Use Cases

for

Formula-1 Informatics,

Release 1.0

Version 1.0 approved

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Revision History

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| Name | Date | Reason for Changes | Version |
| Rohan, Pradhyumna, Karthik | 4th September 2024 | Initial Drafts | 1.0 approved |
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The various user classes identified the following use cases and primary actors for the Cafeteria Ordering System:

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| Actor | Use Case |
| F1 Fans | View Driver Profiles  View Team Profiles  View Race Results  View Season Standings  Access Historical Data  Track Race Calendar  View Track Information  View Highlights |
| Data Analyst | View Driver Profiles  View Team Profiles  View Race Results  View Season Standings  Access Historical Data  Track Race Calendar  Generate System Usage Reports |
| Media Outlets | View Driver Profiles  View Team Profiles  View Race Results  View Season Standings  Access Historical Data  Track Race Calendar |
| System Admin | Manage User Accounts  Configure System Settings  Update Data Sources  Monitor System Performance  Handle User Feedback |
| Content Manager | Update Driver Profiles  Update Team Profiles  Update Race Results  Update Season Standings  Update Historical Data  Manage Race Calendar |

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| **Use Case ID:** | UC 001 |
| **Use case name:** | View Driver Profiles |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst |
| **Description:** | Users can view detailed profiles of F1 drivers, including their statistics, career highlights, and recent performance. |
| **Preconditions:** | Driver data is available. |
| **Postconditions:** | Driver profile is displayed. |
| **Normal flow:** |  User selects a driver from the search or list.   System retrieves and displays the driver’s profile information.   User reviews the profile details. |
| **Alternative flow:** | Driver not found: Display “Driver Not Found” message. |
| **Exception:** | Data retrieval error: Display error message and prompt retry. |
| **Includes:** | Profile display. |
| **Priority:** | High |
| **Frequency of Use:** | High |
| **Business Rules:** | Profile must be accurate and up-to-date. |
| **Special Requirements:** | Clear and accessible driver information. |
| **Assumptions:** | Driver profiles are correctly populated. |
| **Notes and Issues:** | Consider adding more interactive elements in the profile. |

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| **Use Case ID:** | UC 002 |
| **Use case name:** | View Team Profiles |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 fan   Data Analyst |
| **Description:** | Users can view detailed profiles of F1 teams, including their statistics, history and key achievements. |
| **Preconditions:** | Team data is available. |
| **Postconditions:** | Team profile is displayed. |
| **Normal flow:** |  User selects a team from the search or list.   System retrieves and displays the team’s profile information.   User reviews the profile details. |
| **Alternative flow:** | Team not found: Display “Team Not Found” message. |
| **Exception:** | Data retrieval error: Display error message and prompt retry. |
| **Includes:** | Profile display. |
| **Priority:** | High |
| **Frequency of Use:** | High |
| **Business Rules:** | Profile must be accurate and up-to-date. |
| **Special Requirements:** | Clear and accessible team information. |
| **Assumptions:** | Team profiles are correctly populated. |
| **Notes and Issues:** | Consider adding more interactive elements in the profile. |

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| **Use Case ID:** | UC 003 |
| **Use case name:** | View Race Results |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 fan   Data analyst |
| **Description:** | Users can view detailed results of specific F1 races, including lap times, positions, and race outcomes**.** |
| **Preconditions:** | Race result data is available. |
| **Postconditions:** | Race results are displayed. |
| **Normal flow:** |  User selects a race from the schedule or search.   System retrieves and displays the race results.   User reviews the results. |
| **Alternative flow:** | Race not found: Display “Race not found” message. |
| **Exception:** | Data retrieval error: Display error message and prompt retry. |
| **Includes:** | Race results display. |
| **Priority:** | High |
| **Frequency of Use:** | High |
| **Business Rules:** | Race results must be accurate and timely. |
| **Special Requirements:** | Clear presentation of race details. |
| **Assumptions:** | Race results are correctly recorded. |
| **Notes and Issues:** | Include a feature for race result comparisons. |

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| **Use Case ID:** | UC 004 |
| **Use case name:** | View Season Standings |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst   Team Member |
| **Description:** | Users can view the overall standings for a specific season, including driver and team rankings. |
| **Preconditions:** | Season standings data is available. |
| **Postconditions:** | Season standings are displayed with rankings and points. |
| **Normal flow:** |  User navigates to the season standings section.   User selects a season.   System retrieves and displays the season standings.   User reviews the standings. |
| **Alternative flow:** | Standings data not available: Display “Data Not Available” message. |
| **Exception:** | Database error: Display error message and prompt retry. |
| **Includes:** | Standings display. |
| **Priority:** | High |
| **Frequency of Use:** | Medium |
| **Business Rules:** | Standings must be accurate and up-to-date. |
| **Special Requirements:** | Visual representation of standings (e.g., charts). |
| **Assumptions:** | Standings data is updated after each race. |
| **Notes and Issues:** | Consider adding historical standings. |

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| **Use Case ID:** | UC 005 |
| **Use case name:** | Access Historical Data |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst |
| **Description:** | Users can explore historical data, including past seasons, races, and notable F1 events. |
| **Preconditions:** | Historical data is available. |
| **Postconditions:** | Historical data is displayed with relevant details. |
| **Normal flow:** |  User navigates to historical data section.   User selects a time period or event.   System retrieves and displays historical data.   User reviews the historical information. |
| **Alternative flow:** | Data not available: Display “Data Not Available” message. |
| **Exception:** | Database error: Display error message and prompt retry. |
| **Includes:** | Historical data display |
| **Priority:** | Medium |
| **Frequency of Use:** | Low to Medium |
| **Business Rules:** | Historical data must be accurate and well-organized. |
| **Special Requirements:** | Comprehensive and user-friendly historical data presentation. |
| **Assumptions:** | Historical data is complete and accurate. |
| **Notes and Issues:** | Consider adding detailed historical timelines. |

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| **Use Case ID:** | UC 006 |
| **Use case name:** | Track race calendar |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst   Media Outlets |
| **Description:** | Users can view the schedule of upcoming and past F1 races, including race dates, venues, and times. This feature allows users to track and plan for upcoming races and review historical race schedules. |
| **Preconditions:** | Race calendar data is available and up-to-date. |
| **Postconditions:** | The race calendar is displayed to the user, showing race dates, venues, and times. |
| **Normal flow:** |  The user navigates to the "Race Calendar" section from the main menu.   The user selects a view option (e.g., monthly, weekly, or list view).   The system retrieves the race schedule data from the database.   The system displays the calendar with race dates, venues, and times. Users can see both upcoming races and past events. |
| **Alternative flow:** |  If the race calendar data is not available, the system displays a "Calendar Not Available" message.   If the user applies invalid filters or criteria, the system prompts the user to correct their input. |
| **Exception:** | If there is an issue retrieving the calendar data (e.g., data source issues), the system displays an error message and prompts the user to retry. |
| **Includes:** | Presentation of race dates and details. |
| **Priority:** | High |
| **Frequency of Use:** | High |
| **Business Rules:** |  The calendar must be accurate and reflect the most current race schedule.   Race details such as dates, times, and venues must be correctly displayed. |
| **Special Requirements:** |  The calendar should be user-friendly and easy to navigate.   Provide options to export or synchronize race dates with personal calendars (e.g., Google Calendar, Outlook). |
| **Assumptions:** |  Race schedule data is updated regularly and reflects any changes or adjustments.   Users have access to an internet connection for viewing the online calendar. |
| **Notes and Issues:** |  Consider integrating features for users to set reminders or notifications for upcoming races.   Ensure that the calendar is responsive and accessible on various devices, including mobile phones and tablets. |

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| **Use Case ID:** | UC 007 |
| **Use case name:** | View Track information. |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst |
| **Description:** | Users can view detailed information about specific F1 tracks, including track layouts, historical performance data, and track-specific statistics. |
| **Preconditions:** | Track data is available and up-to-date |
| **Postconditions:** | The track information is displayed to the user. |
| **Normal flow:** |  The user navigates to the "Track Info" section from the main menu.   The user selects a specific track from a search or list.   The system retrieves the track’s profile information from the database.   The system displays detailed information about the track, including layout, historical performance, and statistics.   The user reviews the track details, such as track length, lap times, and unique track features. |
| **Alternative flow:** |  If the track is not found in the database, the system displays a "Track Not Found" message.   If the user inputs an invalid track name or identifier, the system prompts the user to correct their input. |
| **Exception:** | If there is an issue retrieving the track information (e.g., connectivity issues), the system displays an error message and prompts the user to retry. |
| **Includes:** |  **Track Layout Display:** Visual representation of the track layout.   **Performance Statistics:** Historical performance data and statistics for the track. |
| **Priority:** | High |
| **Frequency of Use:** | Medium to High |
| **Business Rules:** |  Track information must be accurate and reflect the latest data.   The layout and statistics should be visually clear and easily understandable. |
| **Special Requirements:** |  The track layout should be interactive, allowing users to view different sections and features of the track.   Historical performance data should be presented in a user-friendly manner, with visual aids such as graphs and charts. |
| **Assumptions:** |  Track data is correctly populated and regularly updated.   Users have a basic understanding of F1 tracks and terminology |
| **Notes and Issues:** |  Consider adding a feature to compare track performance across different seasons or races.   Ensure that the track layout is updated to reflect any recent changes or modifications. |

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| **Use Case ID:** | UC 008 |
| **Use case name:** | View Race highlights |
| **Created by:** | Rohan, Pradhyumna, Karthik |
| **Date created:** | 4th September, 2024 |
| **Actors:** |  F1 Fan   Data Analyst   Media Outlets |
| **Description:** | Users can view key highlights from specific F1 races, including significant events, key moments, and notable performances. This feature provides summarized insights into race outcomes and critical incidents. |
| **Preconditions:** |  Race highlights data is available and up-to-date.   The race for which highlights are to be viewed has concluded |
| **Postconditions:** | The race highlights are displayed to the user. |
| **Normal flow:** |  The user navigates to the "Race Highlights" section from the main menu.   The user selects a specific race from the schedule or search function.   The system retrieves the highlights and key moments from the database.   The system displays a summary of highlights, including significant incidents, key overtakes, and noteworthy performances. This may include video clips, images, and textual summaries.   The user reviews the highlights and interacts with any multimedia elements provided. |
| **Alternative flow:** |  If the selected race is not found or no highlights are available, the system displays a "Race Highlights Not Available" message.   If the user selects a race that has not yet occurred or has incomplete highlights, the system prompts the user to select a different race or check back later. |
| **Exception:** | If there is an issue retrieving the race highlights (e.g., data source issues), the system displays an error message and prompts the user to retry. |
| **Includes:** | Incorporation of images and videos to enhance the highlight experience |
| **Priority:** | High |
| **Frequency of Use:** | High |
| **Business Rules:** |  Highlights must accurately reflect the key moments and significant events of the race.   Multimedia content should be properly formatted and functional. |
| **Special Requirements:** |  Highlights should be easily navigable, allowing users to quickly find and view specific moments of interest.   Integration with video playback and image viewing functionalities. |
| **Assumptions:** |  Race highlights are accurately recorded and available shortly after the race concludes. |
| **Notes and Issues:** |  Consider adding a feature for users to bookmark or share their favourite highlights.   Ensure that the multimedia content adheres to copyright and licensing regulations |