

Write a Java program that prompts the user to enter their name and age, validates the inputs, and prints a greeting message to the console. If the user enters an invalid age, the program should throw a custom exception called "InvalidInputException". The program should be implemented as follows:

Create a custom exception class called "InvalidInputException" that printout the error message "Invalid age: Age should be a positive integer less than or equal to 120" if the age is a negative number or greater than 120.

Create another class "GreetingValidator" to get the user inputs through the main method. The program should prompt the user to enter their name and age.

The program should validate the age by checking that it is a positive integer less than or equal to 120. If the age is invalid, the program should throw an InvalidInputException.

If age is valid, the program should print a greeting message to the console that includes the user's name and age.

#### **ANSWER:**

```
import java.util.Scanner;

class InvalidInputException extends Exception {
    public InvalidInputException(String message) {
        super(message);
    }
}

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

        System.out.print("Enter your name: ");
        String name = scanner.nextLine();

        int age = 0;
        boolean isValidAge = false;

        while (!isValidAge) {
            try {
                System.out.print("Enter your age: ");
                age = Integer.parseInt(scanner.nextLine());
            } catch (InvalidInputException e) {
                System.out.println(e.getMessage());
            }
        }

        System.out.println("Hello " + name + ", you are " + age + " years old.");
    }
}
```

```
        if (age <= 0 || age > 120) {
            throw new IllegalArgumentException("Invalid age: Age should be a positive integer less
than or equal to 120");
        }

        isValidAge = true;
    } catch (NumberFormatException e) {
        System.out.println("Invalid age format. Please enter a valid positive integer.");
    } catch (IllegalArgumentException e) {
        System.out.println(e.getMessage());
    }
}

System.out.println("Hello, " + name + "! You are " + age + " years old.");
}
}
```