

Multi-Broker Indian F&O

Algo Trading System

Client Confirmation Document

(Pre-Development)

This document captures the complete understanding and requirements agreed between the client and the development team. It serves as the **confirmation baseline before development** begins.

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Table of Contents

1. System Overview
 2. Broker Integration
 3. Strategy Rules
 4. Inputs (Trade-Related)
 5. Engine Features
 6. Interface – Main Tabs
 7. Trade Monitor
 8. Display (Positions, P&L, Actions)
 9. Common Safety (Locked Channel & Queue)
 10. Additional Safety Features
 11. Summary Table
- Client Sign-off

1. System Overview

Item	Description
Platform	Python-based Indian algorithmic trading system
Model	Multi-broker: market data from one broker API; trades executed across all connected brokers
Segment	F&O (Futures & Options)
Decision Source	Futures candles (e.g. Nifty Fut, Bank Nifty Fut)
Execution	Options (CE/PE) based on signals from futures
Deployment	Must work on local machine and VPS

2. Broker Integration

Item	Description
Brokers	Choice (XTS), IIFL, Zerodha (Kite), Broker 4 (name TBD by client)
Data Source	One of the four brokers provides market data for decision-making
Execution	Same trade (after lot splitting) sent to all connected brokers
Lot Size	Max lots per order per instrument from broker API (not a user input)
Order Splitting	If client lot size > broker max per order, place multiple orders (e.g. 36 → 18+18); default behaviour

3. Strategy Rules

3.1 Data Source for Strategy

- All entry/exit logic is based on **futures** candle data.
- Trades are executed in **options** (CE/PE).

3.2 Main Rule

Step	Description
Reference Candle	Candle 1 (or Candle 2 if "Ignore first candle" is Yes)
Entry	Next candle breaks and closes above reference high → BUY (Buy CE or Sell PE). Below reference low → SELL (Buy PE or Sell CE).
Trailing Exit	Long: exit + reverse when candle closes below previous candle's low. Short: exit + reverse when candle closes above previous candle's high.
SL (on close)	Long: exit when candle closes below reference low. Short: exit when candle closes above reference high.

3.3 Designated Candle Rule

Step	Description
Designated Candle	First candle that closes above previous day high OR closes below previous day low
Entry	Same as main rule: next candle break & close above/below designated candle high/low
Trailing Exit	Same as main (previous candle high/low)
SL (on close)	Long: exit when candle closes below previous day high. Short: exit when candle closes above previous day low.

3.4 Other Rules

- Single position per engine at a time; main and designated are two ways to get an entry.
- Avoid first candle: If first candle range (High – Low) > configured points (e.g. 100), skip it as reference.
- All entry/exit/SL checks are on candle close (futures). Option price-based target/SL/trailing are separate inputs.

4. Inputs (Trade-Related)

4.1 Common (Whole System)

#	Input	Description
21	Overall target	Day profit limit; stop/square off when hit
22	Overall SL	Day loss limit; stop/square off when hit (kill switch)

4.2 Engine-Specific (Per Engine)

Multiple engines per underlying are allowed (Option B).

#	Input	Description
1	Underlying asset selection	Which underlying this engine runs on
2	Candle time (entry)	Timeframe for all entry logic
2a	Use different timeframe for exit	Yes/No
2b	Candle time (exit)	Used when 2a = Yes; else same as entry
3	Start time	Session start (e.g. 9:15 AM)
4	End time	Session end (e.g. 3:15 PM / 3:30 PM)
5	Carry forward	On/Off (positional vs intraday)
6	Ignore first candle	Yes/No
7	Avoid first candle if size (points)	Default 100, inputable
8	Trade direction	Buy only / Sell only / Both
9	Bullish signal	Buy Call or Short Put
10	Bearish signal	Buy Put or Sell Call
11	Strike (ITM/OTM/ATM) in points	e.g. ATM, OTM +50
12	Expiry	Weekly / Monthly
13	Lot size	Total lots per trade
14	Auto-split	Default; uses broker API for max lot per order
15	Target (point or %)	On option price from entry
16	SL (point or %)	On option price from entry
17	Trailing SL	Activation level + trail (points or %)
18	Enable partial booking	On/Off
19	Partial booking trigger	Level (points or price)
20	Partial qty (lots)	Lots to square off when trigger hits
23	Max open trades	Per engine (e.g. 1, 2, 3)

Broker credentials, data source broker, run mode, and log level are configured separately (e.g. under Broker and General Setting).

5. Engine Features

Feature	Description
Edit exit timeframe at runtime	While engine is running or has open position, user can change exit timeframe; candle-based exit uses new timeframe from then on.
Stop	Stop engine (no new entries); allowed anytime.
Pause	Pause engine (no new entries); allowed anytime.
Delete	Only when engine is stopped.

Per-engine display	Each engine shows active number of positions and P&L.
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6. Interface – Main Tabs

Tab	Purpose
General Setting	App-wide settings: common inputs (overall target/SL), alert config (popup, sound, Telegram/email), defaults, theme, etc.
Broker	Broker setup: credentials, connection status, which broker is data source.
Live Trade	Live trading: start/stop/pause engines, live positions, live P&L, manual actions, kill switch.
Paper Trade	Paper/simulation: paper engines, positions, P&L; separate from live.
Backtesting	Historical runs: date range, underlying, timeframe; view results (trades, P&L, drawdown).
Trade Monitor	Select active engine(s) and see full confirmation of current running state (see Section 7).
Logs	Broker-wise (per broker), Paper trade (separate), App logs (separate).

6.1 Login / Authentication Logic (General Settings)

The application has an optional **login logic** that uses **email ID and password**.

Item	Description
Default	Login logic is disabled by default. The app opens without asking for email or password.
Enable from General Settings	The client can enable the login logic from General Setting . When enabled, the app will use email and password (e.g. ask on first run and remember, or ask every time the application is opened – configurable from General Settings).
No hardcoded credentials	The client's own email and password are used; there are no fixed (hardcoded) client credentials.

7. Trade Monitor

Purpose: Full confirmation of current running state for the selected engine(s).

Element	Description
Select active engine	User selects which running engine(s) to monitor (e.g. dropdown or list of active engines).
Broker connection	Per-broker connection status in context of that engine.
All important values	Live data inside the engine: positions, P&L, last candle (OHLC), LTP, reference high/low, PDC high/low, previous candle high/low, current candle, engine state (flat/long/short), entry rule (main/designated), trade ID, SL/target/trailing levels in use.
Processing signals	Current/latest signal (BUY/SELL, main/designated), whether engine is acting on it (e.g. order sent/queued), recent signals in session.
Parameters comparison	Configured vs running (e.g. candle time, SL, target) and/or key levels side by side so user can confirm "what is set" = "what is running".

8. Display (Positions, P&L, Actions)

8.1 Running Positions: By account → under each account, positions listed script wise (one list per account).

8.2 MTM (P&L): Account wise MTM per broker. Overall P&L at the end (total across all accounts).

8.3 Rejected Orders: Exclusive section/screen for rejected order details.

8.4 Status: Broker connection status (per broker). Market open status.

8.5 Actions: Manual square off – close position(s) from UI. Modify – modify order (e.g. price, qty, SL) from UI. Stop all – one action to stop all engines / square off / cancel as designed.

9. Common Safety (Locked Channel & Queue)

#	Feature	Description
1	Trade ID system	Unique trade ID per trade for management, reconciliation, and logging.
2	Manual close detection	Engine detects when position is manually closed, then looks for next entry.
3	Net disconnect / reconnect	Detect disconnect → auto reconnect → sync state with broker → resume algo efficiently.
4	Locked channel	Critical processes run through a lock so no duplication and no overlapping.
5	Queuing system	Order actions (place/cancel/modify) go through a queue; worker(s) process serially so multiple trades don't overlap at broker.

10. Additional Safety Features

#	Feature	Description
1	Kill switch	Emergency stop with confirmation and audit log.
2	Order/quantity caps	Max lots per order/trade; max open orders per broker.
3	Position reconciliation	Periodic sync with broker; on mismatch → alert and optionally pause.
4	Heartbeat / health check	Stale data or stuck process → pause or alert.
5	Config validation before start	Validate inputs before start; refuse to start if invalid.
6	Audit log	Log all critical actions with timestamp.
8	Graceful shutdown	On exit: stop engines → cancel pending orders → save state → flush logs → close connections → then exit.
9	Alerts	Popup + sound + Telegram or email on critical events (rejection, disconnect, mismatch, SL hit, kill switch, etc.).

11. Summary Table

Area	Summary
System	Python, multi-broker F&O; futures for decision, options for execution; local + VPS.
Brokers	Choice, IIFL, Zerodha, Broker 4; one data source; trade to all; lot limit from API.
Strategy	Main + designated candle; entry/exit/SL on close; single position per engine.
Inputs	Common: 21–22. Engine: 1–20, 23; entry/exit timeframe; Option B (multi-engine per underlying).
Engine	Runtime edit exit TF; Stop / Pause / Delete (delete after stop); show positions & P&L.
Interface	Tabs: General Setting, Broker, Live Trade, Paper Trade, Backtesting, Trade Monitor, Logs (broker-wise, paper, app).
Login / Auth	Optional email + password; disabled by default; client can enable from General Settings; no hardcoded credentials.
Trade Monitor	Select active engine → full confirmation: broker connection, all important running values, processing signals, parameters comparison.
Display	Positions (account → script); P&L (account + overall); rejected orders; status; manual square off, modify, stop all.

Safety	Trade ID; manual close; reconnect; locked channel; queue; kill switch; caps; reconciliation; heartbeat; config validation; audit log; graceful shutdown; alerts.
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Client Sign-off

By signing below, the client confirms that the above document accurately reflects the agreed requirements and understanding before development begins.

Client Name	<hr/>
Signature	<hr/>
Date	<hr/>

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