Practice 07 (16-11-2021)

OOP Fall 2021

1. Create class Rational (for Rational numbers). Create parameterized constructor with appropriate default value of parameters. Implement following member functions:

- Equality Operator [Means ==, compare two rational numbers, if same return true otherwise return false]

- ++ [Pre Increment Operator to add 1 in rational number. Please don't add 1 in both data members, rather add 1 to rational number]

- -- [Post Decrement Operator to subtract 1 from rational number. Again, please don't subtract 1 from both data members, rather subtract 1 from rational number]

- += [Add second rational number into first rational number and return current object]

- *= [Multiply rational number with integer and return current object]

- /= [Divide rational number with integer and return current object]

2. Create a class MatchScore having data members [scores, number of balls played, strike rate (float), out/notout] and static class members [total score, total balls played and total players out]. For each object add score into total score, add number of balls played into total balls played and for each out and 1 to total players out. Implement following member functions:

- Parameterized constructor with 4 parameters corresponding to 4 data members. Manipulate static members according to the initial description

- Show function to show data members (only) with label like "Score:" etc.

Implement following static class functions to:

- get total score

- get total balls played

- get total players out

- get average strike rate [Divide total score with total balls played]

Implement main, create an array of 11 objects, using parameterized constructor. Call show function for all objects. Call all static functions.

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