



HACKATHON – 2022

Innovate. Influence. Inspire.

Co-powered by  WhatsApp

TECHGIG

Team Name : Capital Ninjas

College Name : PCCOER

Team Members :

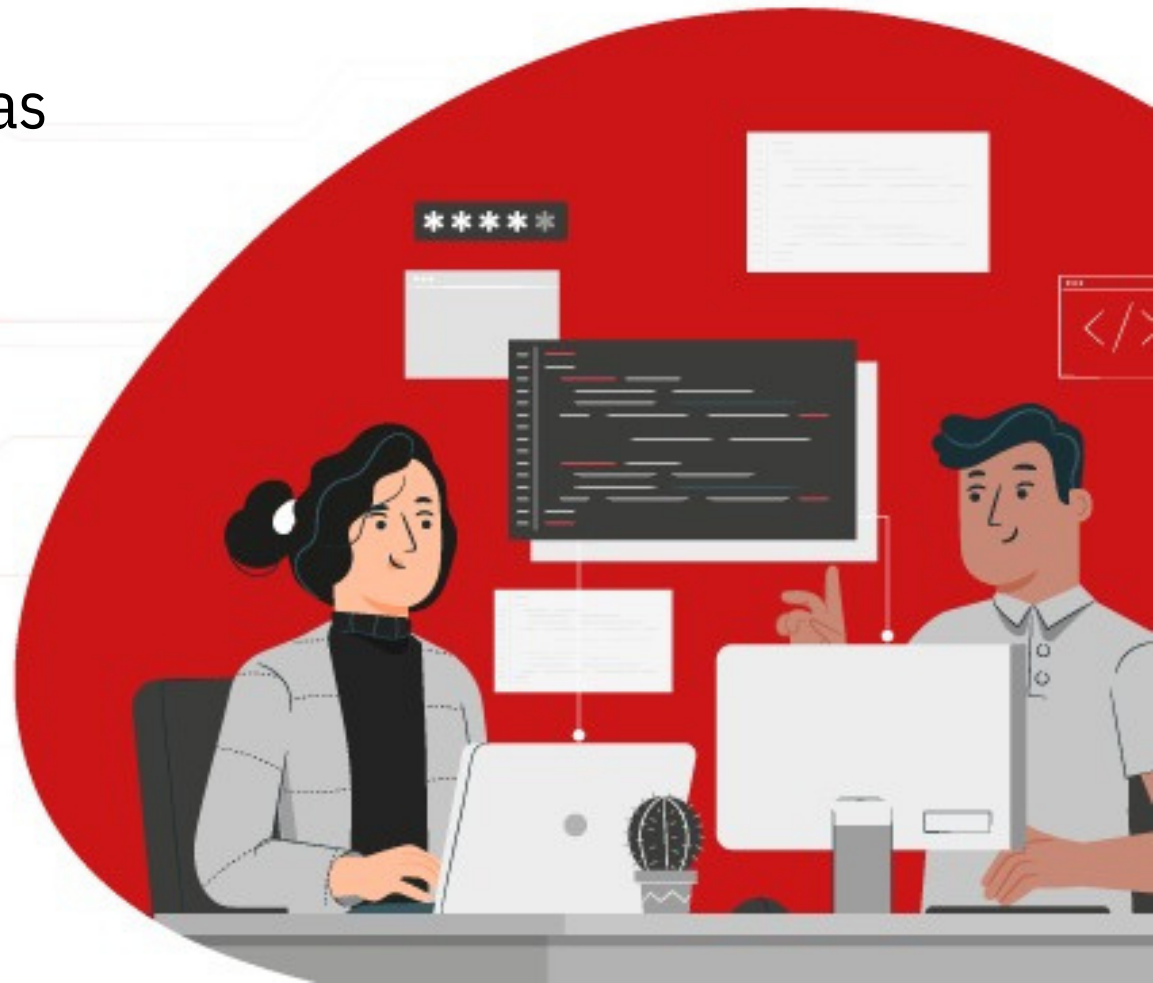
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Problem Statement?



Due to the problems faced in conventional banking methods like visiting physically to the bank location for all the processes, the customer engagement has reduced.

- To increase customer engagement, we can provide the major BFSI services
- through AI driven conversational bots that are available 24/7.
- Chatbots on WhatsApp are a good alternative to regular websites with enormous number of options.

For people living in rural areas or having less knowledge about using payment UPI apps & mobile banking, WhatsApp bot can be proved as a boon.

- Such people can access the BFSI services through dialogues & conversations via chats on WhatsApp bots which provide prospects with a degree of involvement.
- Breaking the language barriers for using BFSI services.
- Boost people's confidence in WhatsApp bots.

User Segment & Pain Points



Early Adopters :-

- Users who are eligible for using BFSI services & having basic knowledge of using WhatsApp.
- Retail investors, enterprises, business professionals, commercial users & government, co-operative sectors can use the bot for maximum ROI.
- People who are aware of banking frauds and want to engage with safe banking transaction.

Pain Points :-

Banking websites/ apps
are difficult

Inconsistencies in
solution received

Service agents
are unable to answer

Customer retention
rate is low due to

User errors &
frustration

Insufficient
Information

Long waiting time

Competitor Analysis

Various bank bots provide common customer services like :-

Checking balance

View tax challans

Update Aadhar and PAN

Block/Unblock card

Providing mini statements

Loan services

Nearest Bank/ATM facility

FD/RD summary

Instant account opening

Cheque book request

Currency calculator



Key Differentiators & Adoption Plan



Key differentiators :-

Alerts, notifications,
remainders

Multilingual support

Digital lockers

E-Kyc & account
opening

Appointments for
BFSI

Feedback &
trust rating

Tutorials of bank
processes

Authentication/
Authorization

Plan for adoption :-

- Set the right expectations of chatbot use cases to the end users.
- Educate users on different capabilities & features of the bot.
- AI and NLP brings power of advanced data analytics and statistics to combat fraudulent transactions and improve performance along with most widely used and hands to platform WhatsApp.
- Banking sector using this can provide and deal with customers enquiries 24/7.

Live Application: RASA NLU



```
a.com) to help us make this feature ready for production"
```

```
2022-11-27 22:40:22 INFO      root - Rasa server is up and running.
```

```
Bot loaded. Type a message and press enter (use '/stop' to exit):
```

```
Your input -> hey
```

```
Hey! How are you?
```

```
Your input -> great
```

```
Great, carry on!
```

```
? Please select your language 3: - {"English": "/language"}
```

```
language set !!
```

```
? Hello 😊 Welcome to Capital Ninjas. How may I help you. 1: - {"Banking Services": "/Bank_Services"}
```

```
? Please select the option from the below list 1: - {"Bank account details": "/validate"}
```

```
"}  
Enter your pin
```

```
Your input -> 1502
```

```
sa_sdk.endpoint - Starting action endpoint server...
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_check_balance'.
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_welcome'.
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_enter_pin'.
```

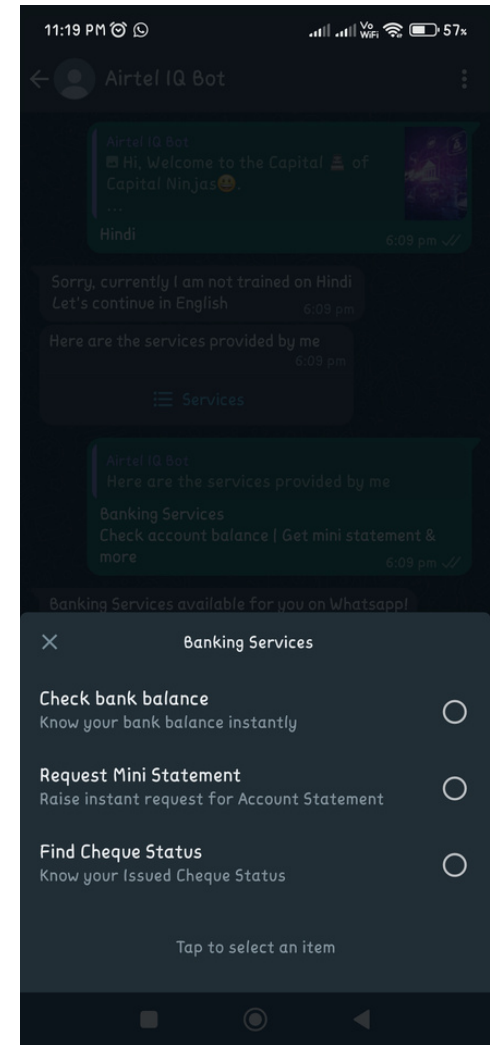
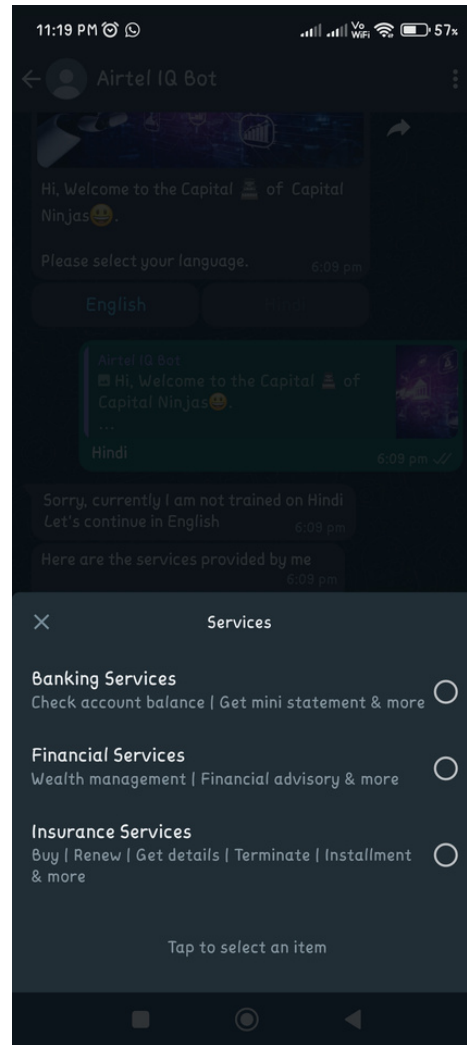
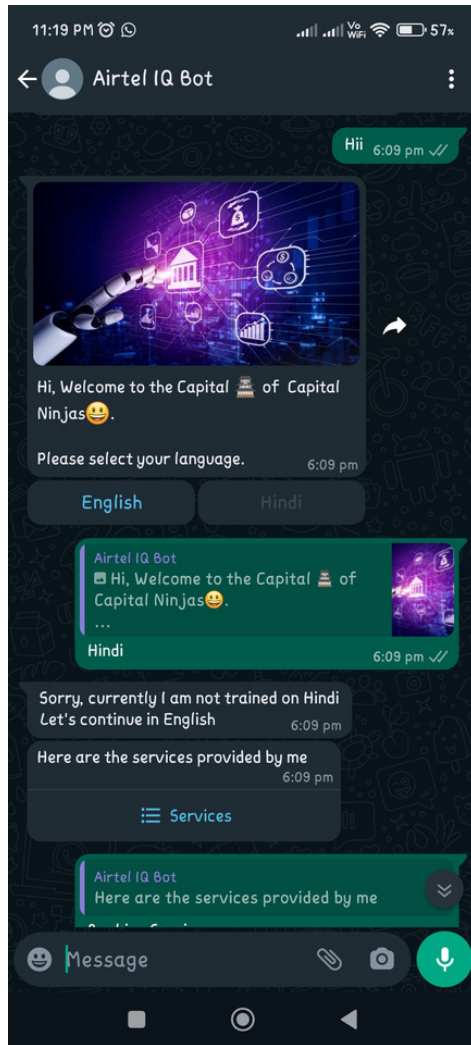
```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_language'.
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_welcome'.
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.executor - Registered function for 'action_banking_services'.
```

```
2022-11-27 22:38:33 INFO      ra  
sa_sdk.endpoint - Action endpoint is up and running on http://0.0.0.0:5055
```

Live Application: WhatsApp bot



What we have tried to build?



- > We have build a chat bot which accepts queries for banking, financial services and insurance.
- > Banking and finance query requires authentication and general and insurance does not require authentication.
- > Then it goes to conversational engines like Rasa Nlu.
- > Encryption and decryption phase is executed.
- > This goes to bank database .
- > Database acquires require query and it encrypts and decrypts .
- > Then it again goes to the conversational engine which gives response speaker and it is then send to user.

Market sizing



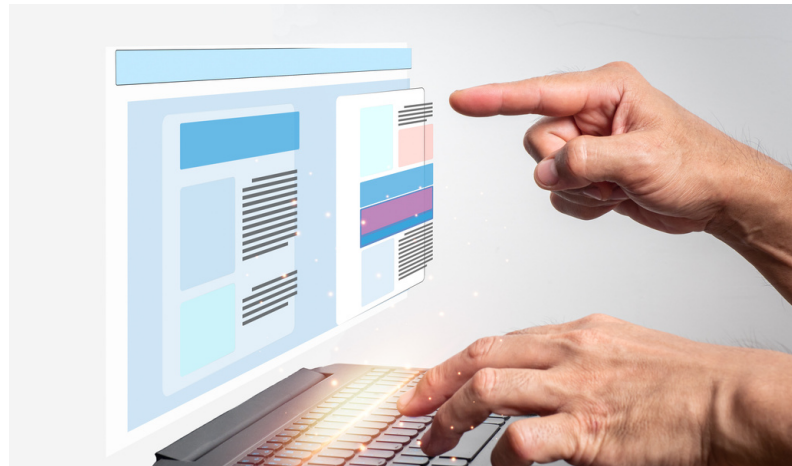
- We have made efforts to increase the restrictions and capabilities of our chatbot users, but ultimately those restrictions are set by WhatsApp.
- Whatsapp initially permits the usage of 50 messages, but after that it checks for fresh user involvement.



Why our application should be considered?



- Our WhatsApp bot tries provides all the three services at a time i.e. Banking, Finance, Insurance.
- Our bot provides the best state of the art facility for validation and authentication, which is provided by very limited banks.
- Our bot can be integrated with any of the given databases provided by the banks.



KPI's



1. Security(OTP)
2. Engagement-users who are eligible for using BFSI services and have understanding of WhatsApp
3. Bank
4. Influence
5. Controlled database facility
6. Performance in responsiveness
7. Retail investors, government, cooperative institution



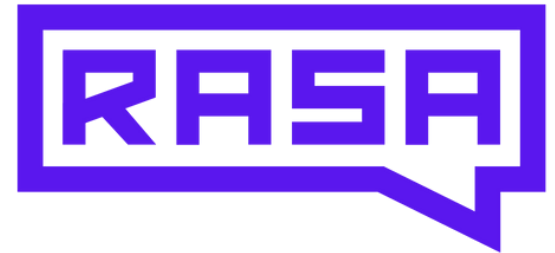
Tools or Resources



WHATSAPP CHATBOT



NLP



RASA NLU



Node Js

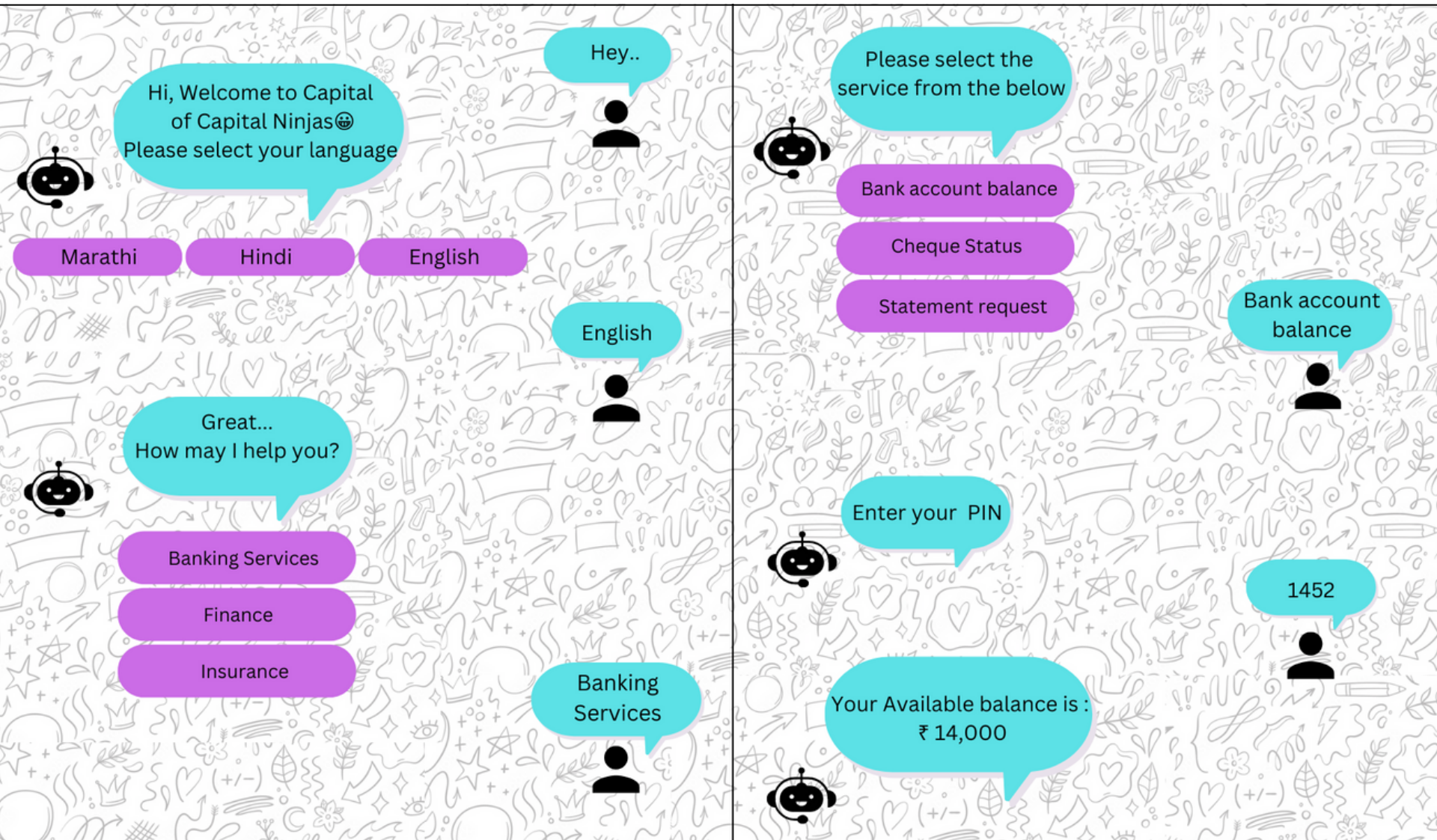


Postman



MongoDB

Chatbot Interaction



Security Features



Please send your photo for face verification



Face verified



Please read text for verification purposes



Voice verified

TEXT



Please set your 4 digit PIN



PIN has been set successfully

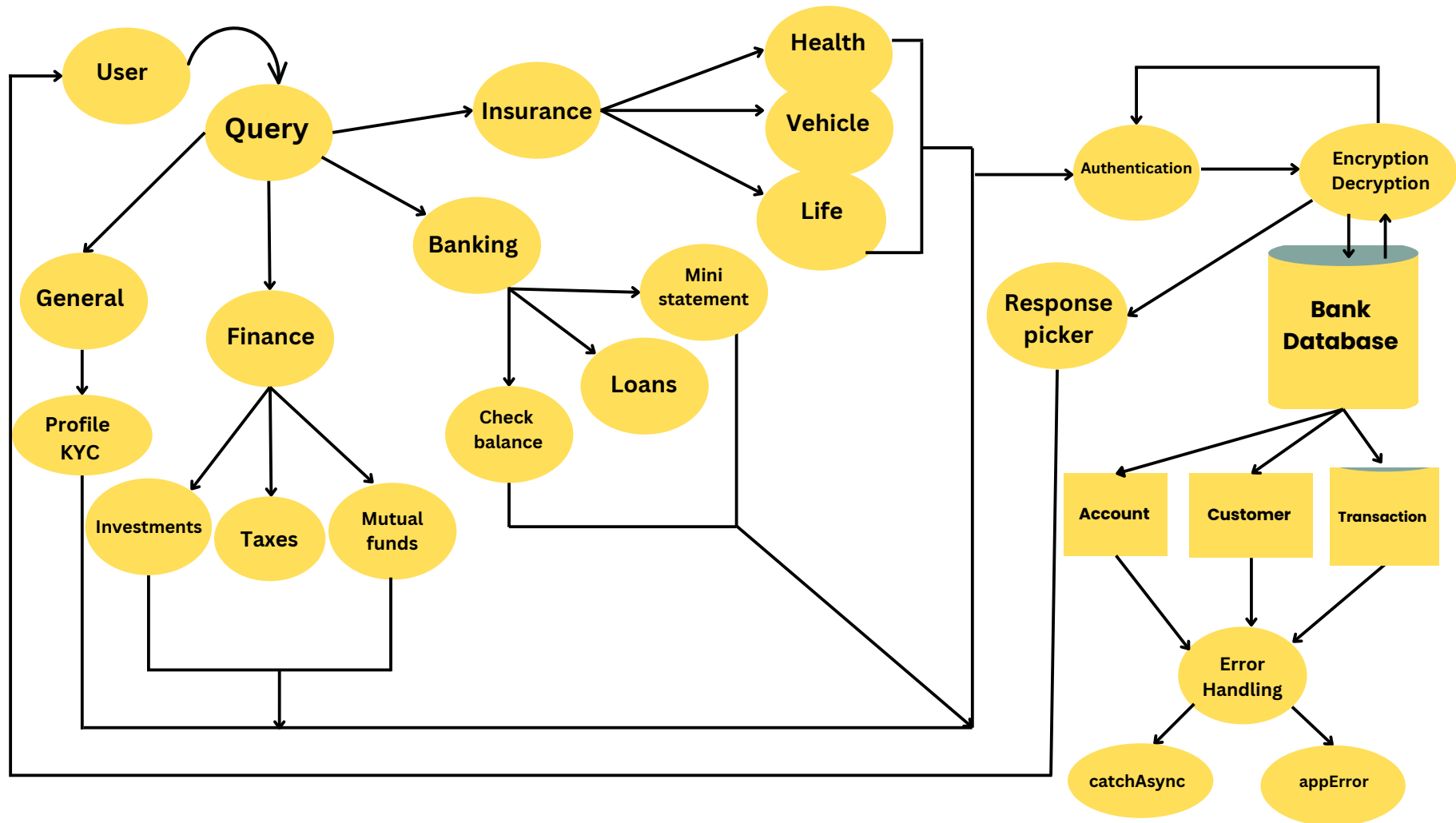
Any Supporting Functional Documents



Proposed Model :-

- Any operation involving the bot requires authentication when a new user uses it for the first time.
- There will be additional methods for accomplishing authentication, including face recognition, biometric verification, etc.
- The customer can select any BFSI service after a successful verification, and the bot will provide straightforward directions on how to carry out the necessary operation. When a crucial action, like a fund transfer, needs to be made, the bot will first request the customer's authorization before beginning the activity.
- Numerous measures will be taken to safeguard the security and privacy of the customer's data, including the use of blockchain technology to store the data for analytics, the end-to-end encryption offered by WhatsApp, and self-destructing messages.

Solution Diagram



USE CASE DIAGRAM

Thank You!