int(input("input number B: "))
if a<b :
    print("a<b")
elif a>b :
    print("a>b")
else :
    print("a=b")
```

TRIP CONDITIONS NO.2

LOGIC OPARATORS

- *AND: condition A && condition B*
- *OR: condition A || condition B*
- *NOT : !(condition)*

```java
public class Example04Java {
    Run | Debug
    public static void main(String[] args) {
        int a=16;
        if(a>10 && a%2==0){
            System.out.println(x: "Statement 1 is OK.");
        }
        if(a<10 || a%2==0){
            System.out.println(x: "Statement 2 is OK.");
        }
        if(!(a%2!=0)){
            System.out.println(x: "Statement 3 is OK.");
        }
        if(a<10 && a%2==0){
            System.out.println(x: "Statement 4 is OK.");
        }
        if(a<10 || a%2==0 || a==16 || a!=8){
            System.out.println(x: "Statement 5 is OK.");
        }
    }
}
```

IF

ผลลัพธ์อันไหนจะออกมาบ้าง?

เด็กชายสายน้ำไม่ได้กล่าวไว้

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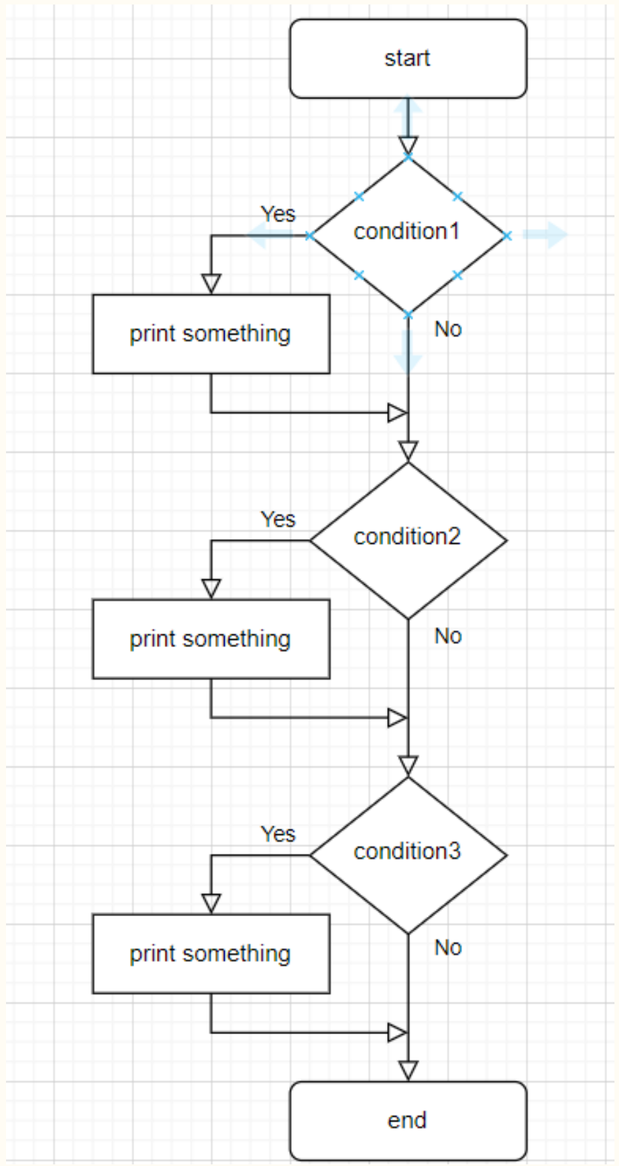
```java
public class Example04Java {
    Run | Debug
    public static void main(String[] args) {
        int a=16;
        if(a>10 && a%2==0){
            System.out.println(x: "Statement 1 is OK.");
        }
        if(a<10 || a%2==0){
            System.out.println(x: "Statement 2 is OK.");
        }
        if(!(a%2!=0)){
            System.out.println(x: "Statement 3 is
        }
        if(a<10 && a%2==0){
            System.out.println(x: "Statement 4 is O
        }
        if(a<10 || a%2==0 || a==16 || a!=8){
            System.out.println(x: "Statement 5 is OK.");
        }
    }
}
```

VS

```java
public class Example05Java {
    Run | Debug
    public static void main(String[] args) {
        int a=16;
        if(a>10 && a%2==0){
            System.out.println(x: "Statement 1 is OK.");
        }
        else if(a<10 || a%2==0){
            System.out.println(x: "Statement 2 is OK.");
        }
        else if(!(a%2!=0)){
            System.out.println(x: "Statement 3 is OK.");
        }
        else if(a<10 && a%2==0){
            System.out.println(x: "Statement 4 is OK.");
        }
        else if(a<10 || a%2==0 || a==16 || a!=8){
            System.out.println(x: "Statement 5 is OK.");
        }
    }
}
```

```java
public class Example04Java {
    Run | Debug
    public static void main(String[] args) {
        int a=16;
        if(a>10 && a%2==0){
            System.out.println(x: "Statement 1 is OK.");
        }
        if(a<10 || a%2==0){
            System.out.println(x: "Statement 2 is OK.");
        }
        if(!(a%2!=0)){
            System.out.println(x: "Statement 3 is OK.");
        }
        if(a<10 && a%2==0){
            System.out.println(x: "Statement 4 is OK.");
        }
        if(a<10 || a%2==0 || a==16 || a!=8){
            System.out.println(x: "Statement 5 is OK.");
        }
    }
}
```



```java
public class Example05Java {
    Run | Debug
    public static void main(String[] args) {
        int a=16;
        if(a>10 && a%2==0){
            System.out.println(x: "Statement 1 is OK.");
        }
        else if(a<10 || a%2==0){
            System.out.println(x: "Statement 2 is OK.");
        }
        else if(!(a%2!=0)){
            System.out.println(x: "Statement 3 is OK.");
        }
        else if(a<10 && a%2==0){
            System.out.println(x: "Statement 4 is OK.");
        }
        else if(a<10 || a%2==0 || a==16 || a!=8){
            System.out.println(x: "Statement 5 is OK.");
        }
    }
}
```

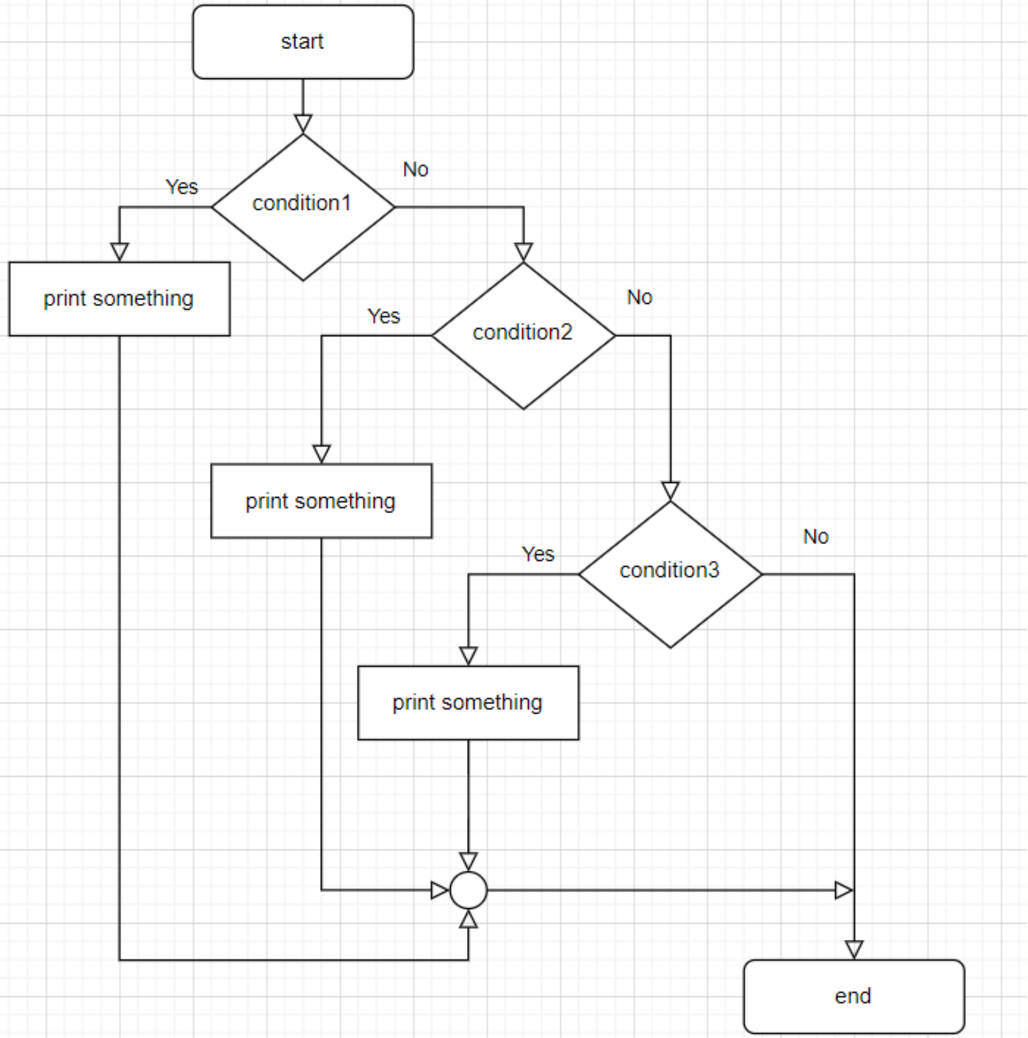


TABLE OF CONTENT

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02 SHORT HAND IF ELSE

03 SWITCH

SHORT HAND IF ELSE (TERNARY OPERATOR)

TERNARY OPERATOR

```
variable = (condition) ? expressionTrue :  expressionFalse;
```

IF ... ELSE

```java
import java.util.Scanner;;

public class Example02Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input Number: ");
        Scanner txt = new Scanner(System.in);
        int number = txt.nextInt();
        String oddOrEven = new String();
        if(number % 2 == 0){
            oddOrEven = "even";
        }
        else{
            oddOrEven = "odd";
        }
        System.out.println(number + " is " + oddOrEven + " number.");
    }
}
```

TERNARY OPERATOR

```java
import java.util.Scanner;

public class Example06Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input Number: ");
        Scanner txt = new Scanner(System.in);
        int number = txt.nextInt();
        String oddOrEven = (number % 2 == 0) ? "Even" : "Odd" ;
        System.out.println(number + " is " + oddOrEven + " number.");
    }
}
```

SHORT HAND IF ELSE (TERNARY OPERATOR)

TERNARY OPERATOR

```
variable = (condition) ? expressionTrue :  expressionFalse;
```

Ternary Operator สามารถทำได้หลาย condition ใน 1 บรรทัด

```java
import java.util.Scanner;

public class Example07Java {
    Run | Debug
    public static void main(String[] args) {
        System.out.print(s: "Input Number: ");
        Scanner txt = new Scanner(System.in);
        float number = txt.nextFloat();
        String OddOrEven = (number % 2 == 0) ? "Even" : (number % 2 == 1) ? "Odd": "float";
        System.out.println(number + " is " + OddOrEven + " number.");
    }
}
```

SHORT HAND IF ELSE (TERNARY OPERATOR)

TERNARY OPERATOR

ลองทำโจทย์ง่ายๆ (มั้ง)

-รับค่าอายุของคนมาเป็นจำนวนเต็ม
ถ้าอายุไม่เกิน 18 ปีจะถือว่าเป็นเด็ก(young)
ถ้าอายุตั้งแต่ 19 ถึง 45 ปีจะถือว่าเป็นผู้ใหญ่(adult)
ถ้าอายุมากกว่า 45 ปีจะถือว่าเป็นผู้สูงอายุ(elder)
กำหนดให้ค่าอายุที่ input มีค่าอยู่ในช่วง 1-100

ให้ลองใช้ SHORT HAND IF ELSE

TABLE OF CONTENT

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03 SWITCH

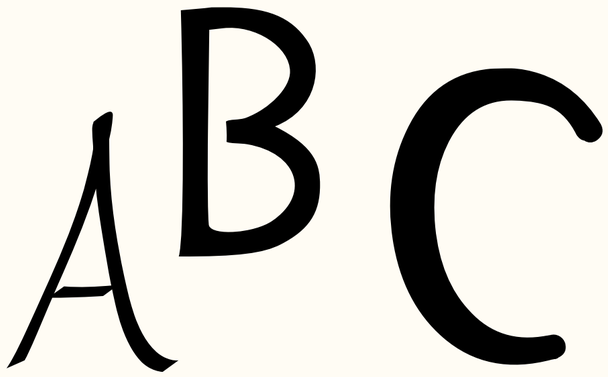
SWITCH CASE

SWITCH CASE

```
switch(expression){
      case x:
            คำสั่งอะไรสักอย่าง1
            break;
      case y:
            code something
            break;
      default:
            คำสั่งอะไรสักอย่าง2
}
```

SWITCH CASE

expression เป็นอะไรได้บ้าง?



ตัวแปร Char
ตัวแปร Integer ต่างๆ(byte, short, int)
String ก็ได้นะ

SWITCH CASE

expression ควรระวัง!!!

Boolean, ตัวแปรที่เป็นทศนิยม(float, double)
long ก็ไม่ได้นะ

```java
public class Example09Java {
    Run | Debug
    public static void main(String[] args) {
        int day = 3;
        switch(day){
            case 1:
                System.out.print(s: "Today is Monday.");
                break;
            case 2:
                System.out.print(s: "Today is Tuesday.");
                break;
            case 3:
                System.out.print(s: "Today is Wednesday.");
                break;
            case 4:
                System.out.print(s: "Today is Thursday.");
                break;
            case 5:
                System.out.print(s: "Today is Friday.");
                break;
            case 6:
                System.out.print(s: "Today is Saturday.");
                break;
            case 7:
                System.out.print(s: "Today is Sunday.");
                break;
            default:
                System.out.print(s: "Today is Today.");
        }
    }
}
```

SWITCH CASE

จะได้วันอะไรน้า~

เด็กชายสายน้ำไม่ได้กล่าวไว้

AUG 2022

SWITCH CASE

SWITCH CASE

```
case 6:
    System.out.print(s: "Today is Saturday.");
    break;
case 7:
    System.out.print(s: "Today is Sunday.");
    break;
default:
    System.out.print(s: "Today is Today.");
```

break; สำคัญมากอย่าลืมใส่เมื่อจบ case แล้ว

SWITCH CASE

SWITCH CASE

```
case 3:
    System.out.print(s: "Today is Wednesday.");
case 4:
    System.out.print(s: "Today is Thursday.");
    break;
```

แล้วถ้าไม่ใส่ break; จะเกิดอะไรขึ้น

SWITCH CASE

SWITCH CASE

```
case 3:
    System.out.print(s: "Today is Wednesday.");
case 4:
    System.out.print(s: "Today is Thursday.");
    break;
```

แล้วถ้าไม่ใส่ break; จะเกิดอะไรขึ้น

```
Today is Wednesday.Today is Thursday.
```

SWITCH CASE

SWITCH CASE

ลองทำโจทย์ง่ายๆ (มั้ง)

-ทำหน้าให้เลือกโหมดมีหน้าตาประมาณนี้ ให้ลองใช้ switch case

```
SWITCH CASE GAME
Select your mode
1 : play game
2 : setting game
3 : exit game T_T
Select Mode:
```

```
SWITCH CASE GAME
Select your mode
1 : play game
2 : setting game
3 : exit game T_T
Select Mode:
```

ลองทำโจทย์ง่ายๆ (ต่อ)

-ถ้าเลือก 1

```
Wow! This game is very fun.
Good luck
```

-ถ้าเลือก 2

```
This is setting game.
```

-ถ้าเลือก 3

```
See you agian BYE!!! T_T
```

-ถ้ากรอกเลขอื่น

```
What?
```

ขอบคุณครับ