

Switch Statement

Introduction:

In this lecture, we will delve into the switch statement in Java, a powerful control flow mechanism used to simplify the process of selecting among multiple alternatives. By the end of this session, you will grasp the syntax and functionality of the switch statement, along with its practical applications.

Syntax of the Switch Statement:

```
switch (expression) {  
    case value1:  
        // Code to be executed if expression matches value1  
        break;  
    case value2:  
        // Code to be executed if expression matches value2  
        break;  
    // Additional cases  
    default:  
        // Code to be executed if none of the cases match  
        break;  
}
```

Example: Using the Switch Statement to Determine Day of the Week:

```
public class SwitchExample {  
    public static void main(String[] args) {  
        int day = 4;  
  
        switch (day) {  
            case 1:  
                System.out.println("Monday");  
                break;  
            case 2:  
                System.out.println("Tuesday");  
                break;  
            case 3:  
                System.out.println("Wednesday");  
                break;  
            case 4:  
                System.out.println("Thursday");  
                break;  
            case 5:  
                System.out.println("Friday");  
                break;  
            case 6:  
                System.out.println("Saturday");  
            case 7:  
                System.out.println("Sunday");  
        }  
    }  
}
```

```
        break;
    case 7:
        System.out.println("Sunday");
        break;
    default:
        System.out.println("Invalid day");
        break;
    }
}
}
```

- **Explanation:**

- In the provided example, the day variable is set to 4.
- The switch statement evaluates the value of day and compares it against each case.
- When day equals 4, the case 4 is matched, and "Thursday" is printed.
- If day does not match any of the defined cases, the default case is executed, printing "Invalid day".

Conclusion:

The switch statement in Java provides an efficient way to handle multiple alternatives based on the value of an expression. By understanding its syntax and usage, you can write cleaner and more structured code. Experiment with different scenarios and explore how the switch statement can streamline your programming tasks.