Computer Programing in Java

Lecture 6
Java Switch

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Java Switch Statements

- Instead of writing many if..else statements, you can use the switch statement.
- The switch statement selects one of many code blocks to be executed:

Syntax
```
switch(expression) {
  case x:
    // code block
    break;
  case y:
    // code block
    break;
  default:
    // code block
}
```

This is how it works:

- The switch expression is evaluated once.
- The value of the expression is compared with the values of each case.
- If there is a match, the associated block of code is executed.
- The break and default keywords are optional, and will be described later in this chapter

First example

- The example below uses the weekday number to calculate the weekday name:

```java
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;
```

```java
    case 5:
      System.out.println("Friday");
      break;
    case 6:
      System.out.println("Saturday");
      break;
    case 7:
      System.out.println("Sunday");
      break;
}
// Outputs "Thursday" (day 4)
```

The break Keyword

- When Java reaches a break keyword, it breaks out of the switch block.
- This will stop the execution of more code and case testing inside the block.
- When a match is found, and the job is done, it's time for a break. There is no need for more testing.
- A break can save a lot of execution time because it "ignores" the execution of all the rest of the code in the switch block.

The default Keyword

- The default keyword specifies some code to run if there is no case match:

```java
int day = 4;
switch (day) {
  case 6:
    System.out.println("Today is Saturday");
    break;
  case 7:
    System.out.println("Today is Sunday");
    break;
  default:
    System.out.println("Looking forward to the Weekend");
}
// Outputs "Looking forward to the Weekend"
```