AADHAAR PAY / OTP PAY

FOR

ALL TYPES OF MOBILE PHONES

Version 2.0

Digital India

Digital India is a campaign launched by the **GOI**: Government of India on 1st July 2015. It was launched by **Shri. Narendra Modi., Prime Minister of India**. It is launched with an Objective of connecting rural areas with high-speed Internet Networks and improving **Digital Literacy.** It is centred on 3 key areas:

1. Digital infrastructure as a Utility to every Citizen
2. Governance and Services on Demand
3. Digital Empowerment of Citizens

According to GOI, As of 31st Dec 2018 India had a Population of 130+ crore people.

- ✓ Aadhaar digital biometric Identity Card Holders = 123+ Crore
- ✓ Mobil Phone Users = 120+ Crore
- ✓ Smart Phone Users = 44+ Crore
- ✓ Internet Users = 56+ Crore

Every year Smart Phone and Internet users growth rate increased up to approx. 50%.

So 50+ Crore people are using Basic Mobile Phones. In that at least 50% are having Digitally literacy. Those people are unable to do Payments Digitally. Some people have Smart phones but they are not interested to use Mobile Wallets.

Reasons: Hacking Threat and Don't know how to utilize it.

Then How to solve this problem?

Aadhaar Pay is a payment wallet which is similar to PayTM, Google Pay, Phone Pay, BHIM UPI and others. Generally every Mobile Wallets are work out only in Smart Phones i.e., Android and IOS based Devices. Where as Aadhaar Pay will work in **Basic Mobile Phones** as well as Smart Phones also.

On November 2012 NPCI introduced *99#, a USSD based mobile banking service. By using this type of Digital Payment we can transfer money from one person to other person. Without Smart Phones and Internet.

Then, Why should implement Aadhaar Pay if USSD Payment is available?

USSD is a Menu based Application. At least 7 or 9 steps are required to transfer money. In fact these Payments are workout through Banks and few Telecom Operators. So many layers are there in this method of Payments. If one layer is not in working then Users will face lot of difficulties. And This is a time taken process.

What is the main intention behind this Innovation?

Digital Payment transactions can be done with all types of Mobile Phones.

Obviously, there is no Mobile Wallet to all Aadhaar Card holders. But Mobile Wallets are definitely required to only Shopkeepers and Business Employers.

In India, almost all Shopkeepers are already using 3rd party Mobile Wallets. Among those Mobile Wallets this Aadhaar Pay is also added in that list.If

Abbreviations used regularly in this Document

- ➢ **API:** Aadhaar Pay ID
- ➢ **ACH:** Aadhaar Card Holder (means Customer or Consumer)
- ➢ **SMA:** Shopkeepers Mobile Application
- ➢ **APIN:** Aadhaar PIN.
- ➢ **OTP:** One Time Password.
- ➢ **DOB:** Date of Birth

Present System

At present, Customer or Digital Users are scan Shopkeepers QR code to transfer money from Digital Users Mobile Wallets to Shopkeepers Mobile Wallets.

Proposed System

Type 1: Transaction with OTP or Aadhaar PIN. If Amount range between 10/- to 1000/-

Scenario: Shopkeepers scan Customer Aadhaar Card QR code (or enter Respective Aadhaar Pay ID), enter Transaction Money, And select With OTP or With APIN.

With OTP

Server sent OTP to Customers Aadhaar Linked Mobile Number. Give it to Shopkeeper. Finally shopkeeper enter that OTP and Server transfer money from ACH Account to Shopkeeper Account.

With APIN

Customer himself/herself enter Secret APIN and click Submit button in SMA. And Server Transfer Money from ACH Account to Shopkeeper Account.

Type 2: Transaction with both OTP & Aadhaar PIN. If Amount is more than 1000/-

Type 2 Scenario is almost similar to Type 1 Scenario. If Amount is more than 1000/-. Then Automatically SMA gives two Fields: APIN as well as OTP.

Now, Customer himself/herself enter Secret APIN as well as OTP and click Submit button in SMA. And Server Transfer Money from ACH Account to Shopkeeper Account.

Why and What is the reason behind Two Scenarios?

Reasons: To speedup the Transaction process and some security reasons. Ultimately Customer will decide the Transaction Scenario.

By using Aadhaar Pay we can finish the money transfer within 3 steps.

Only Prerequisite is Shopkeepers need to Install an Application in their Smartphones.

Let's discuss with simple Example:

Assume Customer Enter into certain Shop and need to purchase some items.

Step 1: Customer/Consumer simply give **API** to Shopkeeper or Shopkeeper scan Aadhaar Card QR code

Step 2: Shopkeeper enter 2 or 3 fields: Customer API (in case without Scanning QR code), Purchase Description and Amount.

Step 3: Customer **himself/herself** enter OTP **and/or** APIN. Here OTP received to his/her Aadhaar linked Mobile Number. Finally Server will transfer money from ACH Account to Shopkeeper Account.

OTP contains: Transaction ID, Purchase Desc:(in a shortcut format), Amount and OTP.

Transaction ID is 16 digit code: First 8 is Shopkeepers ID, Last 8 is Transaction ID

For example:

TID1234567890123456, xxxxxxxxxxxxxxxxxxxx (Purchase Description)

AMT:12345, OTP123456

In case Without OTP, Then after successful Transaction Customer get an intimation to registered mobile number.

Suppose, If Customer ACH Account balance is less than Purchase Amount. Then immediately Shopkeeper got warning reply to their Application. But it won't display Customer Account balance in SMA. Also OTP won't generate to Customer Mobile Number. Finally, There is no transaction between Customer and Shopkeeper.

In case of Returns due to damaged items or any other reasons. Then Transaction ID need to enter in SMA. Along with Customer API, Partially/Total Returns and respective amount also entered by Shopkeeper. And respective amount is deposited from Shopkeeper Account to Customer Account

What are the features and key points in Aadhaar Pay?

1) ACH: Aadhaar Card Holder

Primarily, Before initialize this Application GOI should announce this type of Mobile Wallet is created for Public. In case Aadhaar Card Holder Mobile Number is changed or Mobile Number is blocked by Telecom Operators due to not used for few months. Such people renew their Mobile Number respectively.

By default all Aadhaar Card Holders their respective Accounts are in **Inactive** state. To Activate their ACH Account. ACH should send SMS from their Registered Mobile Number.

For example: 12 digit Aadhaar No. <SPACE> PAN No.   And Send to 123456

Now Server will cross check Full Name and DOB in both records. Indirectly with this action Aadhaar Card is linked with PAN No. Importantly this can be done only from Registered Mobile Number which is linked with Aadhaar No.

If everything is matched then Server will send **API** and **APIN** to ACH mobile number. Once ACH received these API and APIN from their Registered Mobile Number note it. And delete those messages from their mobile phone.

1.1) What is meant by API and APIN?

API: Aadhaar Pay ID and **APIN:** Aadhaar Pin.

Aadhaar Pay ID is differ from Aadhaar Card No. Since at the time of Payments Shopkeepers didn't get their Personal Details such as Aadhaar Card No., Full Name, Date of Birth and Mobile Number.

APIN is almost similar to ATM pin. APIN is 6 digit code and Customer also set their own APIN by sending SMS. Example: 12 digit Aadhaar Card No. <SPACE> SET <SPACE> APIN <SPACE> 6 digit to 123456.

APIN is used to control ACH Account. In case ACH lost / theft their Mobile phone. Or in case of Mobile Number is blocked by Telecom Operator due to no usage.

By using APIN ACH can temporarily Deactivate their Account. Simply send an SMS from any phone. For example: 12 digit Aadhaar Card No. <SPACE> DACTVAT <SPACE> 4 digit CPIN.   to 123456.

Now immediately Server give a confirmation to that Mobile Number. Later ACH should delete those messages from that Mobile phone. Since APIN is there in that Mobile phone too.

1.2) How to Deposit/Recharge money in ACH Account?

By using Internet Banking, Debit & Credit cards, Mobile Wallets, Visiting Bank and Post office etc., At the time of Deposit entering Description is a mandatory.

2) SMA: Shopkeeper Mobile Application

2.1) Registration:

Primarily, Shopkeepers should register in SMA. Registration details such as:

Basic Details, Aadhaar Card No, PAN No/TAN No/GST No, Contact Details, Address Details, Bank Details: Account No. and IFSC. Server cross check all details.

After Successful Registration immediately Server generate SID: Shopkeeper ID to Shopkeeper Mobile Number.

2.2) Settings:

Shopkeepers or Owner of the Business also have their own ACH Account. After Successful Registration their Account is also created with additional settings.

Automatic Deposit and **Item Description** are the two important settings in SMA.

What is meant by Automatic Deposit?

After some transactions with Customers respective amount is stored in their ACH Account. Shopkeeper can set Mature amount in Automatic Deposit form. Once money is reached to Maturity then Automatically amount is deposited in their Bank Account. **Importantly, this action is executed at Server Side not through Shopkeeper Mobile Application.** Finally Shopkeepers get an Acknowledgement to their Mobile Number.

What is meant by Purchase Description?

Various types of Businesses and Shops. Such as.

Grocery stores, Super Markets, Medical Stores, Hotels, Lodges, Vegetables & Fruit Market, Non Veg & Fish Market, Beverages, Furniture, Automobile & Spares. and so on...

Depends on Business type GST % is automatically selected. And create a Purchase Descriptions in a shortcut formats. By using this settings at the time of transaction Shopkeeper simply select respective Description from Drop Down list instead of typing.

What are the Uses & Advantages of Aadhaar Pay.

1) Recording

Shopkeepers need not to maintain Bills in Papers. Any time Shopkeepers send all Transactions data to their Email Account. In fact this is also Automatically done.

2) No Hacking Threat

In both Shopkeepers and Customers Hacking is not possible. Because Amount is stored in Server not in Shopkeeper Mobile Application. All transactions done at Server side only. There is no such Mobile Wallets for ACH. So Hacking threat is very low to Users.

3) Money transfers

- ✓ From ACH Account To Shopkeepers Account is possible.
- ✓ And only in case of Goods Returns Shopkeepers Account to ACH Account.
- ✓ Personal Transfer is also possible. But Money Receiver should use Smartphone.
- ✓ Deposit Money in ACH Account: By using Internet Banking, Debit & Credit cards, Mobile Wallets, Visiting Bank and Post office etc., At the time of Deposit entering Description is a mandatory.

4) Scanning Aadhaar Card QR code

At present, all Digital Payments done with QR code. By using Smartphones Digital Users can transfer money to Shopkeepers and others.

Where as in Aadhaar Pay Shopkeepers need to scan Aadhaar Card QR code from their Shopkeeper Mobile Application.

As per GOI guidelines Aadhaar Card details are not a highly Confidential. So ACH Account users can give only QR code and hide all other details. In simple words Aadhaar Card Holder cut out

QR code and Show it to Shopkeepers. Shopkeepers simply Scan it using their Mobile App. Even that App didn't show Personal Details of that ACH.

So, Shopkeepers simply Scan ACH QR code. Enter Transaction Amount and select Short Description. Click Submit button. Finally take OTP from ACH or ACH himself/herself enter OTP and/or APIN.

5) Government Schemes and Reforms

At present, If Govt need to give money to citizens certain Passbooks and Bank Accounts are very important. Some people don't have Bank Accounts and most of the people don't know how to operate it.

By using Aadhaar Pay Government can easily transfer from Money to all Citizens in a short time. In case Natural Disasters and Accidents Govt. can send money immediately.

What is the Importance?

In India, black money. is funds earned on the black market, on which income and other taxes have not been paid. Also, the unaccounted money that is concealed from the tax administrator is called black money.

By using Mobile Wallets and this Aadhaar Pay or OTP Pay all Transactions then gradually decrease Black Money in India.

Marketing and Awareness

1) For Shopkeepers and Business Employers

Govt. of India should encourage the Digital Users by giving some kind of Prizes to Shopkeepers as well as Aadhaar Card Holders.

Below are some examples.

Shopkeepers can earn some kind of commission who are done more than 10000 transactions in one Month that is **by using any Digital Payments.** Such as Mobile Wallets, USSD, Credit or Debit Card, even this Aadhaar Pay and others all are comes under Digital Payments.

Below are Commissions on their Transactions Amount itself.

	Top 10	Top 11 to 100	Top 101 to 1000
State Wise	9%	6%	3%

Regional Wise	8%	5%	2%
District Wise	7%	4%	1%

The above Commission Slab is just an illustration.

Additional important conditions such as, Depends on their Shopkeepers: Business Types, Transactions Count, Transactions Amount respective Commission figures might be different. Instead of Commission give some kind of gifts to Shopkeepers. Similarly Annually, Monthly and even Daily also create some kind of contest to Shopkeepers.

All Transactions Amount range is 10 to 1,00,000 Rupees

Importantly, in 10,000 transactions at least 75% transactions should be done with different User IDs. In simple words 7500 transactions User IDs are different.

Assuming: A Shopkeeper done 10,000+ transactions and Total Amount is 10 Lacs.

If Shopkeeper is in Top 10 in State wise then Commission is 90,000 Rupees

2) Digital Users

Similarly, for Digital Users also get some kind of gift/commission on Monthly and Annual basis. Conditions such as:

Condition 1: Transactions amount is between 10 to 1,00,000 Rupees **that is also with Shopkeepers and House Owners Only.** Only In case of paying Shop or House Rent then Transaction Amount range may increased accordingly.

Condition 2: If a User done Digital Payments more than 60% on their Average Monthly Income. Then User get a 2% commission on their Digital Payments Amount itself.

All figures Assuming: If an Employee earn salary One Lakh per month. And his/her Digital expenses is more than 60% on their income that is more than 60,000 then he/she get commission of 1200/- that is 2% on digital expenses.

So multiply by 12x1200=14,400/- Annual Commission.

Same Employee Annual Salary is 12 lakhs. If he/she done Digital Expenses more than 80% on their income that is more than 9,60,000 then he/she get commission of 5% on their Digital expenses that is more than 48,000/-. Also another condition should satisfy. That is Every Month Digital Expenses should be more than 75% that is more than 75,000/-. In that Financial year If any Month their Digital expenses is less than 75% on their income. Then they are not eligible to 5% Commission scheme.

In year, If ACH Users done more than 100/- worth Transactions Count is greater than 1000 Transactions then give some kind of Gifts to Digital Users. Indirectly 1,00,000/- Rupees that person is done Expenses using Digital Payments.

3) Business Employers

If Employers Deposit Employees salaries (Either Total or 50% of Salary) directly in their Digital Accounts then Employers get some kind of Tax Exemptions.

If we apply this type of Gifts or Commission then gradually every Citizen of India prefer digital payments. **Slowly Unaccountable Money becomes Accountable.** Since All Digital Payments applications must and should link with PAN card and Aadhaar Card.

Aadhaar Pay vs *99# USSD Payment?

Aadhaar Pay or OTP Pay	*99# USSD Payment
Without Internet and Smartphones. But Shopkeepers must install Mobile Applications in their Smartphones and Internet is mandatory.	Without Internet and Smartphones.
Payments complete with OTP and/or APIN	USSD Payment Gateway and Menu based.
Payments complete Within 3 steps.	At least 7 or 9 steps are required.
Password Protection. As well as OTP Protection. Depends on ACH needs.	Password Protected. For every Transaction Password is required.
Single Layer Architecture. No frequent Interactions with Bank Servers and Telecom Operators Server.	Two Layer Architecture. Frequent Interactions with Bank Servers and Telecom Operators Server. If any of the Server down then Payment Interruptions.

What are the Limitations?

Aadhaar Pay have some Limitations.

1. Payments with Shopkeepers and Shop or House Owners only. But anyone can Deposit or Recharge ACH Account.

2. Personal Transfer is also possible. But Money Receiver should use Smartphone.
3. Shopkeepers can't Transfer Money to another Shopkeepers. But they can Transfer from their ACH Account. Since Shopkeepers also have their Personal ACH Account.
4. Visiting Bank or Post office is the only way to Withdrawal/Transfer Money from Aadhaar Pay. That is also User should give proper reasons. And Money Withdraw/Transfer should be more than 5000/-. (For example)
5. Online 3rd Party Payments is also possible. If User know how to operate Computer and Smartphones. And Accordingly Services are designed.

Technical Feasibility

As a Software Developer there is a 100% feasibility to implement this Application. Very simple and easy to use this Application. Regarding Generating OTP is not big deal. At present for every Bank Transaction OTP is a mandatory. So similar Technology is developed in this Application too.

Importantly, So many Jobs are created if we develop this Application. Jobs such as Software Developers, Maintenance and BPO.

Conclusion

Aadhaar Pay is exclusively developed for Basic Mobile Phone Users and Smartphone Users who are not interested to use Mobile Wallets. All Transactions done in front of Digital Users. By Applying above Marketing Campaigns Gradually Unaccountable Money becomes Accountable Money.

After few years slowly Paper Currency is decreased and Digital Currency is Preferred.