

If we need to show the amount of time taken e.g 2 days or 3 hours then we need to use the `Period` and `Duration` classes introduced in Java 8 time API.

Let's have a deeper look into these classes.

Period#

A period represents the date-based amount of time in the ISO-8601 calendar system, such as **2 years, 3 months, and 4 days**. This class is used to modify a given date or to find the difference between dates. We will look at some of the methods provided by this class and how they work.

a) Creating a period#

We can create a period using the `of()` method. There are multiple overloaded variants of the `of()` method. In the example given below, we will cover the most important ones.

```
1 import java.time.LocalDate;
2 import java.time.Period;
3
4 class DateTimeDemo {
5     public static void main(String args[]) {
6
7         Period period = Period.ofDays(5); // Period of 5 days.
8         System.out.println(period.getDays());
9
10        period = Period.ofMonths(3); // Period of 3 months.
11        System.out.println(period.getMonths());
12
13        period = Period.ofYears(2); // Period of 2 Years
14        System.out.println(period.getYears());
15
16
17        period = Period.of(2, 5, 12); // Period of 2 Years, 5 Months and 12 Days.
18        System.out.println(period.getYears());
19        System.out.println(period.getMonths());
20        System.out.println(period.getDays());
21
22    }
23 }
```

Run Save Reset

b) Finding the difference between two dates.#

To find the difference between two dates, we have a method called `between()` in the `Period` class.

```
1 import java.time.LocalDate;
2 import java.time.Period;
3
4 class DateTimeDemo {
5     public static void main(String args[]) {
6
7         Period period = Period.between(LocalDate.parse("2020-05-18"), LocalDate.parse("2017-04-17"));
8
9         System.out.println(period);
10
11    }
12 }
```

Run Save Reset

c) Getting a specific value from Period#

In the previous example, we saw that we can get a period using the `between()` method. We can fetch the specific value of the year, month, or days also from the period object.

Below is the example for the same.

```
1 import java.time.LocalDate;
2 import java.time.Period;
3
4 class DateTimeDemo {
5     public static void main(String args[]) {
6
7         Period period = Period.between(LocalDate.parse("2017-04-17"), LocalDate.parse("2020-05-18"));
8
9         int years = period.getYears();
10        int months = period.getMonths();
11        int days = period.getDays();
12
13        System.out.println("The difference between two dates is " + years + " Years, " + months + " Month
14
15    }
16 }
```

Run Save Reset

Duration#

Duration represents the time-based amount of time in the ISO-8601 calendar system, such as **8 minutes**. This class is used to modify a given time or to find the difference between times.

We will look at some of the methods provided by this class and how they work.

a) Creating a duration#

We can create a period using the `of()` method. There are multiple overloaded variants of the `of()` method. In the example given below, we will cover the most important ones.

```
1 import java.time.Duration;
2 import java.time.temporal.ChronoUnit;
3
4 class DateTimeDemo {
5     public static void main(String args[]) {
6
7         Duration duration = Duration.ofDays(1); // Created a duration of 1 day.
8         System.out.println(duration.getSeconds() + " seconds"); // This will return the number of seconds
9
10        duration = Duration.ofHours(2); // Created a duration of 2 hours.
11        System.out.println(duration.getSeconds() + " seconds"); // This will return the number of seconds
12
13        duration = Duration.ofMinutes(23); // Created a duration of 23 minutes.
14        System.out.println(duration.getSeconds() + " seconds"); // This will return the number of seconds
15
16        duration = Duration.of(1, ChronoUnit.HOURS);
17        System.out.println(duration.getSeconds() + " seconds");
18
19    }
20 }
```

Run Save Reset

b) Finding the difference between two values of values#

To find the difference between two values of time, we have a method called `between()` in the `Duration` class.

```
1 import java.time.Duration;
2 import java.time.LocalTime;
3
4 class DateTimeDemo {
5     public static void main(String args[]) {
6
7         Duration duration = Duration.between(LocalTime.parse("12:14"), LocalTime.parse("13:15"));
8
9         System.out.println("The difference is " + duration.getSeconds() + " Seconds");
10
11    }
12 }
```

Run Save Reset