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Day 23:- Assignment 7

1. what are the difference between the elseif and switch control construct.

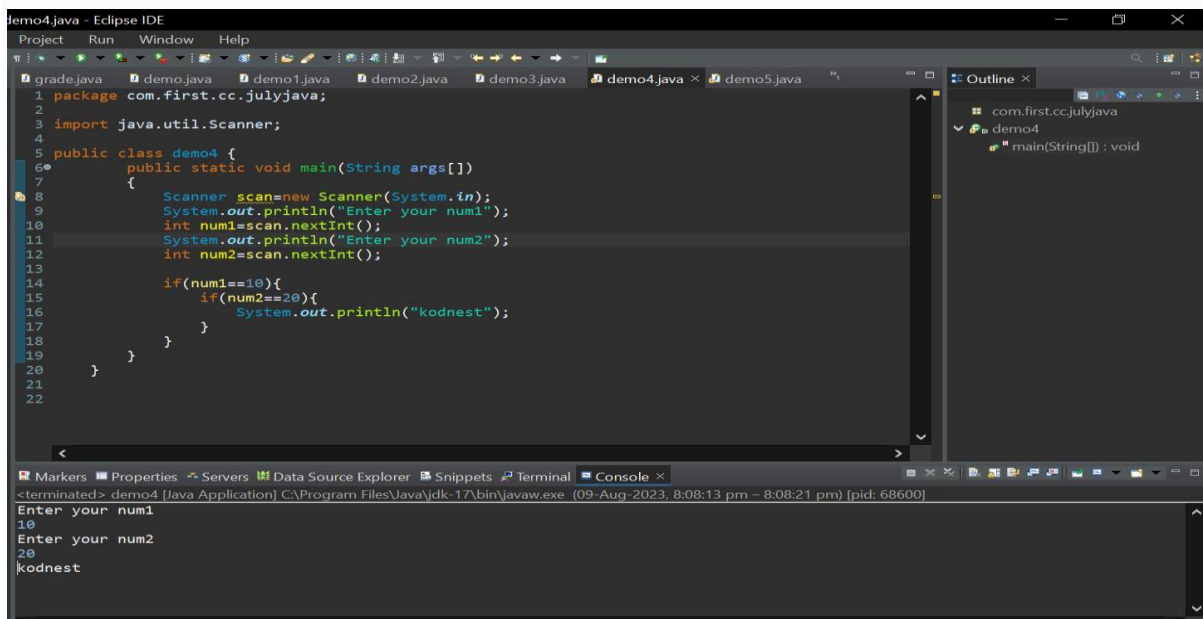
| | Else If | Switch |
|------------------------------|---|---|
| Definition | Depending on the condition in the 'if' statement, 'if' and 'else' blocks are executed. | The user will decide which statement is to be executed. |
| Expression | It contains either logical or equality expression. | It contains a single expression which can be either a character or integer variable. |
| Evaluation | It evaluates all types of data , such as integer, floating-point, character or Boolean. | It evaluates either an integer, or character. |
| Sequence of execution | First, the condition is checked. If the condition is true then 'if' block is executed otherwise 'else' block. | It executes one case after another till the break keyword is not found, or the default statement is executed. |
| Default execution | If the condition is not true, then by default, else block will be executed. | If the value does not match with any case, then by default, default statement is executed. |
| Editing | Editing is not easy in the 'if-else' statement. | Cases in a switch statement are easy to maintain and modify. Therefore, we can say that the removal or editing of any case will not interrupt the execution of other cases. |
| Speed | If there are multiple choices implemented through 'if-else', then the speed of the execution will be slow. | If we have multiple choices then the switch statement is the best option as the speed of the execution will be much higher than 'if-else'. |

2. Nested simple if :

Nested if refers to an if statement within an if statement. When we write an inner if condition within an outer if condition, then it is referred to as a nested if statement in java.

In the nested-if statement, the block of code is placed inside another if block. And the inner block of code will execute only when the outer condition holds true.

Example program:-Scenario :- write a java program Using nested if conditions, we have printed a statement. Here we have two variables are declared and then the according to the conditions the statement is executed



```
demo4.java - Eclipse IDE
Project Run Window Help
1 package com.first.cc.julyjava;
2
3 import java.util.Scanner;
4
5 public class demo4 {
6     public static void main(String args[])
7     {
8         Scanner scan=new Scanner(System.in);
9         System.out.println("Enter your num1");
10        int num1=scan.nextInt();
11        System.out.println("Enter your num2");
12        int num2=scan.nextInt();
13
14        if(num1==10){
15            if(num2==20){
16                System.out.println("kodnest");
17            }
18        }
19    }
20 }
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```

1 package com.first.cc.julyjava;
2
3 import java.util.Scanner;
4
5 public class demo5 {
6     public static void main(String[] args) {
7         Scanner scan=new Scanner(System.in);
8         System.out.println("Enter your age");
9         int age=scan.nextInt();
10        System.out.println("Enter your weight");
11        int weight=scan.nextInt();
12        if(age>=18){
13            if(weight>50){
14                System.out.println("You are eligible to donate blood");
15            } else{
16                System.out.println("You are not eligible to donate blood");
17            }
18        } else{
19            System.out.println("Age must be greater than 18");
20        }
21    }
22 }
23
24

```

Markers Properties Servers Data Source Explorer Snippets Terminal Console

<terminated> demo5 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (09-Aug-2023, 7:54:55 pm – 7:55:02 pm) [pid: 25804]

Enter your age
18
Enter your weight
60
You are eligible to donate blood

Example program 2:- find the tallest among 3 students: First, we'll use an if statement to determine whether the number is even or odd. Then, if the number were even, we would need to put another if and else statement. In the if block we again check whether the number is divisible by 6 or not. Likewise, in the else block, we would need to determine if the number is divisible by 3 or not.

```

5 public class demo6 {
6     public static void main(String[] args) {
7         Scanner scan=new Scanner(System.in);
8         System.out.println("Enter your student n1 height");
9         int n1=scan.nextInt();
10        System.out.println("Enter your student n2 height");
11        int n2=scan.nextInt();
12        System.out.println("Enter your student n3 height");
13        int n3=scan.nextInt();
14
15        if (n1 >= n2) {
16            if (n1 >= n3)
17                System.out.println("Student with height: " + n1 + " is the tallest.");
18            else
19                System.out.println("Student with height: " + n3 + " is the tallest.");
20        } else {
21            if (n2 >= n3)
22                System.out.println("Student with height: " + n2 + " is the tallest.");
23            else
24                System.out.println("Student with height: " + n3 + " is the tallest.");
25        }
26        System.out.println("\n");
27    }
28 }
29

```

Markers Properties Servers Data Source Explorer Snippets Terminal Console

<terminated> demo6 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (09-Aug-2023, 8:14:07 pm – 8:14:12 pm) [pid: 42052]

Enter your student n1 height
10
Enter your student n2 height
20
Enter your student n3 height
30
Student with height: 30 is the tallest.