Week 3- Session 5 Interview Questions

1. Is SimpleDateFormat safe to use in the multithreaded program?

Ans: No.If multiple threads access a format concurrently, it must be synchronized externally. So SimpleDateFormat instances are not thread-safe, and it should be used carefully in concurrent environments.

2. How do you format a date in Java? like in the ddMMyyyy format?
Ans: To format a date in java the DateFormat and SimpleDateFormat classes are used from the java.text package. We can easily format a date in our program by creating an instance of the SimpleDateFormat class and specify a format pattern. Calling the DateFormat.format(Date date) method will format a date into a date-time string.

3. Can you tell some differences between the old and new Date Time API of Java 8?
Ans:With Java 8, a new Date-Time API is introduced to cover the following drawbacks of old date-time API.
- **Not thread safe** − java.util.Date is not thread safe, thus developers have to deal with concurrency issues while using date. The new date-time API is immutable and does not have setter methods.
- **Poor design** − Default Date starts from 1900, month starts from 1, and day starts from 0, so no uniformity. The old API had less direct methods for date operations. The new API provides numerous utility methods for such operations.
- **Difficult time zone handling** − Developers had to write a lot of code to deal with timezone issues. The new API has been developed keeping domain-specific design in mind.

Java 8 introduces a new date-time API under the package java.time. Following are some of the important classes introduced in the java.time package.
- **Local** − Simplified date-time API with no complexity of timezone handling.
- **Zoned** − Specialized date-time API to deal with various time zones.

4. How do you copy a Date in Java?
Ans: The clone() method of Date class in Java returns the duplicate of the passed Date object. This duplicate is just a shallow copy of the given Date object. Parameters: The method does not accept any parameters. Return Value: The method returns a clone of the object.

5. What is the relationship between java.sql.Date and java.util.Date?
Ans: sql. Date just represents DATE without time information while java. util. Date represents both Date and Time information.

6. Can you format Calendar in Java?

Ans: No, the Calendar cannot be formatted in Java. You can only format dates.

7. How do you convert a Calendar to Date and vice-versa?
Ans: First, get Calendar instance using getInstance() method of Calendar
- For Calendar to Date conversion, invoke getTime() method on Calendar instance which will return current date/time in (E MMM dd HH:mm:ss z yyyy) format
- Finally, print Calendar/Date in different formats using DateFormat/SimpleDateFormat classes

8. What is the equivalent of Date class in Java 8?

Ans: The Instance class is the equivalent to java.util.Date in Java 8 because it also represents a millisecond value or an instance in the timescale. Java 8 has also added conversion method e.g. toInstant() and fromDate() to convert instance to java.util.Date and vice-versa. Refer Java SE 8 for Really Impatient By Cay S. Horstmann for more details.

9. How do you convert a millisecond to a Date in Java?
Ans: To convert a millisecond to Date we use java.util.Date(long Millis) constructor or java.util.Calendar.setTimeInMillis() method.

10. How do you get a month and year from a Date object in Java?
Ans: You can convert a Date to a Calendar and then use its get() method with various fields to get the month, year, day of the week, and other date particulars
e.g. int day = calendar.get(Calendar.DATE); // returns the day
int month = calendar.get(Calendar.MONTH) + 1; // month starts from 0 int
year = calendar.get(Calendar.YEAR) + 1900; // year starts from 1900

11. How do you compare two dates in Java to check if they are equal?
Ans: We use compareTo() function from the Date class to compare the two dates. compareTo() function returns: 0 if both dates are equal. 1 if date1 comes after date2.

12. How do you find if one date comes before or after another date in Java?
Ans: The after() is a method of Calendar class which is used to identify if a specified date comes after the passed date. It accepts a date as an argument and returns true when the first date object is after the passed date object

otherwise false.

13. How do you convert java.util.Date to java.sql.Date in Java JDBC?
Ans: Since java.sql.The date is a subclass of java.util.Date you can simply get the time in a millisecond and passed it to SQL date as shown below:
Date now = new Date();

java.sql.Date sqlDate = new java.sql.Date(now.getTime());

14. How do you convert a string (YYYYMMDD) to date in Java?
Ans: To convert String to Date in java we use the parse*()* method of DateFormat and SimpleDateFormat classes.