# Maya Master Document

**BASE STRUCTURE**

**Project Name:** Maya Exchange

**Core Features:**

1. KYC/AML Verification (Know-Your-Coustomer / Anti Money Laundering)
2. Integrated Banking Services (IBS)
3. UPI Payments (Unified Payment Service)
4. Cross-Border Transactions (CBT)
5. Local Currency to Local Currency (LC2LC)
6. Crypto to Crypto (C2C)
7. Crypto to Local Currency (CLC)
8. Local Currency To Crypto (LC2C)
9. Multi-Currency Support (MCS)
10. Local Internal Currency Transactions (LICT)
11. Inbuild UPI system like phonepe and gpay and cross app transactions.

**User Application Design For:**

1. Web Application (Responsive Design)
2. Mobile Application (iOS and Android)
3. API for Integrations (Application Programming Interface)

**User Flow:**

**Scenario 1: User 1 sends local currency to User 2 (LC2LC)**

1. User 1 logs in and selects "Send" option.
2. Chooses recipient (User 2).
3. Enters amount and confirms transaction.
4. Maya Exchange Transfers Local currency to user 2 Via UPI Infrastructure.

**Scenario 2: User 1 sends crypto to User 2 (C2C)**

1. User 1 logs in and selects "Send" option.
2. Chooses recipient. (User 2).
3. Selects cryptocurrency. (BTC).
4. Chooses desired cryptocurrency for User 2 (ETH)
5. Enters amount and confirms transaction.
6. Maya Exchange executes crypto-to-crypto transaction.

**Scenario 3: User 1 Sends crypto and wants local currency (C2LC)**

1. User 1 logs in and selects "Send" option.
2. Chooses recipient (User 2).
3. Selects cryptocurrency (BTC).
4. Chooses local currency (INR).
5. Maya Exchange converts crypto to local currency it’ll transfer and credits to User 2 Bank Account that linked to the app and selected as primary.

**Scenario 4: User 1 Sends Local Currency and wants Crypto(C2LC)**

1. User 1 logs in and selects "Send" option.
2. Chooses recipient (User 2).
3. Selects cryptocurrency (INR).
4. Chooses local currency (BTC).
5. Maya Exchange converts local currency to crypto it’ll transfer and credits to User 2 Web3, Crypto Hot wallet in the app.

**Tech Stack:**

1. Frontend: React.tsx, Angular.tsx, or Vue.tsx
2. Backend: Node.tsx, Python (Flask/Django) & C#, Perl
3. Database: MySQL, PostgreSQL, or MongoDB
4. Cryptocurrency Integration: APIs (Coinbase, Binance) or Web3.js
5. Banking Integration: APIs (Stripe, PayPal) or UPI SDKs
6. Security: OpenSSL, SSL/TLS, Two-Factor Authentication, JWS, Oauth Token

**API Endpoints:**

1. **/users** - User management
2. **/transactions** - Transaction history
3. **/send** - Send local currency or crypto
4. **/receive** - Receive crypto or local currency
5. **/convert** - Convert currency (LCC, CLC, CC)
6. **/kyc** - KYC/AML verification

**Database Schema:**

1. Users table: id, name, email, password, KYC status
2. Transactions table: id, user\_id, transaction\_type, amount, currency
3. Currencies table: id, name, symbol, exchange\_rate

**Security Considerations:**

1. Encryption for sensitive data
2. Secure password storage (bcrypt)
3. Two-Factor Authentication (Google Authenticator)
4. Regular security audits and penetration testing

**Development Roadmap:**

**Phase 1: Research and Planning (2 weeks)**

1. Market research
2. Technical feasibility study
3. Team assembly

**Phase 2: Frontend Development (8 weeks)**

1. User interface design
2. Web and mobile application development

**Phase 3: Backend Development (12 weeks)**

1. API development
2. Database design and integration
3. Cryptocurrency and banking integrations

**Phase 4: Testing and Launch (8 weeks)**

1. Unit testing
2. Integration testing
3. Security auditing
4. Launch preparation

**Phase 5: Maintenance and Updates (Ongoing)**

1. Regular security updates
2. Feature enhancements
3. User support

**Team Structure:**

1. Project Manager
2. Frontend Developer
3. Backend Developer
4. DevOps Engineer
5. QA Engineer
6. Security Specialist

**Tech Architecture, Components & Features**

**Project Name :** Maya Exchange

**Architecture:**

1. Frontend: User interface (Web, Mobile, Desktop)
2. Backend: API, Services (Micro-services architecture)
3. Database: Relational databases (e.g., MySQL) for storing user data, transactions, and order books
4. Cryptocurrency Integration: APIs for cryptocurrency exchanges, wallets, and payment processors
5. Banking Integration: APIs for banking services, UPI, and payment gateways
6. Security: Encryption, 2FA, access controls

**Components:**

**1. User Management :**

1. KYC/AML checks
2. User profiles
3. Account management

**2. Crypto Management :**

1. Wallet Integration
2. Exchange Integration
3. Trading engine

**3. Banking Management :**

1. UPI & IMPS & Individual Bank interface integration
2. Payment gateway integration
3. Fiat currency management

**4. Transaction Management :**

1. Order books
2. Trade matching
3. Settlement

**5. Cross-Border Transactions Management :**

1. International payment processing
2. Currency conversion
3. Compliance with regulations

**Local Currency to Crypto Feature (Same Scenario With Local Currency to crypto) :**

**1. User Interface :**

* 1. Select recipient (User 2)
  2. Choose local currency (INR)
  3. Select desired cryptocurrency or local currency

**2. Backend Processing :**

* 1. Verify user balance and KYC/AML status
  2. Convert local currency to cryptocurrency (or other local currency)
  3. Execute trade on cryptocurrency exchange or OTC desk
  4. Update user balances and transaction history

**Cloud Services Integration :**

**AWS:**

* 1. Amazon EC2 (scalable infrastructure)
  2. Amazon RDS (database management)
  3. Amazons3 (storage)
  4. Amazon CloudWatch (monitoring)

**Advanced Features**

1. **Artificial Intelligence (AI)**: Implement AI-powered trading bots and market analysis tools
2. **Machine Learning (ML)**: Integrate ML algorithms for predictive modeling and risk management
3. **Blockchain Analytics**: Utilize blockchain analytics tools for transaction tracking and security
4. **Compliance**: Implement automated compliance checks for regulatory requirements

**Deployment Strategy**

1. **Containerization**: Use Docker for containerization
2. **Orchestration**: Utilize Kubernetes for container orchestration
3. **Continuous Integration/Continuous Deployment (CI/CD)**: Implement CI/CD pipelines using GitLab CI/CD

**Security Measures**

1. **Encryption**: Implement end-to-end encryption for data protection
2. **Access Controls**: Enforce strict access controls and role-based permissions
3. **Two-Factor Authentication**: Require 2FA for all user accounts
4. **Regular Security Audits**: Conduct regular security audits and penetration testing

**Scalability**

1. **Horizontal Scaling**: Scale infrastructure horizontally using cloud services
2. **Load Balancing**: Implement load balancing for efficient traffic distribution
3. **Caching**: Utilize caching mechanisms for improved performance

**Database Combination**

**Traditional Databases**

1. **MongoDB**: Store customer profiles, order history, and market data.
2. **MySQL**: Manage transactional workloads, user accounts, and banking information.
3. **PostgreSQL**: Store complex relational data, trade history, and order books.

**AWS Databases**

1. **Amazon RDS (MySQL/PostgreSQL)**: Relational database for ACID-compliant transactions.
2. **Amazon DynamoDB**: High-performance key-value store for real-time market data.
3. **Amazon Redshift**: Data warehousing and analytics for sales data and customer behavior.

**Transaction Database**

1. **Apache Cassandra**: Distributed, scalable database for transaction history and trade matching engine.

**Integration Strategies**

1. **Data Replication**: Amazon Data Migration Service (DMS) for replicating data between traditional and AWS databases.
2. **API Gateway**: AWS API Gateway for creating a unified API layer accessing data from multiple databases.
3. **Serverless Functions**: AWS Lambda for interacting with databases and performing tasks like data processing and notifications.

**Data Flow**

1. User data → MySQL
2. Customer profiles → MongoDB
3. Market data → MongoDB and Amazon DynamoDB
4. Transaction data → Apache Cassandra
5. Trade history → PostgreSQL
6. Analytics data → Amazon Redshift

**Key Considerations**

1. **Data Consistency**: Ensure data consistency across databases using replication and validation mechanisms.
2. **Performance**: Optimize performance through indexing, query optimization, and caching.
3. **Cost**: Monitor costs associated with each database and AWS service.
4. **Management**: Establish clear management procedures for backups, security, scaling, and updates.

**Benefits**

1. **Flexibility**: Leverage strengths of each database for specific use cases.
2. **Scalability**: Handle high traffic and large data volumes.
3. **Performance**: Optimize query performance and data processing.
4. **Cost-Effective**: Reduce costs by choosing the right database for each use case.

**Components**

1. User Management
2. Crypto Management
3. Banking Management
4. Transaction Management
5. Cross-Border Transactions Management
6. Analytics and Reporting

**Features**

1. Local Currency to Crypto
2. P2P (Crypto Currency)
3. Crypto to Local Currency
4. P2P ( Local Currency)
5. P2P (Local Currency To Other International Country Currency)
6. P2P (Other International Country Currency To Local Currency)
7. Real-time Market Data
8. Advanced Analytics and Reporting
9. Secure Authentication and Authorization

**Transaction Database (Apache Cassandra) Schema**

1. transactions table: transaction\_id, user\_id, currency, amount, timestamp
2. order\_books table: order\_id, user\_id, currency, amount, price
3. trade\_history table: trade\_id, user\_id, currency, amount, price, timestamp

**Technologies:**

**Frontend:** HTML, CSS, react.tsx, node.tsx, vue.tsx, tsx, java, kotlin

**Backend & Security and encryption:** C#, Perl, Ruby, Python

**Encryption algorithms:** CRYSTALS-Kyber, FALCON, Bcrypt

**Hashing Algorithms:** SHA-256, Skein, Grøstl, Whirlpool, Streebog

**Database:** MongoDB, MySQL, PostgreSQL, Amazon RDS, Amazon DynamoDB, Amazon Redshift, Apache Cassandra

**Integration:** Amazon DMS, AWS RDBS, AWS API Gateway, AWS Lambda

**Cryptocurrency Integration:** APIs (cryptoapi.io, tradinview), Web3.js, own liquidity pool

**Banking Integration:** APIs (e.g., debit, credit, rupay, visa, master card, amex), UPI SDKs

**Security:** OpenSSL, SSL/TLS, Encryption, 2FA, access controls

**AWS:** Amazon EC2, Amazon RDS, Amazon S3, Amazon CloudWatch

**Orchestration & Deployment:** Docker & Kubernetes

**Know Your Customer(KYC)**

**KYC (Know Your Customer) Verification Process**

**There are 3 Different stages**:

**Stage 1: Mobile Number Verification**

**Stage 2: Document Verification**

**Stage 3: Facial Verification**

**Stage 4: Bank Account Verification**

**Stage 1: Mobile Number Verification**

1. **Collect User Information:** Gather the user's name and mobile number during registration.
2. **Send OTP:** Generate a unique one-time password (OTP) and send it to the provided mobile number via SMS or a similar channel.
3. **Verify OTP:** Prompt the user to enter the received OTP to confirm ownership of the mobile number.
4. **Telecom Database Check:** If available and feasible, cross-verify the provided name and mobile number with the telecom provider's database to enhance security.

**Stage 2: Document Verification**

1. **Document Submission:** Request the user to upload a clear copy of a valid government-issued ID (e.g., passport, driver's license, national ID card).
2. **Data Extraction:** Use OCR or other image processing techniques to extract relevant information from the uploaded document, such as name, date of birth, and document number.
3. **Document Authentication:** Verify the authenticity of the document using a reputable third-party identity verification service.
4. **Data Matching:** Compare the extracted information with the data provided during registration and the information verified in Stage 1 (mobile number verification).

**Stage 3: Facial Recognition**

1. **Liveness Check:** Conduct a liveness check to ensure the user is a real person and not a spoofing attempt. This can involve asking the user to perform specific actions (e.g., blink, smile, head movement) while capturing a video or image.
2. **Facial Feature Extraction:** Extract facial features from the captured image or video.
3. **Biometric Comparison:** Compare the extracted facial features with the photo on the uploaded ID and any previously stored biometric data (if applicable).

**Stage 4: Bank Account Verification**

1. **Bank Selection:** Allow the user to select their bank from a list of supported banks.
2. **Account Details:** Request the user to enter their bank account number and other relevant details.
3. **Bank Verification:** Verify the provided bank account details using the bank's API or a third-party verification service.
4. **Name Matching:** Ensure that the name associated with the bank account matches the previously verified information (from mobile number, document, and facial recognition).
5. **Additional Checks (Optional):** Consider implementing additional checks like address verification or credit history checks based on risk assessment.

**Key Considerations:**

1. **Data Privacy:** Handle all collected user data securely and in compliance with applicable data protection regulations (e.g., GDPR, CCPA).
2. **User Experience:** Design the verification process to be user-friendly and minimize friction for the user.
3. **Error Handling:** Implement robust error handling mechanisms to provide clear and informative feedback to the user in case of failures during any stage of the verification process.
4. **Compliance:** Adhere to all relevant KYC/AML regulations and industry standards.
5. **Continuous Improvement:** Regularly review and update the verification process to address emerging threats and improve accuracy.

### ****Maya Revenue Model****

### ****1. Primary Revenue Streams****

1. **Transaction Fees**:
   1. A small percentage (e.g., 0.1%–1%) is charged on every cryptocurrency trade or fiat-to-crypto/crypto-to-fiat conversion.
   2. **Why It Works**: High trading volume on the platform ensures consistent revenue generation.
2. **Spread on Conversion Rates**:
   1. For fiat-to-crypto or crypto-to-fiat conversions, a spread is applied (difference between the buy and sell price).
   2. **Why It Works**: Users are willing to pay for convenience and secure transactions.
3. **Deposit and Withdrawal Fees**:
   1. Charging fees for deposits (e.g., fiat deposits via UPI) and withdrawals (e.g., transferring cryptocurrency to an external wallet).
   2. **Why It Works**: Users accept nominal fees for seamless integration with fiat systems.
4. **Premium Membership Plans**:
   1. Offer tiered memberships for advanced trading tools, lower fees, or priority customer support.
   2. **Why It Works**: Power users and institutional traders value enhanced features.
5. **Staking and Lending Services**:
   1. Earn interest by facilitating staking of cryptocurrencies or lending/borrowing features for users.
   2. **Why It Works**: Users who hold cryptocurrencies long-term are attracted to earning passive income.

### ****2. Secondary Revenue Streams****

1. **Institutional Trading**:
   1. Provide APIs for high-frequency trading and large-scale institutional investors.
   2. Charge subscription fees or fees based on volume.
   3. **Why It Works**: Institutions are attracted to robust APIs and lower fees for bulk trades.
2. **Advertisement and Listing Fees**:
   1. Charge projects and token issuers fees to list their cryptocurrency or advertise on the platform.
   2. **Why It Works**: Growing platforms are attractive marketing channels for emerging tokens.
3. **Educational Content and Training**:
   1. Offer paid courses, webinars, and guides about cryptocurrency trading and blockchain technology.
   2. **Why It Works**: Many users are beginners who value expert guidance.
4. **NFT Marketplace Integration** (Future Expansion):
   1. Monetize by charging fees for NFT transactions or minting.
   2. **Why It Works**: NFT markets are rapidly expanding and complement cryptocurrency platforms.

### ****3. Scaling and Long-term Profitability****

1. **Economies of Scale**:
   1. As user volume grows, operational costs like server hosting and security measures scale more efficiently, increasing profit margins.
2. **Diversified Services**:
   1. Expanding into DeFi, cross-border remittances, and tokenized assets to attract more user demographics.
3. **Strategic Partnerships**:
   1. Collaborate with payment gateways, banks, or other crypto platforms to expand reach and functionality.
4. **Global Expansion**:
   1. Enter new markets with high demand for cryptocurrency trading, such as emerging economies with limited banking infrastructure.

### ****4. Monetization Roadmap****

1. **Year 1**: Focus on user acquisition and platform stability.
   * Low fees to attract users.
   * Launch referral programs to boost sign-ups.
2. **Year 2–3**: Scale operations and introduce premium features.
   * Introduce premium memberships and advanced trading tools.
   * Expand the team for marketing and support.
3. **Year 4+:** Diversify revenue streams.
   * Add staking, lending, and NFT marketplace features.
   * Expand to institutional investors and global markets.

### ****5. How Maya Exchange Will Make Money (Even Today)****

1. **Immediate Revenue**:
   * + Start with transaction fees and fiat integration fees.
     + Leverage partnerships with payment gateways for shared revenue.
2. **Customer Stickiness**:
   * + Provide superior user experience with competitive fees and fast transaction times to retain users.
     + Introduce loyalty programs to encourage repeat usage.
3. **Scalable Growth:** 
   * + Expand user base rapidly while controlling operational costs.
     + Rely on early adopters to promote the platform organically.

### ****Maya Direct & Indirect Competitors****

### ****Direct Competitors****

These are platforms offering similar services, such as cryptocurrency trading, fiat integration, and payment systems.

****Global Players****

#### Binance:

#### Largest cryptocurrency exchange by trading volume.

#### Offers advanced trading features, staking, and DeFi integrations.

#### Competitive on fees and supports a wide range of cryptocurrencies.

1. **Coinbase:**
   * User-friendly interface, ideal for beginners.
   * Offers advanced trading features, staking, and DeFi integrations.
   * Competitive on fees and supports a wide range of cryptocurrencies.
2. **Kraken:**
   * Well-established platform with robust security features.
   * Offers margin trading and futures contracts.
   * Competitive fees for high-volume traders.
3. **Bitfinex:**
   * Known for advanced trading features and high liquidity.
   * Targeted at experienced traders.
   * Offers lending and borrowing services.

#### ****Regional Players in Emerging Markets****

1. **WazirX** (India):
   * + Fiat integration via UPI and Indian payment systems.
     + Focus on attracting Indian traders.
     + Partnership with Binance enhances its global reach.
2. **CoinSwitch Kuber** (India):

* Simplified app for crypto trading targeting beginners.
* UPI support for fiat-to-crypto transactions.
* Strong marketing presence in India.

1. **Bitbns** (India):
   * + Offers innovative products like SIP (Systematic Investment Plan) in cryptocurrencies.
     + Supports a wide range of Indian payment methods.
2. **Paxful** (Global, P2P):
   * + Peer-to-peer exchange for fiat-to-crypto conversions.
     + Strong focus on underserved regions like Africa and parts of Asia.

### ****Indirect Competitors****

These platforms may not directly compete as exchanges but serve similar user needs (crypto payments, wallets, or DeFi features).

#### ****Payment Gateways:****

#### ****Stripe & Wise:****

#### **Offers cryptocurrency payment options for merchants.**

#### **Allows businesses to accept crypto payments, making it a competitor in crypto payment gateways.**

1. ****Phonepe/Gpay/Amazon Pay/Paytm & etc:****
   * Offers payment options for merchants in local currency on UPI network.
   * Allows businesses to accept payments, making it a competitor in payment gateways.

#### ****DeFi Platforms:****

#### ****Uniswap and SushiSwap:****

* + - **Decentralized exchanges (DEX) allowing users to trade cryptocurrencies without intermediaries.**
    - **Compete by offering lower fees and no custody of user funds.**

#### ****Aave and Compound:****

#### **Focused on lending and borrowing cryptocurrencies.**

#### **Indirectly compete if Maya Exchange offers similar DeFi features in the future.**

#### ****Crypto Wallets:****

#### ****MetaMask:****

* + **A non-custodial wallet with direct access to DEXes and DeFi platforms.**
  + **Competes for users who prioritize decentralized trading.**

1. **Trust Wallet:**
   * **Offers wallet services integrated with DEX trading.**
   * **Focused on mobile-first users.**

### ****Unique Positioning for Maya Exchange****

Maya Exchange competes by combining:

1. **Local fiat integration**: UPI and regional payment support (e.g., targeted for UPI Technologies using markets and emerging markets).
2. **Ease of use**: Simplified trading interface for beginners while supporting advanced trading tools.
3. **Regulatory focus**: Ensuring compliance with local and international regulations.

**User Accessible Features on Maya Exchange**

1. **Dashboard:**
   * Overview of account balance
   * Recent transactions
   * Quick links to common actions (send, receive, convert)
2. **User Profile:**
   * Edit personal information
   * Update contact details
   * Manage security settings (password, 2FA)
3. **KYC/AML Verification:**
   * Complete mobile number verification
   * Upload and verify documents (ID, passport, driver's license)
   * Perform facial recognition
   * Verify bank account details
4. **Send and Receive:**
   * Local Currency to Local Currency (LC2LC):

Send local currency to other users via UPI

* + Crypto to Crypto (C2C):

Send cryptocurrencies to other users

* + Crypto to Local Currency (CLC):

Convert and send cryptocurrencies to local currency

* + Local Currency to Crypto (LC2C):

Convert and send local currency to cryptocurrencies

1. **Transaction History:**
   * View past transactions
   * Filter by type (LC2LC, C2C, CLC, LC2C)
   * Download transaction history
2. **Convert Currency:**
   * Convert between different cryptocurrencies
   * Convert between local currencies and cryptocurrencies
   * View realtime exchange rates
3. **Staking and Earning:**
   * Stake cryptocurrencies to earn interest
   * Participate in liquidity pools
   * Earn rewards from staking and lending
4. **Trading**:

* Spot Trading:

Trade cryptocurrencies against each other (e.g., BTC/USDT, ETH/BTC).

* Margin Trading:

Trade with borrowed funds to increase potential gains (and risks).

* Futures Trading:

Trade derivative contracts (long or short positions).

* Options Trading:

Trade options contracts for hedging or speculative purposes.

1. **Deposit and Withdraw:**
   * Fiat Deposits:

Deposit fiat currency via bank transfer, credit/debit card, UPI.

* + Crypto Deposits:

Deposit cryptocurrencies to your Maya Exchange wallet.

* + Fiat Withdrawals:

Withdraw fiat currency to your bank account.

* + Crypto Withdrawals:

Withdraw cryptocurrencies to external wallets.

1. **CrossBorder Transactions:**

* Send and receive funds internationally
* Convert currencies for crossborder transactions

1. **P2P Trading:**

* Trade cryptocurrencies with other users
* Local currency to crypto P2P transactions
* International currency to local currency P2P transactions

1. **RealTime Market Data:**

* View live market prices
* Track market trends and news

1. **Analytics and Reporting:**

* Generate custom reports
* Analyze trading performance
* Track portfolio growth

1. **Security:**

* Enable twofactor authentication (2FA)
* Manage API keys
* View and manage session activity

1. **Support:**

* Access help center and FAQs
* Contact customer support
* Submit tickets for assistance

1. **Settings:**

* Language preferences
* Notification settings
* Privacy settings

1. **Referral Program:**

* Invite friends and earn rewards

Track referral status

* Loyalty Programs:

Earn points for transactions

Redeem points for discounts or rewards

1. **NFT Marketplace (Future Feature):**

* Buy and sell NFTs
* Mint and list NFTs

1. **Advanced Features:**

* Grid Trading:

Automate buying low and selling high

* Copy Trading:

Copy trades of successful traders

* Algorithmic Trading:

Use prebuilt or custom trading bots

1. **DeFi Integration:**

* Access decentralized finance (DeFi) protocols
* Participate in yield farming, liquidity mining, and other DeFi activities

1. **Maya Open Chain Integration:**

* Interact with Maya Open Chainbased dApps
* Swap tokens on Maya Open Chain

1. **Maya Visa Card:**

* Spend cryptocurrencies at merchants
* Earn rewards and cashback

1. **Maya Savings:**

* Flexible savings: earn interest on idle funds
* Fixed savings: lock funds for higher returns

1. **Maya Launchpad/Launchpool:**

* Participate in token sales and initial coin offerings (ICOs)
* Earn new tokens through staking

1. **Maya DEX:**
   * Trade on Maya's decentralized exchange
   * Noncustodial trading
2. **Maya Charity Foundation:**

* Donate to charitable causes
* Participate in social impact projects

1. **Maya Academy:**

* Access educational resources
* Learn about cryptocurrencies and blockchain technology

## **Outline for the PPT**

### **Slide 1: Title Slide**

**Title**: *Maya Exchange: Redefining the Cryptocurrency Landscape*

**Tag-line:** *Let’s Make a Difference In Crypto World*

**Subtitle**: *"Bridging the Gap Between Traditional Finance and Crypto"*

Include a visually appealing background and the Maya Exchange logo (if available).

### **Slide 2: Introduction**

**What is Maya Exchange?**

* 1. Next-generation cryptocurrency trading platform.
  2. Seamlessly integrates blockchain technology with traditional payment systems like UPI.

### **Slide 3: The Problem**

**Highlight issues with current crypto exchanges:**

* 1. Limited payment gateway options.
  2. High transaction fees.
  3. Lack of trust and transparency.
  4. Complexity for new users.

### **Slide 4: The Solution**

How Maya Exchange solves these problems:

* 1. UPI integration for seamless transactions.
  2. Lower fees compared to traditional exchanges.
  3. Blockchain-powered transparency.
  4. User-centric design tailored for beginners and professionals alike.

### **Slide 5: Core Features**

**Key Features of Maya Exchange**:

* 1. Local-currency to Crypto and Crypto to Local-currency transactions.
  2. UPI integration as a Payment Service Provider (PSP).
  3. Staking and liquidity pools for passive income.
  4. Advanced trading options: spot, margin, futures.
  5. Cross-border transactions with minimal fees.

### **Slide 6: Comparison with Competitors**

| **Feature** | **Maya Exchange** | **Binance** | **Coinbase** | **Karken** |
| --- | --- | --- | --- | --- |
| UPI Integration | ✅ | ❌ | ❌ | ❌ |
| Local Currency to Crypto in P2P With UPI | ✅ | ❌ | **❌** | ❌ |
| Crypto To Local Currency in P2P With UPI | ✅ | **❌** | **❌** | **❌** |
| Staking & Liquidity Pools | ✅ | ✅ | ✅ | ✅ |
| Cross-Border Transaction | ✅ | ✅ | ❌ | ✅ |
| Minimal | ✅ | ❌ | ❌ | ❌ |
| Blockchain Transparency | ✅ | ✅ | ✅ | ✅ |

### **Slide 7: TAM, SAM, and SOM Analysis**

**TAM (Total Addressable Market)**:

*Global Crypto Market*: $1.1 trillion.

Includes all potential users of cryptocurrency exchanges worldwide.

**SAM (Serviceable Available Market)**:

*UAE Crypto Users*: ~$34 billion market.

Users who can trade using UPI or bank integrations.

**SOM (Serviceable Obtainable Market)**:

*Initial Market Penetration*: 1% of SAM in the first year.

Target revenue: ~$680 million in Year 1.

### **Slide 8: How We Are Different**

**Highlight the Unique Selling Points (USPs):**

* 1. UPI integration for direct fiat-to-crypto transactions.
  2. Blockchain-backed transparency.
  3. Advanced yet user-friendly trading features.
  4. Cost-effective trading with minimal fees.

### **Slide 9: Technology Stack**

**Frontend:** HTML, CSS, react.tsx, node.tsx, vue.tsx, tsx, java, kotlin

**Backend & Security and encryption:** C#, Perl, Ruby, Python

**Encryption algorithms:** CRYSTALS-Kyber, FALCON, Bcrypt

**Hashing Algorithms:** SHA-256, Skein, Grøstl, Whirlpool, Streebog

**Database:** MongoDB, MySQL, PostgreSQL, Amazon RDS, Amazon DynamoDB, Amazon Redshift, Apache Cassandra

**Integration:** Amazon DMS, AWS RDBS, AWS API Gateway, AWS Lambda

**Cryptocurrency Integration:** APIs (cryptoapi.io, tradinview), Web3.js, own liquidity pool

**Banking Integration:** APIs (e.g., debit, credit, rupay, visa, master card, amex), UPI SDKs

**Security:** OpenSSL, SSL/TLS, Encryption, 2FA, access controls

**AWS:** Amazon EC2, Amazon RDS, Amazon S3, Amazon CloudWatch

**Orchestration & Deployment:** Docker & Kubernetes

### **Slide 10: Roadmap**

**Phase 1**: Development (Core Features, MVP Launch).

**Phase 2**: UPI as PSP integration and TAM expansion.

**Phase 3**: Advanced trading features and global reach.

### **Slide 11: Call to Action**

Name : Karthikeyan Katkam

Phn. No. : +917981703460

Email ID: [karthikeyankatkam@yahoo.com](mailto:karthikeyankatkam@yahoo.com)