Problem Statement Number:

SH1007 (Software)

Problem Statement:

Mechanism to help rural people to self select for receiving benefit offered under government scheme

Organization Name:

Ministry of Rural Development

Team Name :

PAVVVFECT

Team Leader Name (Registration Number and Email ID):
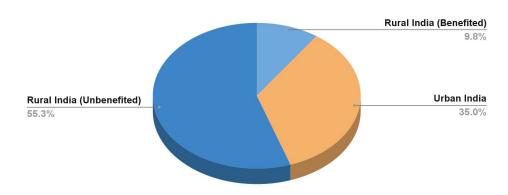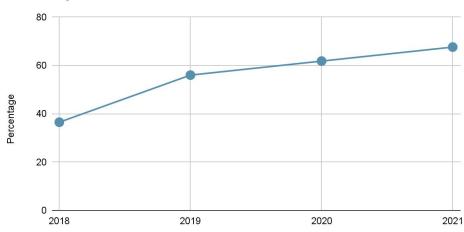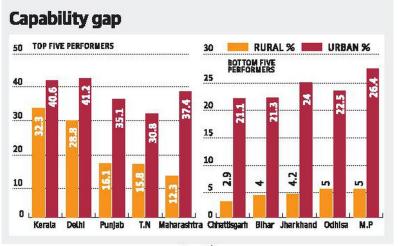
Vrushabh Bhagwatkar - 2019BCS074 - 2019bcs074@sggs.ac.in
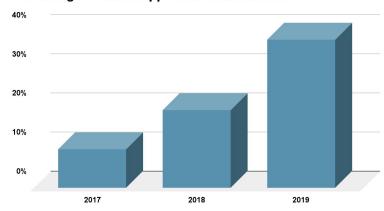
IMPACT

Rural Indians Benefited by Government Schemes

Rural India (Benefited) 9.8%

Rural India (Unbenefited) 55.3%

Urban India 35.0%

Availibility of Smart Phones in Rural India

(Line chart, Percentage vs Year)

Capability gap

TOP FIVE PERFORMERS   RURAL %   URBAN %

BOTTOM FIVE PERFORMERS

Kerala: 32.3 / 40.6
Delhi: 28.8 / 41.2
Punjab: 16.1 / 35.1
T.N: 15.8 / 30.8
Maharashtra: 12.3 / 37.4

Chhattisgarh: 2.9 / 21.1
Bihar: 4 / 21.3
Jharkhand: 4.2 / 24
Odhisa: 5 / 22.5
M.P: 5 / 26.4

SOURCE: NSSO 71ST ROUND (2014) | % DEPICTS POPULATION ADEPT AT COMPUTER USE

Percentage of WhatsApp Users in Rural India

(Bar chart: 2017, 2018, 2019)

PROCESS

- Our Whatsapp bot can be accessed only if the user has Whatsapp number of the bot (which is basically a business account). For that purpose number of our bot will be **provided either on social media** or through **word of mouth** or the **button to the bot will be provided on the government schemes' website**.

> Whatsapp is **widely used platform** in India. Whatsapp bots are based on **Whatsapp business accounts** which allow the business account holder to **automate messages for ease of the user** as per their requirement. We are going to inculcate this facility to **take input from user and provide interface to the user.**

- Once the user has saved the phone number, they will have to **send some message** (e.g. "Hi") to the bot and the bot will be initialized and will ask for **language choice** from the user.
- After the bot is initialized, it will send the message consisting of different options which are: -
  - !users
  - !user add
  - !user delete
  - !user select <id>
  - !schemes
  - !adhaar
  - !category
  - !income

- All the functionalities will **follow specific syntax** which will be **provided for the users when they use it.** E.g. if user wants to select !user select 1, he will have to follow convention as `!user select <id>`.
- When user provides input, our bot will store the relevant details of the user, step by step asking them for aadhaar card, then their category and finally their income.
- After the input is collected, the user data is compared with our schemes database and it returns the most appropriate scheme for the user, with information about the benefits, documents required and the application link as well!
- Our bot will be **available in regional languages**, making user experience **hassle free** and **easy to understand**.
- Facility to add users will **allow user to know about schemes for more than one person** from same mobile phone.
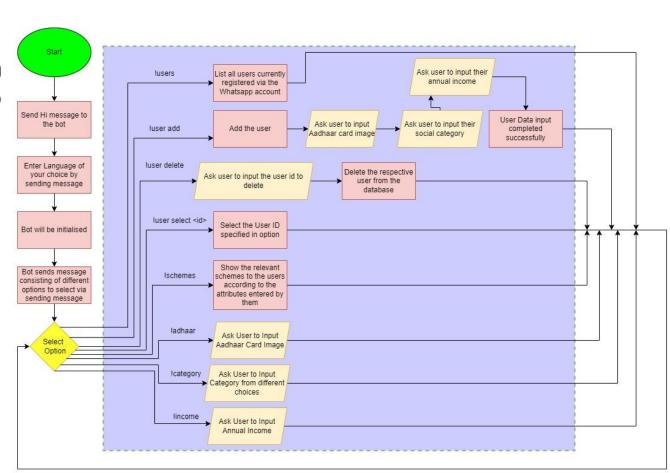- User can also register for the schemes from the application itself, thus ensuring a seamless user experience

FLOWCHART

Option input is taken continuously

TECHNOLOGY STACK

- **Software**:
  - Meta Developers Tools
  - Python (Primary language)
  - Flask (Backend and server)
  - PostgreSQL (Database)
  - pyZbar (QR extraction from image)
  - pyAadhaar (QR to Aadhaar Data)

FEATURES

- Solution is **user friendly** and **built on widely used platform**.

- Even technically literate user can not operate government websites smoothly, which is simplified by our solution to **make it easy to be used by even people living in rural area**.

- Our solution provides **multilingual interface** which **surpasses the language barrier** between the end user and government websites which are primarily written in English.

- Efficiency of Whatsapp makes our solution **independent of fast internet connectivity**.

- User will only have to **send the pictures of the documents** to our WhatsApp bot and will **directly get the government schemes** which are **best fit for that particular user**.
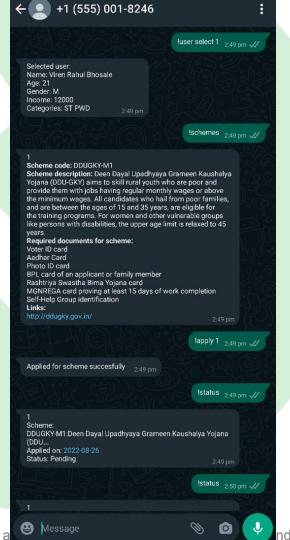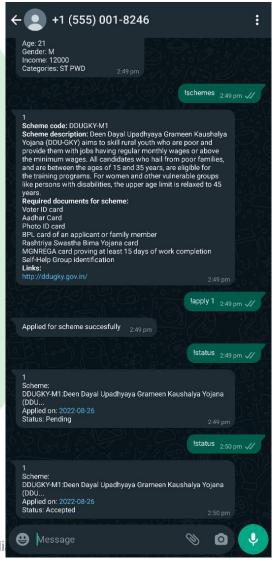
- **Not** limited to **only one user.**

REFERENCES

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- https://docs.djangoproject.com/en/4.0
- https://www.postgresql.org/docs
- https://pypi.org/project/pyaadhaar/
- https://pypi.org/project/pyzbar/
- https://developers.facebook.com/docs/whatsapp

MENTORS

- Faculty mentors:
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