Functional Requirements (FR)

ID	Module	Requirement Description
FR-1	Advertiser Module	Advertisers shall be able to register with the application.
FR-2	Advertiser Module	Registration shall require verification through OTP.
FR-3	Advertiser Module	Advertisers shall be able to log in using their credentials.
FR-4	Advertiser Module	Advertisers shall be able to reset their password.
FR-5	Advertiser Module	Advertisers shall be able to view their profile information.
FR-6	Advertiser Module	Advertisers shall be able to update their profile information.
FR-7	Advertiser Module	Advertisers shall be able to view their wallet balance.
FR-8	Advertiser Module	Advertisers shall be able to view transaction history.
FR-9	Advertiser Module	Advertisers shall be able to recharge their wallet using JAZZ CASH.
FR-10	Advertiser Module	Advertisers shall be able to recharge their wallet using vouchers.
FR-11	Advertiser Module	Advertisers shall be able to create advertising campaigns.
FR-12	Advertiser Module	Advertisers shall specify campaign parameters (location, duration, etc.).

ID	Module	Requirement Description
FR-13	Advertiser Module	Advertisers shall be able to view active campaigns.
FR-14	Advertiser Module	Advertisers shall be able to view pending campaigns.
FR-15	Advertiser Module	Advertisers shall be able to view completed campaigns.
FR-16	Advertiser Module	Advertisers shall track the real-time location of drivers.
FR-17	Advertiser Module	Advertisers shall be able to contact customer support.
FR-18	Advertiser Module	Advertisers shall be able to inquire about driver status.
FR-19	Driver Module	Drivers shall be able to register with the application.
FR-20	Driver Module	Drivers shall be able to log in using their credentials.
FR-21	Driver Module	Drivers shall be able to sign out.
FR-22	Driver Module	Drivers shall be able to view their profile information.

ID	Module	Requirement Description
FR-23	Driver Module	Drivers shall be able to update their profile information.
FR-24	Driver Module	Drivers shall be able to upload images of their vehicles.
FR-25	Driver Module	Drivers shall receive campaign requests.
FR-26	Driver Module	Drivers shall accept or reject campaign requests.
FR-27	Driver Module	Drivers shall view navigation to installation centers.
FR-28	Driver Module	Drivers shall start campaigns after installation.
FR-29	Driver Module	Drivers shall record their campaign activities.
FR-30	Driver Module	Drivers shall upload verification images with location data.
FR-31	Driver Module	Drivers shall view their wallet balance.
FR-32	Driver Module	Drivers shall view their earnings history.

ID	Module	Requirement Description
FR-33	Driver Module	Drivers shall access help center resources.
FR-34	Driver Module	Drivers shall contact customer support.
FR-35	Admin Module	Administrators shall log in to the admin portal.
FR-36	Admin Module	Administrators shall reset their password.
FR-37	Admin Module	The system shall support different admin roles with varying access levels.
FR-38	Admin Module	Administrators shall add, delete, and update admin accounts.
FR-39	Admin Module	Administrators shall add drivers to the system.
FR-40	Admin Module	Administrators shall create driver profiles.
FR-41	Admin Module	Administrators shall update user information.
FR-42	Admin Module	Administrators shall block/unblock driver accounts.

ID	Module	Requirement Description
FR-43	Admin Module	Administrators shall send notifications to users.
FR-44	Admin Module	Administrators shall send emails to users.
FR-45	Admin Module	Administrators shall search for campaigns and users.
FR-46	Admin Module	Administrators shall activate campaigns.
FR-47	Admin Module	Administrators shall start driver campaigns from installation centers.
FR-48	Admin Module	Administrators shall complete driver trials.
FR-49	Admin Module	Administrators shall manage coupons.
FR-50	Admin Module	Administrators shall manage vouchers.
FR-51	Admin Module	Administrators shall manage car types.
FR-52	Admin Module	Administrators shall manage installation centers.

ID	Module	Requirement Description
FR-53	Campaign Management	The system shall allow creation of advertising campaigns.
FR-54	Campaign Management	The system shall support multiple images in campaigns.
FR-55	Campaign Management	The system shall validate campaign parameters before creation.
FR-56	Campaign Management	The system shall match campaigns to drivers based on location/availability.
FR-57	Campaign Management	The system shall send campaign requests to selected drivers.
FR-58	Campaign Management	The system shall track driver responses to requests.
FR-59	Campaign Management	The system shall guide drivers to installation centers.
FR-60	Campaign Management	The system shall track the installation process.
FR-61	Campaign Management	The system shall monitor campaign progress in real-time.
FR-62	Campaign Management	The system shall enforce campaign time/distance constraints.

ID	Module	Requirement Description
FR-63	Campaign Management	The system shall generate campaign performance reports.
FR-64	Campaign Management	The system shall provide heat maps of advertisement displays.
FR-65	Campaign Management	The system shall track duration/location of advertisement displays.
FR-66	Payment System	The system shall integrate with JAZZ CASH payment gateway.
FR-67	Payment System	The system shall process wallet recharge transactions.
FR-68	Payment System	The system shall calculate driver earnings based on participation.
FR-69	Payment System	The system shall maintain transaction records.
FR-70	Payment System	The system shall support discount coupons for advertisers.
FR-71	Payment System	The system shall support voucher-based wallet recharges.
FR-72	Payment System	The system shall validate coupons/vouchers before application.

ID	Module	Requirement Description
FR-73	Tracking System	The system shall track real-time location of drivers.
FR-74	Tracking System	The system shall display active campaigns on a map.
FR-75	Tracking System	The system shall allow advertisers to track specific drivers.
FR-76	Tracking System	The system shall record driver routes during campaigns.
FR-77	Tracking System	The system shall analyze driver movement patterns.
FR-78	Tracking System	The system shall detect deviations from expected routes.
FR-79	Tracking System	The system shall request verification images from drivers.
FR-80	Tracking System	The system shall verify image location data.
FR-81	Tracking System	The system shall maintain verification activity records.
FR-82	Support System	The system shall provide support channels for users.

ID	Module	Requirement Description
FR-83	Support System	The system shall allow users to submit support tickets.
FR-84	Support System	The system shall track support request status.
FR-85	Support System	The system shall support FCM notifications.
FR-86	Support System	The system shall support email communications.
FR-87	Support System	The system shall maintain communication logs.

Non-Functional Requirements (NFR)

ID	Category	Requirement Description
NFR-1	Performance	Mobile applications shall load within 3 seconds.
NFR-2	Performance	The system shall support 1000 concurrent users.
NFR-3	Performance	Location tracking updates shall occur every 30 seconds.
NFR-4	Performance	API responses shall be delivered within 2 seconds.

ID	Category	Requirement Description
NFR-5	Performance	The system shall handle 100 campaign creations per minute.
NFR-6	Performance	Push notifications shall be delivered within 5 seconds.
NFR-7	Safety	The driver app shall not require interaction while driving.
NFR-8	Safety	The system shall comply with road safety regulations.
NFR-9	Safety	Advertisements shall not obstruct driver visibility.
NFR-10	Safety	The system shall flag unsafe driving behaviors.
NFR-11	Security	User authentication shall employ secure password hashing.
NFR-12	Security	All API communications shall use TLS encryption.
NFR-13	Security	Payment handling shall comply with PCI DSS standards.
NFR-14	Security	User sessions shall timeout after 30 minutes of inactivity.

ID	Category	Requirement Description
NFR-15	Security	The system shall implement rate limiting.
NFR-16	Security	The system shall maintain audit logs of admin actions.
NFR-17	Software Quality (Usability)	The interface shall be intuitive for new users.
NFR-18	Software Quality (Reliability)	The system shall maintain 99.5% uptime.
NFR-19	Software Quality (Availability)	The system shall be available 24/7.
NFR-20	Software Quality (Maintainability)	The codebase shall follow consistent standards.
NFR-21	Software Quality (Portability)	The app shall function on all compatible Android devices.
NFR-22	Software Quality (Scalability)	The system shall scale horizontally for growth.

Business Rules (BR)

ID	Rule Description
BR-1	Drivers must complete verification before accepting campaigns.

ID	Rule Description
BR-2	Advertisers must maintain a minimum wallet balance.
BR-3	Campaign pricing shall be based on duration, cars, and location.
BR-4	Drivers shall receive payment only for verified participation.
BR-5	Advertisements must comply with local regulations.
BR-6	Campaign data shall be retained for at least 1 year.