

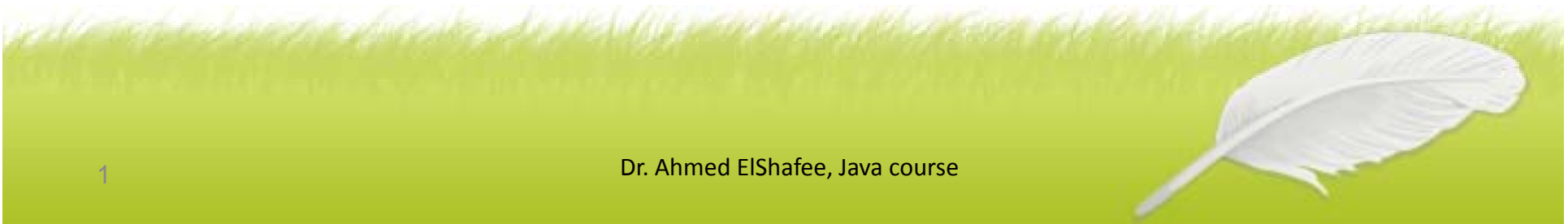


# Lecture (04)

## Conditional Logic

---

Dr. Ahmed ElShafee



# Agenda

---

- Introduction

# Introduction

---

- The programming you're doing now is sequential programming, meaning the code is executed from top to bottom.
- It's very linear, in that each and every line of code will be read, starting with the first line of code you write and ending at the last line.
- But you don't always want your programs to work like that.
- Often, you want code to be executed only if certain conditions are met.
- For example, you might want one message to display if a user is below the age of 18 and a different message if he or she is 18 or older.

- 
- You want to control the flow of the programme for yourself. You can do this with conditional logic.
  - Conditional logic is mainly about the IF word:
    - IF user is less than 18 then display this message;
    - IF user is 18 or older then display that message.Fortunately,
  - it's very easy to use conditional logic in Java.
  - Let's start with IF Statements.

# IF Statements

---

- For condition says “IF user is less than 18”.
- We use the shorthand notation of the left-pointing angle bracket ( < ).
- IF the user is less than 18 then we want something to happen, to display a message, for
- example:

```
if ( user < 18 ) {  
//DISPLAY MESSAGE  
}
```

- 
- If the user is not less than 18 then the code between the curly brackets will be skipped, and the program continues on its way, downwards towards the last line of code. Whatever you type between the curly brackets will only be executed
  - IF the condition is met, and this condition goes between the round brackets.
  - **“greater than 18”**

```
if ( user > 18 ) {  
//DISPLAY MESSAGE  
}
```

- 
- “greater than or equal to 18”

```
if ( user >= 18 ) {  
    //DISPLAY MESSAGE  
}
```

- “less than or equal to”

```
if ( user <= 18 ) {  
    //DISPLAY MESSAGE  
}
```

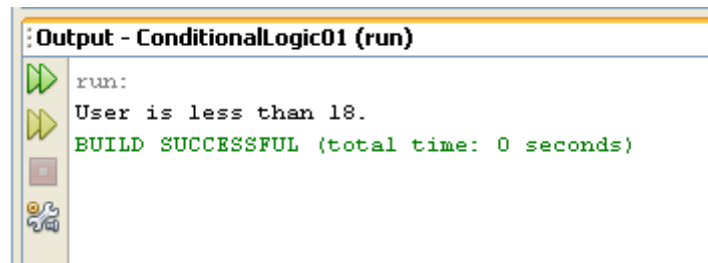
# ConditionalLogic01

---

```
package conditionallogic01;

/**
 *
 * @author Dr. Ahmed Elshafee
 */
public class IfStatment01 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        int user=17;
        if(user<18)
        {
            System.out.println("User is less than 18.");
        }
    }
}
```



```
Output - ConditionalLogic01 (run)
run:
User is less than 18.
BUILD SUCCESSFUL (total time: 0 seconds)
```



---

## Exercise

- Replace your “less than” symbol with the “less than or equal to” symbols.
- Change your message to suit, something like “user is less than or equal to 18”.
- Run your program again. Do you see the message?

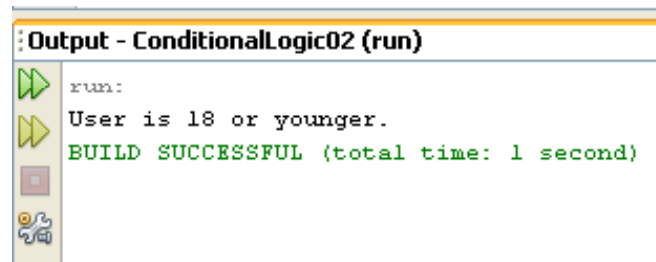
## Exercise

- Change the user value to 20. Run your program again.
- Do you still see the message?

# ConditionalLogic02

```
/**
 *
 * @author Dr. Ahmed Elshafee
 */
public class IfStatment02 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        int user=18;
        if(user<=18)
        {
            System.out.println("User is 18 or younger.");
        }
        if(user>18)
        {
            System.out.println("User is older than 18.");
        }
    }
}
```



```
Output - ConditionalLogic02 (run)
run:
User is 18 or younger.
BUILD SUCCESSFUL (total time: 1 second)
```

# ConditionalLogic03

```
* @author Dr. Ahmed Elshafee
*/
public class IfStatment03 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        int user=20;
        if(user<=18)
        {
            System.out.println("User is 18 or younger.");
        }
        if(user>18)
        {
            System.out.println("User is older than 18.");
        }
    }
}
```

```
Output - ConditionalLogic03 (run)
run:
User is older than 18.
BUILD SUCCESSFUL (total time: 0 seconds)
```

# IF ... ELSE

---

- Instead of using two IF Statements, you can use an IF ... ELSE Statement instead.
- Here's the structure of an IF ... ELSE statement:

```
if ( condition_to_test ) {  
    }  
else {  
    }
```

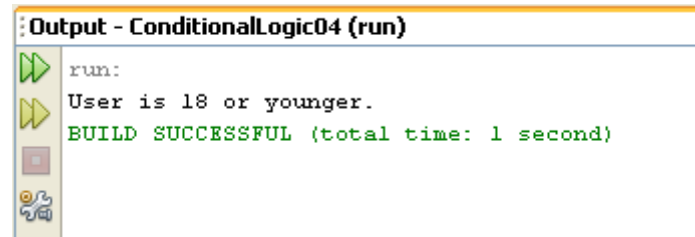
# ConditionalLogic04

---

```
package conditionallogic04;

/**
 *
 * @author Dr. Ahmed Elshafee
 */
public class IfElseStatment01 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        int user=17;
        if(user<=18)
        {
            System.out.println("User is 18 or younger.");
        }
        else
        {
            System.out.println("User is older than 18.");
        }
    }
}
```



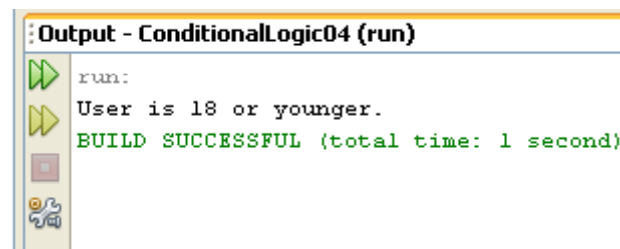
```
Output - ConditionalLogic04 (run)
run:
User is 18 or younger.
BUILD SUCCESSFUL (total time: 1 second)
```

# ConditionalLogic05

---

```
* @author Dr. Ahmed Elshafee
*/
public class IfElseStatment02 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
        int user=20;
        if(user<=18)
        {
            System.out.println("User is 18 or younger.");
        }
        else
        {
            System.out.println("User is older than 18.");
        }
    }
}
```



```
: Output - ConditionalLogic04 (run)
run:
User is 18 or younger.
BUILD SUCCESSFUL (total time: 1 second)
```

# IF ... ELSE IF

---



Thanks,  
See you next Lecture, isA

