OPEN BANKING WITH SPRING BOOT

The complete ecosystem which empowersbanks to make their services available to the third- party is called "Open Banking". This ecosystem provides a platform of data exchange, which is essential to execute certain specialized services for the customers.

- **What is Open BankingActually Means?**

Open Banking is a process ofmaking banking data accessible to other external players through a secure channel. Technically, Open Banking is a collection of standard RESTful APIs (Representational State Transfer – a JSON-based architectural style of web- services) available in the public domain for subscription. Through this platform, banks are exposing services such as Accounts, Payments, Lending and Fund Transfer. Regulatory agencies across the world are setting rules for Open Banking. In the finance world, a similar churning isgoing on and adoption of Open Banking has becomeone such necessity imposed upon banking firms. App/wallet-based payment is just a starting point of API-based banking services.Open Banking, by standardization of APIs, taking these services to the next level opening upopportunities to innovate, to develop and to launch a new setoff service, which are notprovided by traditional banking and financial institutions.

Difference between open banking and traditional:

- Payment, fund transfer, and account services are the only internet banking services available traditionally. Only the parent banks have access to transactionand credit history data. While the goal of Open Banking is to make banking data and services available to Third Party Partners (TPP) through open APIs, TPP is exploiting these APIs to offer specialized services that conventional banks do notoffer.
- Data is exposed securely using APIs. This enables end customers to handle theirbank accounts through service interfaces provided by third parties and independent of the primary bank.
- In this model, the data is owned by consumer and upon consent, it will be available to TPPs.

Benefits and some implementation of Open Banking…

- Simple solution using a mobile app. All financial tasks in one app, including payments, fund transfers, taxmanagement, investments, and a ton more that are still to come.

- Competitive market for financial services – pressure on banks to innovate and to provide better services.
- New opportunity: Streamlined lending due to accessible data related to banking transactions and credithistory. Enrollment of new product requires less or no paper work.
- Budgeting and account book maintenance: App-based integrated account management, tax managementfor small and medium business firms.
- Fraud Management: Spending management and various liquidity management solutions are powered byprofessional services, which are providing proactive monitoring and preventing any

potential financial fraud.

- More payment options: Wallet payment, phone payment and email-based payment.
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Building blocks of open banking:

Open banking is a system that allows third-party financial service providers to access customer financial data from banks and other financial institutions through open APIs (application programming interfaces). The building blocks of open banking include:

1. APIs: APIs are the key building blocks of open banking. They allow banks to share customer financial data securely with third-party providers.
2. Data standards: Data standards define the structure and format of the data shared through APIs. They ensure that data can be shared efficiently and effectively between different systems.

3. Authentication and Authorization: Authentication and authorization are critical to the security of open banking. They ensure that only authorized users and services have access to customer data.

4. Consent management: Consent management is a critical component of open banking. It ensures that customers have control over their financial data and can choose which third-party providers have access to it.

5.Payment initiation: Payment initiation allows third-party providers to initiate payments on behalf of customers. This allows for more convenient and streamlined payment processes.

6.Account information services: Account information services allow third-party providers to access and analyse customer financial data. This can provide valuable insights for financial planning and budgeting.

7.Regulatory framework: A clear regulatory framework is essential for the success of open banking. It provides a level playing field for all participants and ensures that customer data is protected.

API'S Architecture for Open banking:

The architecture for APIs in open banking typically involves a layered approach, with each layer providing specific functionality and services. Here are the key layers that make up the API architecture for open banking:

- Presentation Layer: The presentation layer provides the user interface for the API, allowing third-party providers and customers to interact with the platform. This layer typically includes web portals, mobile apps, and other interfaces that enable users to access and interact with the API.
- API Gateway Layer: The API gateway layer provides a centralized interface for third-party providers to access the bank's systems. It manages API traffic and ensures that data is securely shared between different systems. The API gateway layer also includes authentication and authorization services to ensure that only authorized parties have access to the data.
- Security Layer: The security layer provides security services to protect the API from unauthorized access and other security threats. This includes encryption, access control, and other security measures.

There are three important modules in Open Banking.

These modules are Customer Experience, Consent Management and Monetization. Customer journey for an Open Banking can be depicted as:

Service Provision:

With access to customer data, third-party providers can offer a range of services, such as financial planning, budgeting, and investment advice. The Open Banking platform may also offer its own services, such as payments and money transfers.

Customer Experience:

Customer experience is a critical component of Open Banking. The platform should provide a seamless and user-friendly experience for customers, with easy-to-use interfaces and personalized services.

Consent Management:

Consent management is essential to Open Banking, as it ensures that customers have control over their financial data. The platform should provide a clear and transparent process for customers to manage their consent settings, including the ability to revoke or modify their consent at any time.

Monetization:

Monetization is an important consideration for Open Banking platforms, as they need to generate revenue to be sustainable. This may involve charging third-party providers for access to customer data, or offering premium services to customers for a fee.

Overall, the customer journey for an Open Banking platform should be designed with the customer in mind, providing a seamless and user-friendly experience that puts control in the hands of the customer.

Conclusion:

A new platform for a few services to both banks and consumers is being established through an open banking concept. Using open APIs, users and suppliers can communicate. There are already some things available, which provide a broad range of services and an integrated, customized solution.According to market research, this model will develop into a comprehensive data and platform for service exchange. Several new, specialized services that are based on innovation may soon enter the market. Using these APIs. If banks want to remain relevant in the future, they must go on this trip. The advancing of time They must implement a thorough API Management policy that may be used to capitalize on the user base and develop cutting-edge solutions. Are deeply ingrained.