CORADS Requirements Extraction and Traceability Matrix

Functional Requirements

1. Advertiser Module Requirements

Req ID	Category	Description	Priority	Module
FR-1	Authentication	Advertisers shall be able to register with the application	High	Advertiser
FR-2	Authentication	Registration shall require verification through OTP (One-Time Password)	High	Advertiser
FR-3	Authentication	Advertisers shall be able to log in to the application using their credentials	High	Advertiser
FR-4	Authentication	Advertisers shall be able to reset their password through a forgotten password feature	Medium	Advertiser
FR-5	Profile Management	Advertisers shall be able to view their profile information	Medium	Advertiser
FR-6	Profile Management	Advertisers shall be able to update their profile information	Medium	Advertiser
FR-7	Wallet Management	Advertisers shall be able to view their wallet balance	High	Advertiser
FR-8	Wallet Management	Advertisers shall be able to view their transaction history	Medium	Advertiser
FR-9	Wallet Management	Advertisers shall be able to recharge their wallet using JAZZ CASH	High	Advertiser
FR-10	Wallet Management	Advertisers shall be able to recharge their wallet using vouchers	Medium	Advertiser
FR-11	Campaign Management	Advertisers shall be able to create advertising campaigns	High	Advertiser

Req ID	Category	Description	Priority	Module
FR-12	Campaign Management	Advertisers shall be able to specify campaign parameters (location, duration, cars, content)	High	Advertiser
FR-13	Campaign Management	Advertisers shall be able to view active campaigns	High	Advertiser
FR-14	Campaign Management	Advertisers shall be able to view pending campaigns	High	Advertiser
FR-15	Campaign Management	Advertisers shall be able to view completed campaigns	Medium	Advertiser
FR-16	Campaign Management	Advertisers shall be able to track current location of drivers displaying their ads	High	Advertiser
FR-17	Support	Advertisers shall be able to contact customer support	Medium	Advertiser
FR-18	Support	Advertisers shall be able to inquire about driver status	Medium	Advertiser

2. Driver Module Requirements

Req ID	Category	Description	Priority	Module
FR-19	Authentication	Drivers shall be able to register with the application	High	Driver
FR-20	Authentication	Drivers shall be able to log in to the application using their credentials	High	Driver
FR-21	Authentication	Drivers shall be able to sign out from the application	Medium	Driver
FR-22	Profile Management	Drivers shall be able to view their profile information	Medium	Driver

Req ID	Category	Description	Priority	Module
FR-23	Profile Management	Drivers shall be able to update their profile information	Medium	Driver
FR-24	Profile Management	Drivers shall be able to upload images of their vehicles	High	Driver
FR-25	Campaign Interaction	Drivers shall be able to receive campaign requests	High	Driver
FR-26	Campaign Interaction	Drivers shall be able to accept or reject campaign requests	High	Driver
FR-27	Campaign Interaction	Drivers shall be able to view navigation to installation centers	High	Driver
FR-28	Campaign Interaction	Drivers shall be able to start campaigns after installation	High	Driver
FR-29	Campaign Interaction	Drivers shall be able to record their campaign activities	High	Driver
FR-30	Campaign Interaction	Drivers shall be able to upload verification images with location data	High	Driver
FR-31	Wallet Management	Drivers shall be able to view their wallet balance	High	Driver
FR-32	Wallet Management	Drivers shall be able to view their earnings history	Medium	Driver
FR-33	Support	Drivers shall be able to access help center resources	Medium	Driver
FR-34	Support	Drivers shall be able to contact customer support	Medium	Driver

3. Admin Module Requirements

Req ID	Category	Description	Priority	Module
FR-35	Authentication	Administrators shall be able to log in to the admin portal	High	Admin
FR-36	Authentication	Administrators shall be able to reset their password	Medium	Admin
FR-37	Access Control	The system shall support different admin roles with varying access levels	High	Admin
FR-38	User Management	Administrators shall be able to add, delete, and update admin accounts	High	Admin
FR-39	User Management	Administrators shall be able to add drivers to the system	High	Admin
FR-40	User Management	Administrators shall be able to create driver profiles	High	Admin
FR-41	User Management	Administrators shall be able to update user information	High	Admin
FR-42	User Management	Administrators shall be able to block and unblock driver accounts	High	Admin
FR-43	Communication	Administrators shall be able to send notifications to drivers and advertisers	Medium	Admin
FR-44	Communication	Administrators shall be able to send emails to drivers and advertisers	Medium	Admin
FR-45	Campaign Management	Administrators shall be able to search for campaigns and users	Medium	Admin
FR-46	Campaign Management	Administrators shall be able to activate campaigns	High	Admin
FR-47	Campaign Management	Administrators shall be able to start driver campaigns from installation centers	High	Admin

Req ID	Category	Description	Priority	Module
FR-48	Campaign Management	Administrators shall be able to complete driver trials	High	Admin
FR-49	System Configuration	Administrators shall be able to add, delete, and update coupons	Medium	Admin
FR-50	System Configuration	Administrators shall be able to add, delete, and update vouchers	Medium	Admin
FR-51	System Configuration	Administrators shall be able to add, delete, and update car types	Medium	Admin
FR-52	System Configuration	Administrators shall be able to manage installation centers	High	Admin

4. Campaign Management Requirements

Req ID	Category	Description	Priority	Module
FR-53	Campaign Creation	The system shall allow creation of advertising campaigns with specified parameters	High	Campaign
FR-54	Campaign Creation	The system shall support multiple images in campaign creation	Medium	Campaign
FR-55	Campaign Creation	The system shall validate campaign parameters before creation	High	Campaign
FR-56	Campaign Assignment	The system shall match campaigns to appropriate drivers based on location and availability	High	Campaign
FR-57	Campaign Assignment	The system shall send campaign requests to selected drivers	High	Campaign
FR-58	Campaign Assignment	The system shall track driver responses to campaign requests	High	Campaign

Req ID	Category	Description	Priority	Module
FR-59	Campaign Execution	The system shall guide drivers to installation centers	High	Campaign
FR-60	Campaign Execution	The system shall track the installation process	High	Campaign
FR-61	Campaign Execution	The system shall monitor campaign progress in real-time	High	Campaign
FR-62	Campaign Execution	The system shall enforce campaign time and distance constraints	High	Campaign
FR-63	Campaign Reporting	The system shall generate campaign performance reports	High	Campaign
FR-64	Campaign Reporting	The system shall provide heat maps showing advertisement display concentration	Medium	Campaign
FR-65	Campaign Reporting	The system shall track duration and location of advertisement displays	High	Campaign

5. Payment System Requirements

Req ID	Category	Description	Priority	Module
FR-66	Payment Processing	The system shall integrate with JAZZ CASH payment gateway	High	Payment
FR-67	Payment Processing	The system shall process wallet recharge transactions	High	Payment
FR-68	Payment Processing	The system shall calculate driver earnings based on campaign participation	High	Payment
FR-69	Payment Processing	The system shall maintain transaction records	High	Payment

Req ID	Category	Description	Priority	Module
FR-70	Discount Management	The system shall support discount coupons for advertisers	Medium	Payment
FR-71	Discount Management	The system shall support voucher-based wallet recharges	Medium	Payment
FR-72	Discount Management	The system shall validate coupons and vouchers before application	Medium	Payment

6. Tracking System Requirements

Req ID	Category	Description	Priority	Module
FR-73	Real-time Tracking	The system shall track the real-time location of drivers	High	Tracking
FR-74	Real-time Tracking	The system shall display active campaigns on a map	High	Tracking
FR-75	Real-time Tracking	The system shall allow advertisers to track specific drivers	High	Tracking
FR-76	Route Monitoring	The system shall record driver routes during campaigns	High	Tracking
FR-77	Route Monitoring	The system shall analyze driver movement patterns	Medium	Tracking
FR-78	Route Monitoring	The system shall detect deviations from expected routes	Medium	Tracking
FR-79	Verification System	The system shall request verification images from drivers	High	Tracking
FR-80	Verification System	The system shall verify image location data	High	Tracking

Req ID	Category	Description	Priority	Module
FR-81	Verification System	The system shall maintain a record of verification activities	Medium	Tracking

7. Support System Requirements

Req ID	Category	Description	Priority	Module
FR-82	Customer Support	The system shall provide support channels for advertisers and drivers	Medium	Support
FR-83	Customer Support	The system shall allow users to submit support tickets	Medium	Support
FR-84	Customer Support	The system shall track support request status	Medium	Support
FR-85	Communication	The system shall support FCM notifications	High	Support
FR-86	Communication	The system shall support email communications	Medium	Support
FR-87	Communication	The system shall maintain communication logs	Medium	Support

Non-Functional Requirements

Performance Requirements

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-1	Performance	Mobile applications shall load within specified time	Load time ≤ 3 seconds on minimum spec devices	High
NFR-2	Performance	System shall support concurrent users	Support ≥ 1000 concurrent users	High

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-3	Performance	Location tracking update frequency	Updates ≥ every 30 seconds	High
NFR-4	Performance	API response time	Response time ≤ 2 seconds under normal load	High
NFR-5	Performance	Campaign creation capacity	Handle ≥ 100 campaign creations per minute	Medium
NFR-6	Performance	Push notification delivery	Delivery ≤ 5 seconds from trigger	Medium

Safety Requirements

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-7	Safety	Driver app interaction restrictions	No interaction required while vehicle in motion	High
NFR-8	Safety	Road safety compliance	Comply with local road safety regulations	High
NFR-9	Safety	Advertisement visibility verification	Verify ads don't obstruct driver visibility	High
NFR-10	Safety	Unsafe driving behavior monitoring	Monitor and flag unsafe driving behaviors	Medium

Security Requirements

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-11	Security	Password security	Use secure password hashing	High
NFR-12	Security	API encryption	All API communications encrypted using TLS	High

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-13	Security	Payment compliance	Payment handling complies with PCI DSS standards	High
NFR-14	Security	Session management	User sessions timeout after 30 minutes inactivity	Medium
NFR-15	Security	Attack prevention	Implement rate limiting for brute force prevention	High
NFR-16	Security	Audit logging	Maintain audit logs of all administrative actions	Medium

Software Quality Attributes

Req ID	Category	Description	Acceptance Criteria	Priority
NFR-17	Usability	Interface intuitiveness	New users complete basic tasks without assistance	High
NFR-18	Reliability	System uptime	Maintain 99.5% uptime during operating hours	High
NFR-19	Availability	System availability	Available 24/7 with scheduled maintenance windows	High
NFR-20	Maintainability	Code quality	Follow consistent coding standards with documentation	Medium
NFR-21	Portability	Device compatibility	Function on all Android devices meeting minimum requirements	High
NFR-22	Scalability	System scaling	Designed to scale horizontally for growth	Medium

Business Rules

Req ID	Category	Description	Priority
BR-1	Business Rule	Drivers must complete verification process before accepting campaigns	High
BR-2	Business Rule	Advertisers must maintain minimum wallet balance to create campaigns	High
BR-3	Business Rule	Campaign pricing based on duration, number of cars, and location	High
BR-4	Business Rule	Drivers receive payment only for verified campaign participation	High
BR-5	Business Rule	Advertisements must comply with local advertising regulations	High
BR-6	Business Rule	System shall retain campaign data for minimum 1 year	Medium

Other Requirements

Database Requirements

Req ID	Category	Description	Priority
DR-1	Database	Use relational database for structured data storage	High
DR-2	Database	Maintain referential integrity between related entities	High
DR-3	Database	Daily backup with 30-day retention period	High
DR-4	Database	Monitor performance with query optimization	Medium

Legal Requirements

Req ID	Category	Description	Priority
LR-1	Legal	Comply with local data protection regulations	High
LR-2	Legal	Present clear terms and conditions during registration	High
LR-3	Legal	Implement data retention and deletion policies	High

Req ID Category Description	Priority
LR-4 Legal Maintain records of user consent for data processing	High

Requirements Summary

Category	Total Count	High Priority	Medium Priority	Low Priority
Functional Requirements	87	58	29	0
Non-Functional Requirements	28	18	10	0
Total Requirements	**115**	**76**	**39**	**0**

Module-wise Requirements Distribution

Module	Functional Requirements Count
Advertiser	18
Driver	16
Admin	18
Campaign	13
Payment	7
Tracking	9
Support	6
Total	**87**