Lesson 10: Date, Time, Regex Method

1. Java Date and Time- Java does not have a built-in Date class, but we can import the java.time package to work with the date and time API. The package includes many date and time classes. To display the current date, import the java.time.LocalDate class, and use its now() method:

   ```
   public static void main(String[] args) {
   LocalDate myObj = LocalDate.now(); // Create a date object
   System.out.println(myObj); // Display the current date
           }
   }
   Output:
   2022-09-20
   ```

2. To display the current time (hour, minute, second, and nanoseconds), import the java.time.LocalTime class, and use its now() method:

   ```
   public static void main(String[] args) {
   LocalTime myObj = LocalTime.now();
   System.out.println(myObj);
           }
   Output:
   14:29:51.748584
   ```

3. To display the current date and time, import the java.time.LocalDateTime class, and use its now() method:

   ```
   public static void main(String[] args) {
   LocalDateTime myObj = LocalDateTime.now();
   System.out.println(myObj);
           }
   Output:
   2022-09-20T14:29:51.748190
   ```

4. The Java Regex or Regular Expression is an API to define a pattern for searching or manipulating strings. It is widely used to define the constraint on strings such as password and email validation.

Java Regex API provides 1 interface and 3 classes in *java.util.regex* package.

Class	Description
Pattern	Defines a pattern (to be used in a search)
Matcher Class	Used to search for the pattern
PatternSyntaxException	Indicates syntax error in a regular expression pattern

5. First, the pattern is created using the Pattern.compile() method. The first parameter indicates which pattern is being searched for and the second parameter has a flag to indicate that the search should be case-insensitive.
6. The second parameter is optional. The matcher() method is used to search for the pattern in a string. It returns a Matcher object which contains information about the search that was performed.
7. The find() method returns true if the pattern was found in the string and false if it was not found.