# USE CASE

@startuml Cricket\_Database\_Use\_Case\_Diagram

!theme plain

skinparam backgroundColor #F8F9FA

skinparam actor {

BackgroundColor #E3F2FD

BorderColor #1976D2

FontSize 12

}

skinparam usecase {

BackgroundColor #F3E5F5

BorderColor #7B1FA2

FontSize 11

}

title Cricket Database Management System - Use Case Diagram

' Actors

actor "Website Visitor" as Visitor

actor "Administrator" as Admin

' System boundary

rectangle "Cricket Database Management System" {

' Public Use Cases

usecase "View Teams Information" as UC1

usecase "Browse Player Profiles" as UC2

usecase "View Player Statistics" as UC3

usecase "Check Team Rankings by Format" as UC4

usecase "Check Player Rankings by Format" as UC5

usecase "View Upcoming Fixtures" as UC6

usecase "View Fab Four Players" as UC7

usecase "Send Contact Message" as UC8

usecase "Search Players/Teams" as UC9

usecase "Filter by Cricket Format" as UC10

' Admin Use Cases

usecase "Receive Contact Messages" as UC11

usecase "View User Suggestions" as UC12

}

' Visitor relationships

Visitor --> UC1

Visitor --> UC2

Visitor --> UC3

Visitor --> UC4

Visitor --> UC5

Visitor --> UC6

Visitor --> UC7

Visitor --> UC8

Visitor --> UC9

Visitor --> UC10

' Admin relationships

Admin --> UC11

Admin --> UC12

' Include relationships

UC2 ..> UC3 : <<include>>

UC4 ..> UC10 : <<include>>

UC5 ..> UC10 : <<include>>

UC9 ..> UC2 : <<include>>

' Communication relationship

UC8 ..> UC11 : <<communicate>>

note right of UC7

Showcases top 4

featured players

end note

note right of UC8

Contact form for

user messages and

suggestions

end note

note bottom of Admin

Receives and manages

user messages only

end note

@enduml

# COMPONENT DIAGRAM

@startuml Cricket\_Component\_Diagram

!theme plain

skinparam backgroundColor #F8F9FA

skinparam component {

BackgroundColor #E8F5E8

BorderColor #388E3C

FontSize 10

}

skinparam interface {

BackgroundColor #FFF3E0

BorderColor #F57C00

FontSize 9

}

skinparam database {

BackgroundColor #E3F2FD

BorderColor #1976D2

}

title Cricket Database Management System - Component Diagram

' External Actors

actor "Website Visitor" as Visitor

actor "Administrator" as Admin

' Presentation Layer Components

package "Presentation Layer" {

component "Home Page" as HomePage

component "Teams Page" as TeamsPage

component "Players Page" as PlayersPage

component "Team Rankings Page" as TeamRankingsPage

component "Player Rankings Page" as PlayerRankingsPage

component "Fixtures Page" as FixturesPage

component "Contact Page" as ContactPage

component "Search Component" as SearchComp

component "Navigation Component" as NavComp

component "Fab Four Component" as FabFourComp

}

' Business Logic Layer Components

package "Business Logic Layer" {

component "Team Service" as TeamService

component "Player Service" as PlayerService

component "Statistics Service" as StatsService

component "Rankings Service" as RankingsService

component "Fixtures Service" as FixturesService

component "Contact Service" as ContactService

component "Search Service" as SearchService

component "Format Filter Service" as FilterService

}

' Data Access Layer Components

package "Data Access Layer" {

component "Team Repository" as TeamRepo

component "Player Repository" as PlayerRepo

component "Statistics Repository" as StatsRepo

component "Rankings Repository" as RankingsRepo

component "Fixtures Repository" as FixturesRepo

component "Contact Repository" as ContactRepo

}

' Database Layer

package "Database Layer" {

database "Teams Table\n(10 teams)" as TeamsDB

database "Players Table\n(50 players)" as PlayersDB

database "Statistics Table" as StatsDB

database "Rankings Table" as RankingsDB

database "Fixtures Table" as FixturesDB

database "Contact Messages Table" as ContactDB

}

' Interfaces

interface "ITeamService" as ITeamSvc

interface "IPlayerService" as IPlayerSvc

interface "IStatsService" as IStatsSvc

interface "IRankingsService" as IRankingsSvc

interface "IFixturesService" as IFixturesSvc

interface "IContactService" as IContactSvc

interface "ISearchService" as ISearchSvc

' External connections

Visitor --> HomePage

Visitor --> TeamsPage

Visitor --> PlayersPage

Visitor --> TeamRankingsPage

Visitor --> PlayerRankingsPage

Visitor --> FixturesPage

Visitor --> ContactPage

Admin --> ContactPage

' Navigation relationships

HomePage --> NavComp

TeamsPage --> NavComp

PlayersPage --> NavComp

TeamRankingsPage --> NavComp

PlayerRankingsPage --> NavComp

FixturesPage --> NavComp

ContactPage --> NavComp

' Component relationships within presentation layer

HomePage --> FabFourComp

HomePage --> SearchComp

TeamsPage --> SearchComp

PlayersPage --> SearchComp

TeamRankingsPage --> FilterService

PlayerRankingsPage --> FilterService

' Presentation to Business Logic connections

HomePage --> ITeamSvc

HomePage --> IPlayerSvc

TeamsPage --> ITeamSvc

PlayersPage --> IPlayerSvc

PlayersPage --> IStatsSvc

TeamRankingsPage --> IRankingsSvc

PlayerRankingsPage --> IRankingsSvc

FixturesPage --> IFixturesSvc

ContactPage --> IContactSvc

SearchComp --> ISearchSvc

FabFourComp --> IPlayerSvc

' Interface implementations

ITeamSvc -- TeamService

IPlayerSvc -- PlayerService

IStatsSvc -- StatsService

IRankingsSvc -- RankingsService

IFixturesSvc -- FixturesService

IContactSvc -- ContactService

ISearchSvc -- SearchService

' Business Logic to Data Access connections

TeamService --> TeamRepo

PlayerService --> PlayerRepo

StatsService --> StatsRepo

RankingsService --> RankingsRepo

FixturesService --> FixturesRepo

ContactService --> ContactRepo

SearchService --> TeamRepo

SearchService --> PlayerRepo

' Data Access to Database connections

TeamRepo --> TeamsDB

PlayerRepo --> PlayersDB

StatsRepo --> StatsDB

RankingsRepo --> RankingsDB

FixturesRepo --> FixturesDB

ContactRepo --> ContactDB

' Cross-component dependencies

StatsService --> PlayerRepo

RankingsService --> TeamRepo

RankingsService --> PlayerRepo

SearchService --> StatsRepo

note right of FabFourComp

Displays top 4

featured players

end note

note right of ContactDB

Stores user messages

and suggestions for

administrator

end note

note right of FilterService

Filters by Test,

ODI, T20 formats

end note

note bottom of "Database Layer"

All cricket data including

10 teams with 5 players each

end note

@enduml