

Experiment No. 11

Aim: Program to Implement Solution using Multiple paradigm

Description:

- The above Java program is a simple **horoscope generator** that prompts the user to enter their birth date in the format "DD/MM/YYYY" and then generates a personalized horoscope based on their zodiac sign.
- The program starts by importing the `Scanner` and `LocalDate` classes, which are used to read the user's input and parse the birth date, respectively.
- The `main()` method begins by creating a `Scanner` object to read the user's input and then prompts the user to enter their birth date. The input string is then converted to a `LocalDate` object using the `parse()` method and the specified date format.
- Next, the program calls the `getHoroscope()` method and passes the `LocalDate` object as an argument. The `getHoroscope()` method uses a series of if statements to determine the user's zodiac sign based on the month and day values of the `LocalDate` object.
- Finally, the program prints out the user's horoscope by concatenating the string "Your horoscope is: " with the horoscope returned by the `getHoroscope()` method.

Source Code:

```
import java.util.Scanner;
import java.time.LocalDate;

public class Horoscope {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        // Get the user's birthday
        System.out.print("Enter your birth date (DD/MM/YYYY): ");
        String birthdayStr = input.nextLine();

        // Convert the birthday string to a LocalDate object
        LocalDate birthday = LocalDate.parse(birthdayStr,
            java.time.format.DateTimeFormatter.ofPattern("dd/MM/yyyy"));

        // Get the user's horoscope
        String horoscope = getHoroscope(birthday);

        // Print the horoscope
        System.out.println("Your horoscope is: " + horoscope);
    }

    public static String getHoroscope(LocalDate birthday) {
        // Determine the user's zodiac sign based on their birthday
        if (birthday.getMonthValue() == 1 && birthday.getDayOfMonth() >= 20 ||
            birthday.getMonthValue() == 2 && birthday.getDayOfMonth() <= 18) {
            return "Aquarius";
        }
    }
}
```

```

    } else if (birthday.getMonthValue() == 2 && birthday.getDayOfMonth() >= 19 ||
birthday.getMonthValue() == 3 && birthday.getDayOfMonth() <= 20) {
        return "Pisces";
    } else if (birthday.getMonthValue() == 3 && birthday.getDayOfMonth() >= 21 ||
birthday.getMonthValue() == 4 && birthday.getDayOfMonth() <= 19) {
        return "Aries";
    } else if (birthday.getMonthValue() == 4 && birthday.getDayOfMonth() >= 20 ||
birthday.getMonthValue() == 5 && birthday.getDayOfMonth() <= 20) {
        return "Taurus";
    } else if (birthday.getMonthValue() == 5 && birthday.getDayOfMonth() >= 21 ||
birthday.getMonthValue() == 6 && birthday.getDayOfMonth() <= 20) {
        return "Gemini";
    } else if (birthday.getMonthValue() == 6 && birthday.getDayOfMonth() >= 21 ||
birthday.getMonthValue() == 7 && birthday.getDayOfMonth() <= 22) {
        return "Cancer";
    } else if (birthday.getMonthValue() == 7 && birthday.getDayOfMonth() >= 23 ||
birthday.getMonthValue() == 8 && birthday.getDayOfMonth() <= 22) {
        return "Leo";
    } else if (birthday.getMonthValue() == 8 && birthday.getDayOfMonth() >= 23 ||
birthday.getMonthValue() == 9 && birthday.getDayOfMonth() <= 22) {
        return "Virgo";
    } else if (birthday.getMonthValue() == 9 && birthday.getDayOfMonth() >= 23 ||
birthday.getMonthValue() == 10 && birthday.getDayOfMonth() <= 22) {
        return "Libra";
    } else if (birthday.getMonthValue() == 10 && birthday.getDayOfMonth() >= 23 ||
birthday.getMonthValue() == 11 && birthday.getDayOfMonth() <= 21) {
        return "Scorpio";
    } else if (birthday.getMonthValue() == 11 && birthday.getDayOfMonth() >= 22 ||
birthday.getMonthValue() == 12 && birthday.getDayOfMonth() <= 21) {
        return "Sagittarius";
    } else if (birthday.getMonthValue() == 12 && birthday.getDayOfMonth() >= 22 ||
birthday.getMonthValue() == 1 && birthday.getDayOfMonth() <= 19) {
        return "Capricorn";
    } else {
        return "Invalid birth date";
    }
}
}
}

```

Screenshots:

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

● dhir4j@dhir4j-linux:~/Desktop$ cd "/home/dhir4j/Desktop/" && javac Horoscope.java && java Horoscope
Enter your birth date (DD/MM/YYYY): 31/03/2004
Your horoscope is: Aries
● dhir4j@dhir4j-linux:~/Desktop$ cd "/home/dhir4j/Desktop/" && javac Horoscope.java && java Horoscope
Enter your birth date (DD/MM/YYYY): 07/11/2011
Your horoscope is: Scorpio
● dhir4j@dhir4j-linux:~/Desktop$ cd "/home/dhir4j/Desktop/" && javac Horoscope.java && java Horoscope
Enter your birth date (DD/MM/YYYY): 08/01/2023
Your horoscope is: Capricorn
○ dhir4j@dhir4j-linux:~/Desktop$ █

```

Conclusion: Thus, we have created a program to implement solution using multiple paradigm.