EINS

# Data User Stories

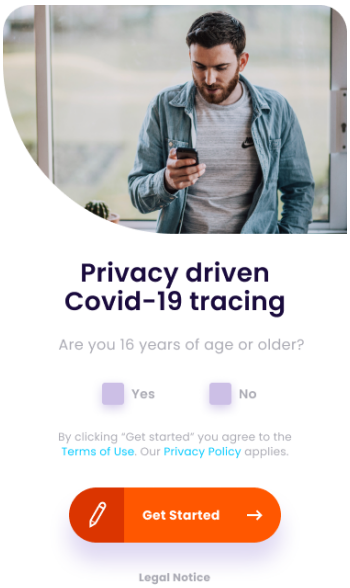
18/06/2020

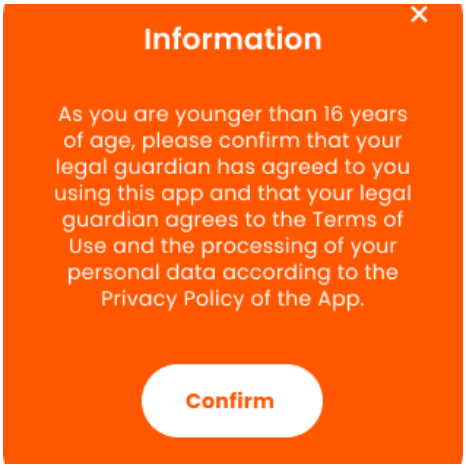
EINS By VIA

# Data User Stories

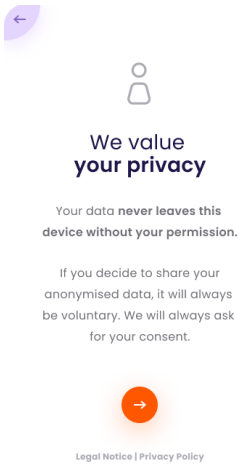
## Registration Process

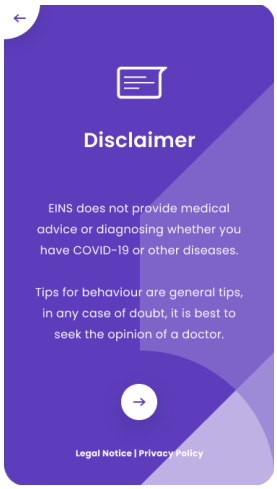
1. A user downloads the app.
2. The user is required to confirm if they are older/younger than 16 years of age. If a user is younger than 16 years old then they are required to confirm that their legal guardian has provided consent to use the app.
3. The user clicks 'Get Started'. By doing this a user agrees to the terms of use and privacy policy of the application.

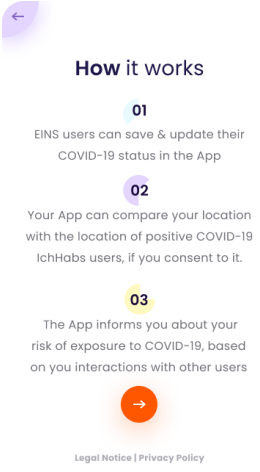



4. The user completes the following onboarding screens.

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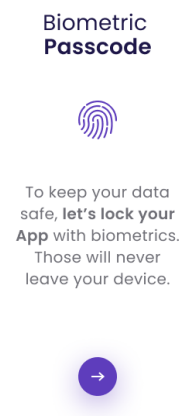
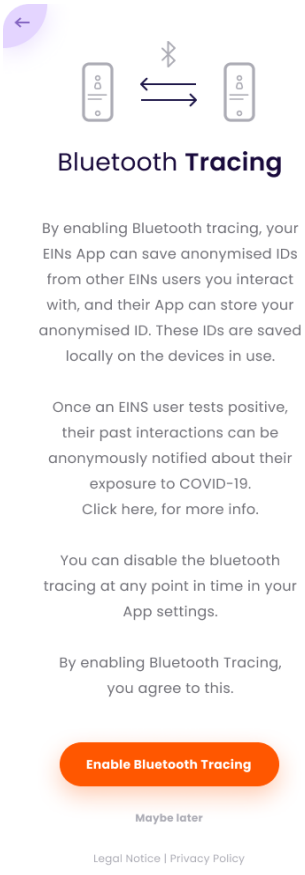
5. The user locks the app with their biometrics or device password.

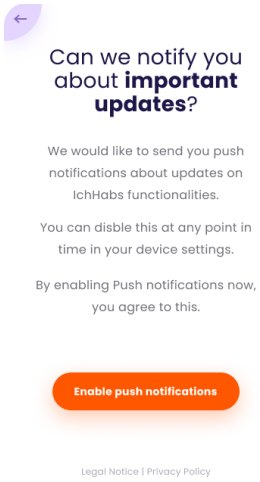



6. The app connects to the VIA servers:
    a. End-to-end asymmetric encryption is achieved.
    b. The app stores hashed App Instance ID on the server.
7. The user has the choice to enable Bluetooth Tracing

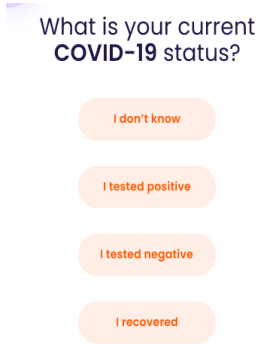


8. If the user agrees to enable Bluetooth they are prompted to turn on their Bluetooth

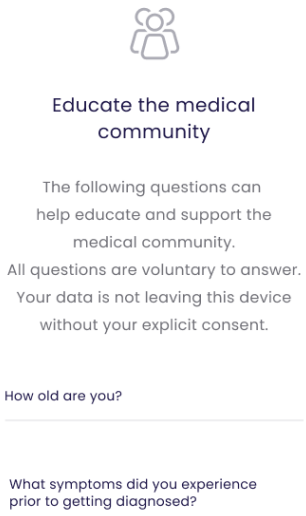
9. Users are asked to enable push notifications. If agreed:
    a. The app requests push token from firebase.
    b. The app receives the push token.
    c. The app sends the push token, along with the hashed App Instance Id, to the server for storage.

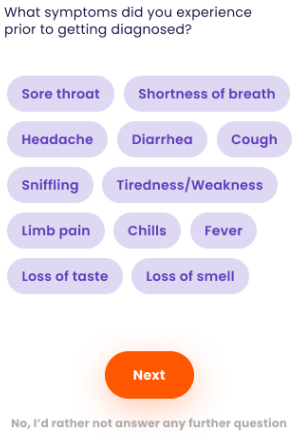



10. The user enters their COVID-19 status and subsequent questions.
    a. The app stores the answers into an encrypted local device.



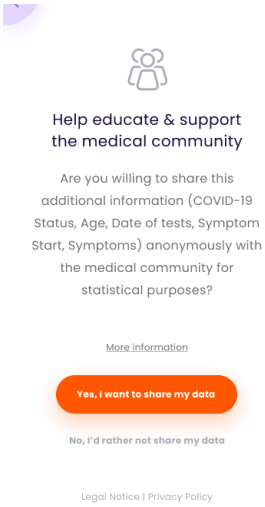

11. The user enters basic survey data based on the status answer.



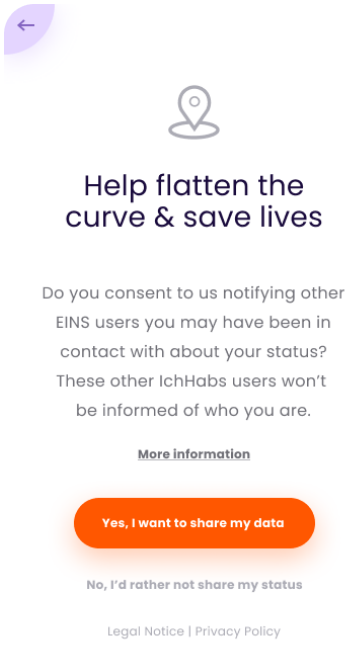

**12.** Users are then asked if they are happy to donate and share the survey data anonymously. If agreed:

- **a.** User age is masked by adding a random factor of +-2 years to the date. This anonymizes the data, without statistically damaging the set.
- **b.** The data is uploaded completely anonymously, it is not stored against any identifier on the server.

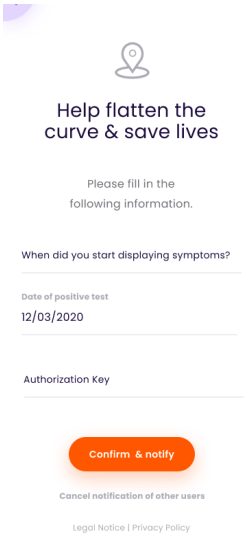


## User Updates COVID-19 Status

1. The user updates their COVID-19 status.




2. If the user tests positive, he/she is asked if he/she is consenting to EINS notifying his/her contacts about their exposure to COVID-19.
3. If the user agrees, he/she is then asked for the date of symptom start, date of the positive test result and a CovidCode in order to verify that the test status is valid
    a. The app uploads the data to the server along with the hashed AppId.
    b. The hashed App Instance Id is stored in a submission table to prevent abuse and multi submission protection.
    c. The submission for the dataset is stored separately and anonymously.




## Registration Process

1. The server receives the App Instance ID of a newly installed app on a new device.
2. If agreed to by the app user, the server stores the push token of each app install with the App Instance ID.
3. If the user agrees to submit their survey data, the server accepts the survey data along with the App Instance ID.
    a. The App Instance ID is hashed and checked against a list of hashed IDs saved. If the hash is already present, then the submission is discarded as a duplicate or a malicious submission.
    b. If the App Instance ID was not found, the survey data is saved and the App Instance ID is added to the list and then discarded. The App Instance ID is not saved alongside the survey response.

## User Updates COVID-19 Status

1. Through Bluetooth, the app logs all person to person interactions that the user has had with other users. These interactions are stored on the user's device. If the user specifies their COVID-19 status as positive, the device's own ephemeral Ids are uploaded to the database during the user's infectious period. All devices on the system regularly download the list of infected ephemeral Ids and search their local interaction log for any of these Ids.

## User Tests Path for COVID-19 Contact

1. The server will receive a list of all ephemeral ids for the positive user within a given date and time period (infectious period up to the date of submission).
2. The mobile application then fetches (in the background) this list of all contagious ephemeral Ids and searches through all contacts recorded on the device for these Ids