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Bitties App: Project Briefing Document

1. Project Overview

**Project Name:** Bitties

**Application Purpose:** To provide a mobile and web application for tracking and managing a shared Bitcoin investment fund among a group of friends. The app will offer live updates, financial charts, and member-specific information, aiming to simplify the monitoring of Bitcoin purchases and progress towards a shared financial goal (specifically, a trip to Augusta in 2036).

**Target Audience:** The project creator and their friends who have contributed to the shared Bitcoin fund since 2022.

**Core Values/Principles:**

* **User-Centric Design:** Accessibility-first (single-click/tap, one-hand use), intuitive navigation.
* **Automation:** Zero manual setup for data structure creation, migration, and completion. All actions and logic automated.
* **Modularity:** Designed for easy extension and future feature additions.
* **Efficiency:** Token-efficient for GPT interactions and brief handovers.
* **Data Accuracy:** Live and historical data updates for BTC prices and trip costs.
* **Branding Consistency:** Adherence to a specific colour palette and typography.

2. Technical Requirements & Architecture

**2.1. Technology Stack:**

* **Core Development Language:** Python or PowerShell (decision pending, but the document implies a preference for a single block output script for deployment).
* **Version Control:** GitHub.
* **Content Delivery Network (CDN):** Cloudflare (if necessary).
* **APIs:** CoinGecko, CryptoCompare for BTC price data (ZAR and USD).
* **Web Scraping/APIs:** For Augusta 2036 trip costs (flights, accommodation, tickets, spending).

**2.2. Development Principles:**

* **Modular Build:** The application must be modular to facilitate future feature additions and maintenance.
* **Project File:** Creation of a structured project file is required.
* **Error Management:** Any errors should trigger a version change.
* **README Maintenance:** Continuous updates to the README file are essential.
* **Token Efficiency:** Maintain token efficiency for GPT interactions and handover briefs.
* **Deployment:** The output of any script must be a "single block output that I can copy and paste," eliminating the need for manual folder creation or file pasting. The build process should be "single upload, everything works."

**2.3. Data Handling:**

* **Source Data:** The creator possesses relevant data regarding "contribution, members (new and old), btc purchases etc." The formatting of this data needs to be determined for integration into the app modules.
* **Automated Data Management:** "All data structure creation, migration, and completion is 100% automated."
* **Robustness:** The app must be "robust against missing, incomplete, or inconsistent data."

3. Key Features

**3.1. Core Application Functionality:**

* **Dual-Currency Dashboard:** Ability to "instantly switch all charts/values between ZAR and USD."
* **Personal & Group Dashboards:**Individual view (per member).
* Collective view (group totals, BTC held, portfolio value, progress).
* **Trader Analytics:**Live and historic BTC charts (candlestick, line, area).
* Contribution/balance graphs, P&L, volatility, drawdown.
* Timeframes: "1D, 1W, 1M, YTD, All."
* Goal progress, performance vs. target trajectory.
* **Speculation Tool:** "What-if" simulator for:
* Contribution amounts, BTC price, inflation, trip costs, member count.
* Instant forecast updates.
* Export/share scenarios.
* **Manual BTC Entry:** Single accessible form for authorised persons to add BTC purchases, which "gets split in teh pool to teh number of mebers."
* **Notifications:** "Email and (if possible) WhatsApp reminders for contributions, milestones, BTC price alerts."
* **Membership Management:**Manage join/leave events, adjust shares fairly.
* Support user roles (admin/member/viewer).
* Nickname/avatar.
* Audit log.
* **Trip Goal Logic:** "Auto-track and dynamically update savings goal based on latest flight/accommodation/ticket cost data, including API-based refresh and scenario simulation."

**3.2. User Interface (UI) & Experience (UX):**

* **Accessibility-First Design:**"Full use by someone with only one hand and limited typing ability."
* "All actions are single-tap/click and accessibility friendly."
* "Interface actions (including dashboard toggles, scenario simulation, and manual BTC entry) must all be achievable with single-click/tap controls, dropdowns, and accessible buttons."
* **Mobile Responsiveness:** "Dashboard and all UI elements optimised for both desktop and mobile/touch use."
* **Navigation:** "One-click navigation for mobile and desktop."
* **Styling Module:** All styling "should be organized in a separate tab so that it can be implemented globally." Modifications should only require changing the styling module, affecting "fonts, typography, and colors, without requiring changes to the core code."

4. Branding & Aesthetics

**4.1. Theme:** "UI must echo the Masters’ premium, elegant aesthetic."

**4.2. Typography:**

* **Font:** "All text must use the “Poppins” font."
* **CSS Variable:** --font-family: 'Poppins', sans-serif;

**4.3. Colour Palette (Clean Masters Tournament):**

* **Primary Colour (Dominant):Blue (#0656A3):** "Use as the dominant brand and navigation colour. Apply for app bars, primary buttons, links, and key highlights. Set as the default for headings and actionable text."
* **CSS Variable:** --primary-blue: #0656A3;
* **Secondary Accent Colours (Limited Usage):Green (#00722D):** "Use for success messages, progress indicators, and positive highlights." "Limit usage to avoid overwhelming the primary blue."
* **CSS Variable:** --accent-green: #00722D;
* **Yellow (#FFB81C):** "Use sparingly for alerts, warnings, or notification badges. Use as accent lines, separators, or call-to-action highlights."
* **CSS Variable:** --accent-yellow: #FFB81C;
* **Red (#D62718):** "Apply for errors, destructive actions, or urgent notifications. Use for status indicators or confirmation of critical actions."
* **CSS Variable:** --accent-red: #D62718;
* **Backgrounds and Surfaces:White (#FFFFFF):** "Use as the primary background to maximise clarity and contrast."
* **CSS Variable:** --background: #FFFFFF;
* **Very Light Grey (#F6F7FB or similar):** "Use for cards, surfaces, or sections to reduce visual fatigue."
* **CSS Variable:** --surface: #F6F7FB;
* **Text Colours:Primary Text:** "Use your blue (#0656A3) for headings and key text."
* **Body Text:** "Consider soft black (#242424) or dark grey for readability, instead of pure blue for all body text."
* **CSS Variable:** --text-main: #242424;
* **Contrast:** "Ensure all text has WCAG AA/AAA contrast for accessibility."

**4.4. UI Elements & Modern Touches (2025):**

* **Buttons:**Primary: Blue background, white text.
* Secondary: White background, blue border and text.
* Success/Confirm: Green background, white text.
* Destructive: Red background, white text.
* **Icons:** Use blue for active, grey for inactive, red/green/yellow for status.
* **Modern Touches:**"Rounded corners: Use 12-20px radius for cards and buttons."
* "Subtle drop-shadows: For elevation, use soft shadows, not harsh outlines."
* "Micro-interactions: Add smooth transitions on hover/focus states."
* "Spacing: Generous padding and margin for a clean, uncluttered interface."
* **Charts:** "Wrap each chart in a fluid container."

5. Instructions for Language Model (AI Assistant)

* **Output Format:** Deliver "only the full app code and a step-by-step guide." Do not repeat or paraphrase this brief.
* **Automation:** "Do not prompt the user for input during code execution. All actions and logic must be automated and documented."
* **Deployment:** "All app setup, data migration, and UI deployment must be as close to 'single upload, everything works' as possible."
* **Code Quality:** "No unnecessary comments, softeners, or explanations outside what is needed for code documentation and the step-by-step guide."
* **Language:** "Use only UK English spelling, UK number/date formats, and professional but friendly language in all app outputs."
* **Scope:** AI assistance is "only applicable to teh app and certain data sources."

This briefing document encapsulates the complete vision and technical requirements for the "Bitties" application, serving as a comprehensive guide for its development.

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