



Higher Diploma in Information Technology

Object Oriented Programming (Java)

Year 1 Semester 2 – 2021

Nested Classes

Intended Learning Outcomes:

At the end of the class the students should be able to:

- To use Nested classes in java Applications

1. Write a class called Rider with following attributes and methods

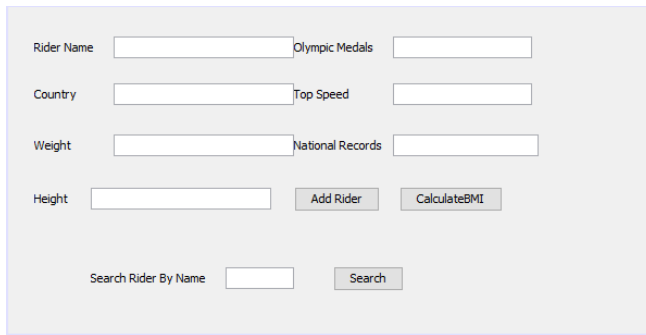
- Attributes
 - Name
 - Country
 - Age
 - Weight
 - Height
- Nested class Records with following attributes and methods.
 - Attributes
 - ✓ No_Of_Olympic_Medals.
 - ✓ TopSpeed.
 - ✓ No_National_Level_Records.
 - Methods
 - ✓ Constructor: -Take values accordingly
 - ✓ displayRecords:-Print all the details.

2. Write a method called calBMI which has a method local inner class called BMI as follows

- Attributes
 - WeightMetric
 - HeightMetric
- Methods
 - BMIMetric()-return bmi as a double value as follows

$$BMI = \frac{\text{mass (kg)}}{\text{height}^2 \text{ (m)}} :$$

3. Design the UI as follows.



The UI design is a light gray rectangular panel with a thin blue border. It contains the following elements:

- Rider Name:** A text label followed by a white input field, then the text "Olympic Medals" followed by another white input field.
- Country:** A text label followed by a white input field, then the text "Top Speed" followed by another white input field.
- Weight:** A text label followed by a white input field, then the text "National Records" followed by another white input field.
- Height:** A text label followed by a white input field, then two buttons: "Add Rider" and "CalculateBMI".
- Search:** A text label "Search Rider By Name" followed by a white input field, then a "Search" button.

4. Call the inner classes methods to implement the features described in the UI