## horizontal line



callPay

25.02.2020

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Members :

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# Overview

Digitalization of financial services has become an integral part of the economy in developing countries especially in india. Successful financial inclusion has to be made at the customer level. By using our project the reach and digital financial traffic increases at least by 20 percent. Our service can cover upto 75 - 80 percent of the existing financial transactions.

# Goals

1. Voice based assistant for making upi based payments.
2. Voice assistant for making these payments more fun and interactive.
3. Toll free number enabling users to perform upi transactions offline.
4. Quizzes and other services to educate the user about the services.

# Specifications

We make a service i.e chat-bot which listens and understands the user intention and tries to full-fill the need in terms of making payments. We make a tool-free number which enables users to perform all upi based transactions even offline.

# Milestones

## Chat-bot

We make chat-bot using aws lex nlp, which has the required skills to understand and perform upi based transactions.

Name : callPay bot

## Toll-free number

We make a toll-free number with chat-bot as an end point to address all the issues and even make upi based transactions offline.

Number : +1 866-803-6498

# Features

## Voice assistant

Chat-bot has the ability to respond to user voice. Hence almost all transactions can be made through voice commands. Bot constantly listens and converts the speech to text and performs necessary transactions. Once the transaction completes the acknowledgement is also provided in the form of voice.

## Offline upi transactions

Offline upi transactions are possible with the toll-free number. Even when there is no internet connection to the mobile or internet is fluctuating, They can make a call and then the payment or transaction completes. As this is done solely on phone network, they don’t require the internet.

## Voice notification

User receives a voice notification every time he receives a payment. We can extend it to notify with voice for any transaction done. But currently we implemented voice notification features similar to “paytm sound box”.

Note : We made voice notifications translated from english to hindi.

## Quiz

Upi and app based quiz, where the questions are based on app features, details, limits, working procedure and offers. There are levels based on usage and difficulty. User clears the questions and receives rewards in the form of cashbacks and directly prize money. By this feature we increase app usage, user engagement and eventually awareness about the app feature.

A small survey done with random 10 different people using upi based payments app. We found 80 percent of them interesting and curious about this quiz feature.

## Multi-language support

We can support almost all main regional languages including Hindi. By using relevant translators we can easily shift and lend support or service in any other language.

## Noise cancellation

When a user speaks, the background noise gets cancelled and vocal features of the voice of the user are enhanced for accurate and quick responses.

Note : Right now we are using aws lex for speech to text functionality. By default some level of this feature is implemented.

# User onboarding

A new user can be registered to the UPI gateway by calling the toll-free number as stated above. If he already had an UPI registration done. He can directly use the services by calling the number.

## Steps of onboarding

Step1: User calling to toll-free number

Step2: User says “I want to register”

Step3: User receives prompts to say his details for registration.

Step4: User gets confirmation prompt after success-full registration.

Mobile app Integration:

## Mobile app integration

This service can be integrated with any of the existing UPI based payments apps like GooglePay, PhonePe, BHIM etc. When a user clicks on the button, a phone call will be placed to the toll-free number. This way is more secure, As the relevant api keys are extracted from the mobile encrypted storage from the app.

Payment flow:

When a user calls the toll-free number from his registered number, the chat-bot addresses with relevant prompts for getting required details for making a payment. Then back-end system powered by aws makes an secured api call to complete the payment and acknowledgment is given to the user

Steps for payment:

Step1: User calling to toll-free number.

Step2: User says “I want to send money to phone number 9874563210

Step3: User gets the prompt to say his pin number.

Step4: For another stage of authentication, User is asked to say his last four digits of registered aadhar card number. (Important)

Step5: Once all the required details are collected the back-end engine makes the payment

Step6: User is given the acknowledgement of the payment.

## Use cases

Use case 1 :: Making upi based transactions while driving.

Use case 2 :: For farmers to make an upi payment in their own language.

Use case 3 :: Making a voice notification in regional language once after the payment.

Use case 4 :: Making upi based transactions offline.

Use case 5 :: Making upi based transactions through a phone call.

Use case 6 :: Making upi based transactions in different currency(Dollars/Euros)

Use case 7 :: Adding money to existing e-wallets like ola uber zomato big basket.

Use case 8 :: Block/Unblock the card if lost associated with the account.

Use case 9 :: Information about last transaction was successful if yes to whom it was done with what amount

Use case 9 :: Recharge your phone number

Use case 10 ::Reminder for mobile recharge on next month(financial decisions by analysing habits)

Use case 11 :: To enquire and get to know the bank savings/current account balance with the associated card.

V. Rapid reprompts

Even when user response was captured correctly, bot remains in the same state and prompts again till it gets the required information to complete the task and then completes the transaction. Typical conversation to show that they didn’t really understand the speaker like

* “What was that?”
* “Say it again?”
* “I’m sorry?”

## Additional security features

Voice recognition:

We authenticate users with some voice tokens. To make it a bit fun and interactive, We ask him to repeat a tongue twister or ask him to sing a song.

Face recognition:

We use face recognition. We recognize him with his smile.

## Technology specifications

Toll-free number :: +1 866-803-6498

Chat-bot :: callPay

Security :: Aws authentication

IVR system :: Aws connect

Chat-bot engine :: Aws lex

Note: Presently for the demo purpose, we use US region toll-free number. Once the project goes live we use the local region toll-free number.

## Additional details

The present paytm speaker feature is implemented with additional speakers. We will be implementing the feature with no additional speaker.

Conclusion: We now can make a payment through a user voice. With this even people in rural areas can be able to make payments.