

```
1 import components.map.Map1L;
4
5 /**
6  * Kernel interface for managing college basketball team
   statistics.
7  */
8 public interface CollegeBasketballTeamKernel
9     extends Standard<CollegeBasketballTeam> {
10
11     public enum StatCategory {
12         FIRST_HALF_POINTS_PER_GAME, SECOND_HALF_POINTS_PER_GAME,
        ASSIST_TO_TURNOVER_RATIO, ASSISTS_PER_FIELD_GOAL_MADE,
        ASSISTS_PER_GAME, ASSISTS_PER_POSSESSION,
        AVERAGE_FIRST_HALF_MARGIN, AVERAGE_SECOND_HALF_MARGIN,
        AVERAGE_OVERTIME_MARGIN, AVERAGE_SCORING_MARGIN,
        BLOCK_PERCENTAGE, BLOCKS_PER_GAME, DEFENSIVE EFFICIENCY,
        DEFENSIVE_REBOUNDING_PERCENTAGE, DEFENSIVE_REBOUNDS_PER_GAME,
        EFFECTIVE_FIELD_GOAL_PERCENTAGE, EFFECTIVE_POSSESSION_RATIO,
        EXTRA_CHANCES_PER_GAME, FIELD_GOALS_ATTEMPTED_PER_GAME,
        FIELD_GOALS_MADE_PER_GAME, FLOOR_PERCENTAGE,
        FREE_THROW_PERCENTAGE, FREE_THROW_RATE,
        FREE_THROWS_ATTEMPTED_PER_GAME, FREE_THROWS_MADE_PER_GAME,
        FTA_PER_FGA, FTM_PER_100_POSSESSIONS,
        NON_BLOCKED_TWO_POINT_PERCENTAGE, OFFENSIVE EFFICIENCY,
        OFFENSIVE_REBOUNDING_PERCENTAGE, OFFENSIVE_REBOUNDS_PER_GAME,
        OPPONENT_FIRST_HALF_POINTS_PER_GAME,
        OPPONENT_SECOND_HALF_POINTS_PER_GAME,
        OPPONENT_ASSIST_TO_TURNOVER_RATIO,
        OPPONENT_ASSISTS_PER_FIELD_GOAL_MADE, OPPONENT_ASSISTS_PER_GAME,
        OPPONENT_ASSISTS_PER_POSSESSION,
        OPPONENT_AVERAGE_SCORING_MARGIN, OPPONENT_BLOCK_PERCENTAGE,
        OPPONENT_BLOCKS_PER_GAME,
        OPPONENT_DEFENSIVE_REBOUNDING_PERCENTAGE,
        OPPONENT_DEFENSIVE_REBOUNDS_PER_GAME,
        OPPONENT_EFFECTIVE_FIELD_GOAL_PERCENTAGE,
        OPPONENT_EFFECTIVE_POSSESSION_RATIO,
        OPPONENT_FIELD_GOALS_ATTEMPTED_PER_GAME,
        OPPONENT_FIELD_GOALS_MADE_PER_GAME, OPPONENT_FLOOR_PERCENTAGE,
        OPPONENT_FREE_THROW_PERCENTAGE, OPPONENT_FREE_THROW_RATE,
        OPPONENT_FREE_THROWS_ATTEMPTED_PER_GAME,
        OPPONENT_FREE_THROWS_MADE_PER_GAME, OPPONENT_FTA_PER_FGA,
        OPPONENT_FTM_PER_100_POSSESSIONS,
        OPPONENT_NON_BLOCKED_TWO_POINT_PERCENTAGE,
        OPPONENT_OFFENSIVE_REBOUNDING_PERCENTAGE,
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OPPONENT_OFFENSIVE_REBOUNDS_PER_GAME,
OPPONENT_OVERTIME_POINTS_PER_GAME,
OPPONENT_PERCENT_OF_POINTS_FROM_TWO_POINTERS,
OPPONENT_PERCENT_OF_POINTS_FROM_THREE_POINTERS,
OPPONENT_PERCENT_OF_POINTS_FROM_FREE_THROWS,
OPPONENT_PERSONAL_FOUL_PERCENTAGE,
OPPONENT_PERSONAL_FOULS_PER_GAME,
OPPONENT_PERSONAL_FOULS_PER_POSSESSION,
OPPONENT_POINTS_FROM_TWO_POINTERS,
OPPONENT_POINTS_FROM_THREE_POINTERS, OPPONENT_POINTS_PER_GAME,
OPPONENT_SHOOTING_PERCENTAGE, OPPONENT_STEAL_PERCENTAGE,
OPPONENT_STEALS_PER_GAME, OPPONENT_STEALS_PER_POSSESSION,
OPPONENT_TEAM_REBOUNDS_PER_GAME,
OPPONENT_THREE_POINTERS_ATTEMPTED_PER_GAME,
OPPONENT_THREE_POINTERS_MADE_PER_GAME,
OPPONENT_THREE_POINT_PERCENTAGE, OPPONENT_THREE_POINT_RATE,
OPPONENT_TOTAL_REBOUNDS_PER_GAME,
OPPONENT_TRUE_SHOOTING_PERCENTAGE, OPPONENT_TURNOVER_PERCENTAGE,
OPPONENT_TURNOVERS_PER_GAME, OPPONENT_TURNOVERS_PER_POSSESSION,
OPPONENT_TWO_POINT_PERCENTAGE, OPPONENT_TWO_POINT_RATE,
OVERTIME_POINTS_PER_GAME, PERCENT_OF_POINTS_FROM_TWO_POINTERS,
PERCENT_OF_POINTS_FROM_THREE_POINTERS,
PERCENT_OF_POINTS_FROM_FREE_THROWS, PERSONAL_FOUL_PERCENTAGE,
PERSONAL_FOULS_PER_GAME, PERSONAL_FOULS_PER_POSSESSION,
POINTS_FROM_TWO_POINTERS, POINTS_FROM_THREE_POINTERS,
POINTS_PER_GAME, POSSESSIONS_PER_GAME, SHOOTING_PERCENTAGE,
STEAL_PERCENTAGE, STEALS_PER_GAME, STEALS_PER_POSSESSION,
TEAM_REBOUNDS_PER_GAME, THREE_POINTERS_ATTEMPTED_PER_GAME,
THREE_POINTERS_MADE_PER_GAME, THREE_POINT_PERCENTAGE,
THREE_POINT_RATE, TOTAL_REBOUNDS_PER_GAME, TRUE_SHOOTING_PERCENTAGE,
TURNOVER_PERCENTAGE, TURNOVERS_PER_GAME,
TURNOVERS_PER_POSSESSION, TWO_POINT_PERCENTAGE, TWO_POINT_RATE,
AWAY_BY_OTHER, CONSISTENCY_BY_OTHER, HOME_ADV_BY_OTHER,
HOME_BY_OTHER, LUCK_BY_OTHER, NEUTRAL_BY_OTHER,
PREDICTIVE_BY_OTHER, FIRST_HALF_BY_OTHER, FUTURE_SOS_BY_OTHER,
IN_CONFERENCE_BY_OTHER, IN_CONFERENCE_SOS_BY_OTHER,
LAST_10_GAMES_BY_OTHER, LAST_5_GAMES_BY_OTHER,
NON_CONFERENCE_BY_OTHER, NON_CONFERENCE_SOS_BY_OTHER,
SCHEDULE_STRENGTH_BY_OTHER, SEASON_SOS_BY_OTHER,
SECOND_HALF_BY_OTHER, SOS_BASIC_BY_OTHER, VS_101_200_BY_OTHER,
VS_1_25_BY_OTHER, VS_201_AND_UP_BY_OTHER, VS_26_50_BY_OTHER,
VS_51_100_BY_OTHER

```

```

13     }

```

```
14
15  /**
16   * Adds a custom statistic to the team's data.
17   *
18   * @param category
19   *         the category of the statistic
20   * @param rank
21   *         the rank of the statistic
22   * @param value
23   *         the value of the statistic
24   * @requires category != null && value != null
25   * @ensures the custom statistic is added to the team's data
26   */
27  void addCustomStatistic(StatCategory category, int rank,
double value);
28
29  /**
30   * Removes a statistic category from the team's data.
31   *
32   * @param category
33   *         the category of the statistic to remove
34   * @requires category != null
35   * @ensures the specified statistic category is removed from
the team's data
36   */
37  void removeStatistic(StatCategory category);
38
39  /**
40   * Retrieves statistics by category for the team.
41   *
42   * @param category
43   *         the category of statistics to retrieve
44   * @return a map containing the statistics for the specified
category
45   * @requires category != null
46   * @ensures returns a map containing the statistics for the
specified
category
47   */
48  Map1L<Integer, Double> getStatisticsByCategory(StatCategory
category);
49
50
51  /**
52   * Retrieves all categories of statistics for the team.
```

```
53      *
54      * @return a sequence containing all statistic categories
55      * @ensures returns a sequence containing all statistic
   categories
56      */
57      Sequence1L<String> getAllCategories();
58
59      /**
60      * Identifies the top 5 and bottom 5 statistics for the
   team.
61      *
62      * @ensures the top 5 and bottom 5 statistics for the team
   are identified
63      */
64      void bestAndWorstStatistics();
65 }
66
```