IPO Charts

FR-XX	Function	Input	Process	Output
FR-01	OnNoteHit	Type of player input Time of player input	Get next expected note → If expected note type matches the user's input, calculate the timing difference between input and the note (gets absolute value of Input Time - Note Time) → Depending on the timing difference, assign the input a Good, Okay, or Miss judgement → Award score based on the judgement	Score update
FR-02	StartGame	None	Start background music → Loop while the game is running → Continuously get current music time → Spawn	Notes spawned in sync with music

			upcoming notes based on audio offset	
FR-03	UpdateHUD	Player score Player accuracy Player combo Current time in song Total song length	While game is running → Continuously update score text, accuracy, combo count, and song progress bar	Real-time HUD display of stats
	GetAccuracy	Number of good hits Number of okay hits Number of misses	Divide (Number of good hits + 0.5 * Number of okay hits) by the sum of total hits and misses (Number of good hits + Number of okay hits + Number of misses)	Player's current hit accuracy
FR-04	CheckHyperTime	Current time in song Time intervals in which Hyper Time is active	While game is running → Check if current time is within hyper time intervals → Enable/disable visual effects and adjust score multiplier	Visual effects and multiplier
FR-05	InitializeInput	None	Assign specific keys (D, F, J, K) to input actions (left rim, left	Initial key mappings set

			center, right center, right rim)	
FR-06	RebindKey	Action to rebind New key/button code	Bind a new key to an input action	Updated key mapping
	UpdateInput	Input Type (keyboard/gamepad)	Check input type (keyboard or gamepad) → Detect corresponding key or button presses → Update input state while input is accepted	Player inputs registered
FR-07	EditColorInPalette	Palette field to assign to New value	Update the specified color field in the current color palette	Updated color palette
	SetVisualEffectActive	Visual effect ID Enable/disable	Enable or disable a visual effect based on the enable/disable boolean	Visual effect applied
FR-08	SetVolume	Volume type Desired value	Check for valid range (0 - 100) → Apply value to master, SFX, or music volume based on volume type → Log error if invalid	Volume level adjusted

	SetAudioOffset	Value	Set the global audio offset to the provided value	Adjusted note sync timing
FR-09	SearchCharts	Query	Filter chart list using query → Clear previous chart list → Display the filtered results	Filtered chart list shown
FR-10	SortCharts	Sort criteria Ascending/descending	Sort the chart list by selected criteria and order → Clear current list → Display sorted list	Sorted chart list displayed
FR-11	SelectChart	Chart	Store selected chart → Play preview audio → Display metadata (title, artist, length, difficulty) in either Unicode or regular format	Chart preview and metadata displayed
FR-12	SaveScoreToLeaderboard	Player name Player score Accuracy Current date/time	Load local leaderboard → Add new score entry → Save updated leaderboard	Leaderboard updated

	ShowLeaderboard	None	Load local leaderboard → Clear previous entries in the display → Display each entry in the UI	Leaderboard displayed
FR-13	OnFileImport	Chart file	Check file extension → Extract/parse based on .osz or .tja file format, reject if does not match → Convert to internal chart format → Add to chart library	Chart file imported
FR-14	SetPhotosensitivity	Value	Apply the new photosensitivity setting to game settings	Photosensitivity mode enabled or disabled