Practical No. 12

Aim: Create, debug and run java programs based on user defined exception.

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Theory:

What are user defined exceptions?

→ In Java, we can create our own exceptions that are derived classes of the Exception classes.

- Creating our own exception is known as custom exception or user defined exception.
- Basically, the custom exceptions in Java are used to customize the exception according to user need.

Why should we use custom exeptions?

→

- To catch and provide specific treatment to a subset of existing java exceptions.
-

Syntax:

```
public class className extends Exception {

    public className ( parameter ) {
        Statement(s);
    }
}
```

Conclusion:

Hence, I learnt about the concept of user defined exception handling and developed, debugged and executed programs based on the concept.

Code:

```
import java.util.InputMismatchException;
import java.util.Scanner;

class InvalidAgeForVaccinationException extends Exception{
    InvalidAgeForVaccinationException(int age){
        int requiredYears = 18 - age;
        System.out.println("You are currently " + age + " years old. You need to be
" + requiredYears + " years older to get vaccinated.");
    }
}


class Practical12{

    public static int setAge(){
        Scanner sc = new Scanner(System.in);
        int age = 0;
        try{
            System.out.print("Enter your age : ");
            age = sc.nextInt();
        }catch(InputMismatchException e){
            System.out.println("Wrong input, please re-enter age again");
            age = setAge();
        }catch (Exception e){
            System.out.println("Unexpected error : ");
            System.out.println(e);
            System.out.println("Setting age to 0.");
        }finally {
            return age;
        }
    }


    public static void main(String[] args) {
        System.out.println("\n--------------------------\nCovid Vaccine
Registration\n--------------------------\n");
        Scanner sc = new Scanner(System.in);
        int age;
        try{
            age = setAge();
            if(age < 18){
                throw new InvalidAgeForVaccinationException(age);
            }
```

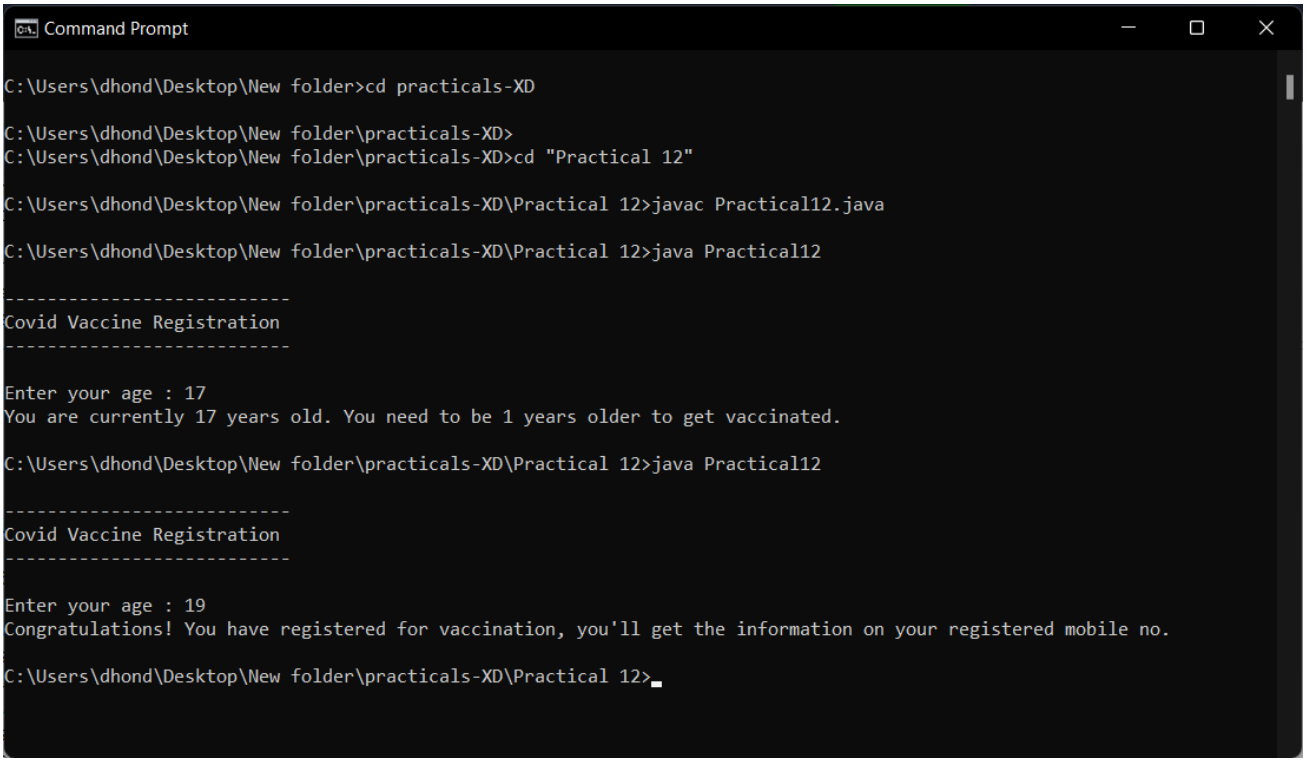
```
            System.out.println("Congratulations! You have registered for
vaccination, you'll get the information on your registered mobile no.");

        }catch(InvalidAgeForVaccinationException e){
//            System.out.println("Exception : " + e);
        }

    }

}
```

Output:



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