

BDT Currency Converter	
Project Sponsor	Bangladesh Bank
Business Need	To support individuals, businesses, and investors in making informed financial decisions, there is a critical need for a reliable and accessible platform that provides up-to-date conversion rates of Bangladeshi Taka (BDT) against major foreign currencies and precious metals. This tool will help users track real-time and historical price trends, enabling better planning for travel, trade, remittances, and investments.
Business Requirement	<ol style="list-style-type: none"> Currency Conversion Feature <ul style="list-style-type: none"> Convert Bangladeshi Taka (BDT) to popular foreign currencies (e.g., USD, EUR, GBP, INR, etc.) <p>Real-time exchange rates via an API (e.g., Exchange Rate-API, Forex API)</p> <ol style="list-style-type: none"> Precious Metal Conversion Feature <ul style="list-style-type: none"> Convert BDT to precious metals (Gold, Silver) by gram Live price fetching for gold and silver (via metal pricing API) Graphical Price Representation <ul style="list-style-type: none"> Display historical exchange rates and metal prices using interactive line or bar graphs Filter Options for Graphs <ul style="list-style-type: none"> Show conversion trends for: <ul style="list-style-type: none"> Last week Last month Last 3 months Custom date range (optional) User Interface (UI) Requirements <ul style="list-style-type: none"> Clean and responsive UI Easy selection between currencies or metals Toggle for changing BDT to target unit and vice versa Backend Functionality <ul style="list-style-type: none"> Fetch and cache real-time data to optimize performance Historical data processing and storage Error Handling and Fallbacks <ul style="list-style-type: none"> Handle API failures or rate limit issues gracefully Display fallback message or cached values when needed
Business Value	<ol style="list-style-type: none"> Financial Transparency <ul style="list-style-type: none"> Helps users understand the real-time value of BDT in foreign markets and commodity terms

	<ol style="list-style-type: none"> 2. Investor & Traveler Utility <ul style="list-style-type: none"> ○ Useful for people investing in precious metals or traveling abroad 3. Educational Purpose 4. Visual data helps educate users about currency/metal price trends and fluctuations 5. Market Awareness <ul style="list-style-type: none"> ○ Supports better financial decision-making based on historical trends 6. Competitive Advantage <ul style="list-style-type: none"> ○ Combines both currency and precious metal conversion in one app, which is uncommon in local solutions 7. Localization <ul style="list-style-type: none"> ○ Tailored specifically for Bangladeshi users, fulfilling a niche demand
Special Issues	<ul style="list-style-type: none"> ● API Reliability – Dependence on third-party APIs may cause downtime or data inaccuracies. ● Security Risks – Sensitive data and API keys must be protected from breaches or misuse. ● Political & Economic Instability – Sudden market changes may affect currency and metal price accuracy. ● Performance Challenges – Heavy data or graph processing can slow down the app. ● Device Compatibility – UI and performance must be optimized for mobile, tablet, and desktop. ● Network Latency – Slow or unstable connections may delay real-time data fetching. ● Regulatory Compliance – Legal and licensing requirements must be followed for financial data. ● User Trust & Transparency – Clear data sources and update times are needed to maintain credibility.