

Java day 5

Conditional statements

Mainly there are two types of conditional statements are there in java they are

- I. if statements
- II. switch statement

I If statement

The java if statement is used to test the condition. The boolean condition true or false there are various if statements are there in java

- 1.if statement
- 2.if else statement
- 3.if else if ladder
- 4.nested if statement

1.if statement

Java if statement tests the condition if the condition is true it executes the if block

Example :

```
public class Ifexample {  
    public static void main(String[] args) {  
        int age=20;  
        if(age>18){  
            System.out.print("Age is greater than 18");  
        }  
    }  
}
```

2.if else statement

It executes the if block if condition is true otherwise it executes the else block

Example :

```
public class Ifelse {  
    public static void main(String[] args) {  
        int age=20;  
        if(age>18){  
            System.out.print("Age is greater than 18");  
        }  
        else{  
            System.out.print("Age is less than 18");  
        }  
    }  
}
```

3.if else if ladder

The if else if ladder executes one condition from multiple statements

Example :

```
public class Ifelseif {
    public static void main(String[] args) {
        int age=18;
        if(age>18){
            System.out.print("Age is greater than 18");
        }
        else if(age<18){
            System.out.print("Age is less than 18");
        }
        else {
            System.out.print("Age is equal to 18");
        }
    }
}
```

4.nested if statement

The nested if statement is represents the if block within the another if block.inner block is executed only when the outer block condition is true

Example :

```
public class Nestedif {
    public static void main(String[] args) {
        int age=20;
        int height=170;
        if(age==20){
            if(height>165){
                System.out.print("he is tall");
            }
        }
    }
}
```

II.Switch statement

Java switch statement executes one statement from multiple conditions. It is like if else if ladder statement. The switch statement work with byte,short,int,long,enum types

```
public class Switchex {
    public static void main(String[] args) {
```

```

int number=20;
switch(number){
case 10: System.out.println("10");
break;
case 20: System.out.println("20");
break;
case 30: System.out.println("30");
break;
default: System.out.println("Not in 10, 20 or 30");
}
}
}

```

Loop statements

In a programming language loops are used to execute the statements repeatedly when some condition becomes true there are three types of loops

I for loop

II while loop

III do-while loop

I. for loop

A for loop is a repetition control structure that allows you to efficiently write a loop that needs to be executed a specific number of times. A for loop is useful when you know how many times a task is to be repeated.

Example :

```

public class Forex {
public static void main(String[] args) {
    for(int i=1;i<=10;i++){
        System.out.println(i);
    }
}

```

```
}  
}
```

II. while loop

A while loop statement in Java programming language repeatedly executes a target statement as long as a given condition is true.

Example :

```
public class Whileex {  
    public static void main(String[] args) {  
        int i=1;  
        while(i<=10){  
            System.out.println(i);  
            i++;  
        }  
    }  
}
```

III.do-while loop

A do...while loop is similar to a while loop, except that a do...while loop is guaranteed to execute at least one time.

Example :

```
public class DoWhileex {  
    public static void main(String[] args) {  
        int i=1;  
        do{  
            System.out.println(i);  
            i++;  
        }  
    }  
}
```

```

    }while(i<=10);
}
}

```

Write a java program to print the following series using while loop and for loop
1,2,4,7,11,16,22.... For a given number n.

```

public class sequence {
    public static void main(String args[]){
        int s=1,n=50;
        /*      for(int i=0;i<n;i++){
                    s=s+i;
                    if(s<n){
                        System.out.println(s);
                    }
                    else
                        break;
                }*/
        int i=0;
        while(s<n){
            s=s+i;
            if(s<n){
                System.out.println(s);
                i=i+1;
            }
            else
                break;
        }
    }
}

```

Write a java program to print all the alphabets using while loop and for loop.

```
public class Alphabets {  
  
    public static void main(String args[]){  
  
        //while loop  
  
        /*char ch ='a';  
        while(ch<='z'){  
            System.out.println(ch);  
            ch++;  
        }*/  
  
        //for loop  
  
        char ch;  
        for(int i='a';i<='z';i++){  
            ch=(char)i;  
            System.out.println(ch);  
        }  
    }  
}
```

Write a java program to print the following pattern

Input n = 3

*

**

```
*****
*****
***
*****
```

```
public class Pattern {

    public static void main(String args[]){

        int i,j,n=3;

        for(i=1;i<=n;i++)

        {

            for(j=1;j<=i*5;j++)

                System.out.print("*");

            System.out.print("\n");

            for(j=1;j<=i;j++)

                System.out.print("*");

            System.out.print("\n");

            for(j=1;j<=i*5;j++)

                System.out.print("*");

            System.out.print("\n");

        }

    }

}
```

