SOFTWARE ENGINEERING GUI PROTOTYPES

ON THE PROJECT OF

"Clinical Diagnosis iOS App – The Phenomizer"

Submitted To

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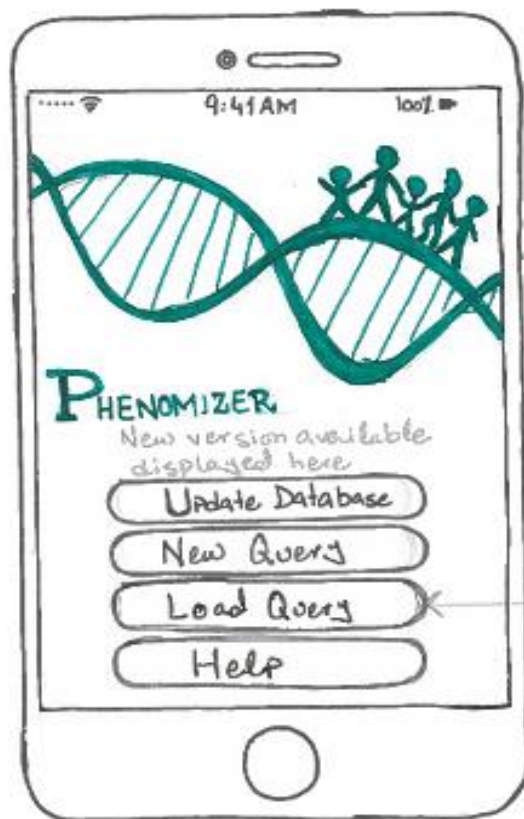## UNDER THE GUIDANCE OF

Emamurho Juliet Ugherughe

Contents

GUI Prototype for Use Case 1

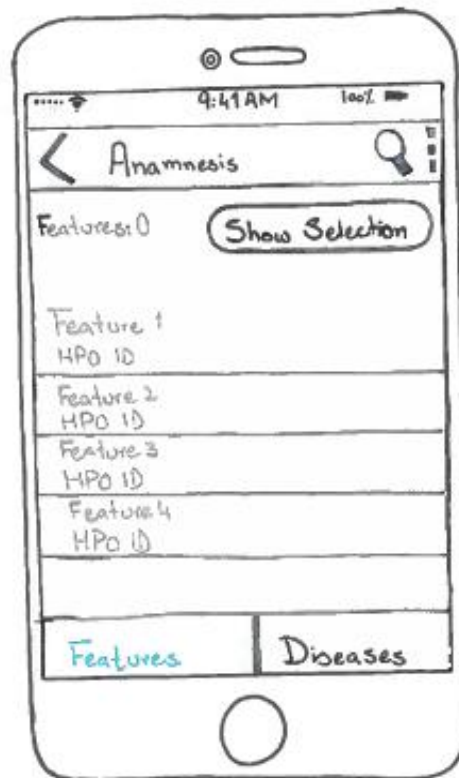## Getting diagnosis by selecting phenotype(s) from features screen
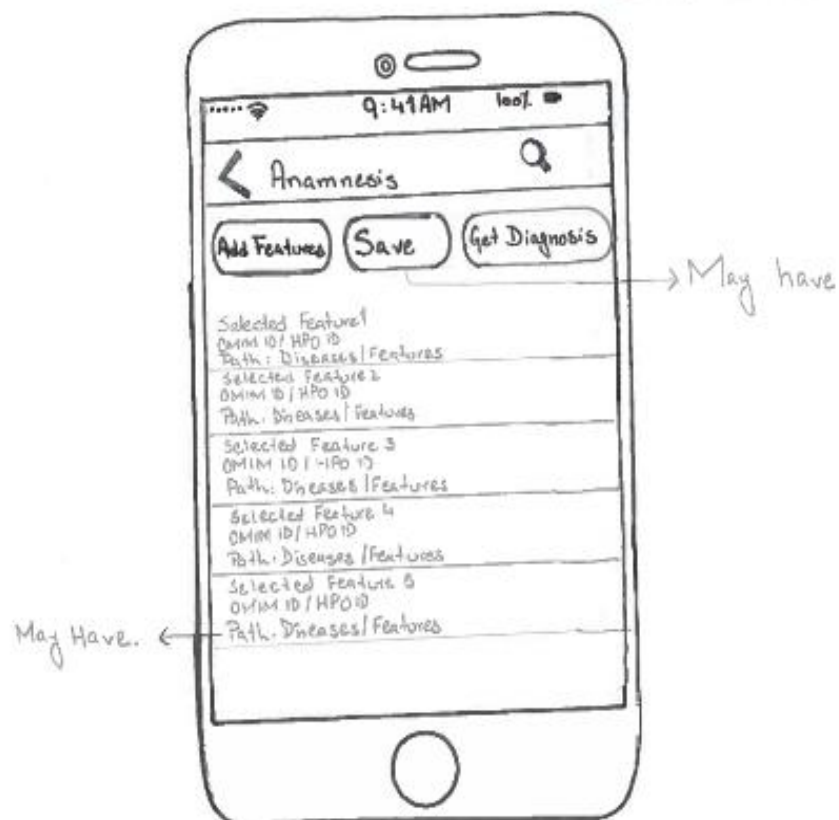
1Press new query button

2   Select phenotypes from features screen (multiple phenotypes can be selected)

Features Screen
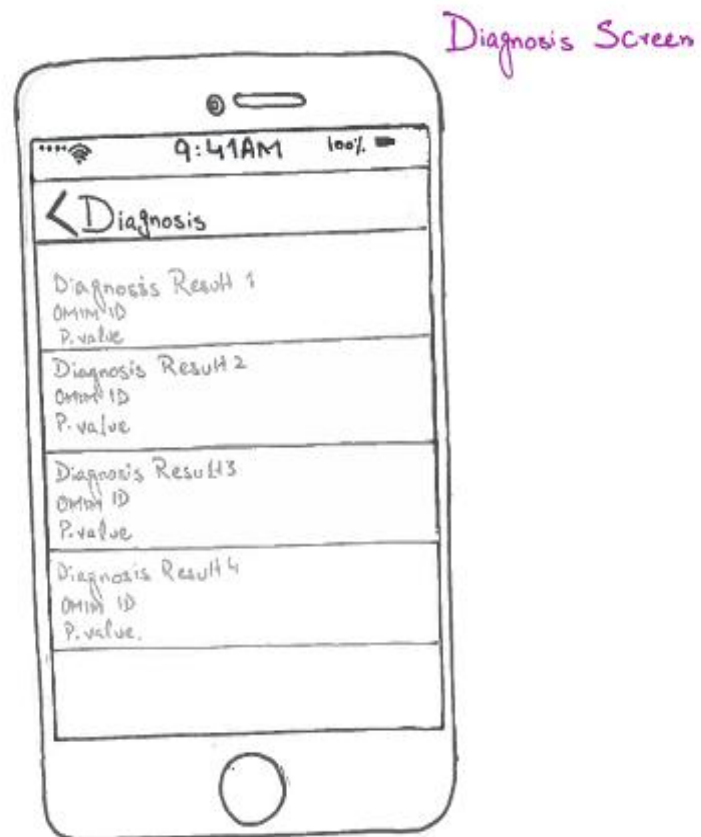
3 Press show selection on the features screen

Show Selection Screen

4   Press get diagnosis – diagnosis results are displayed

Diagnosis Screen

Diagnosis

Diagnosis Result 1
OMIM ID
P. value

Diagnosis Result 2
OMIM ID
P. value

Diagnosis Result 3
OMIM ID
P. value

Diagnosis Result 4
OMIM ID
P. value

Exception 1: No internet connection available

Exception #3
Users tries to get
diagnosis without an
internet connection.
Error message is displayed.

9:41 AM 100%

< Anamnesis   🔍

Add Features   Save   Get Diagnosis

No Internet connection
available. Please connect
your device to Internet!

O K

Exception 2: Database is never updated

Exception #2
User select New Query
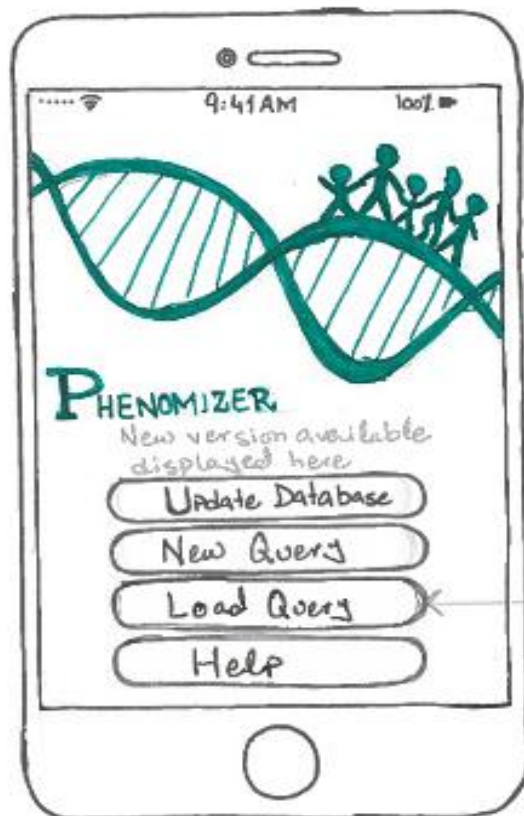& database is not
updated at all. Empty
Features & Dineases
screen

GUI Prototype for Use Case 2

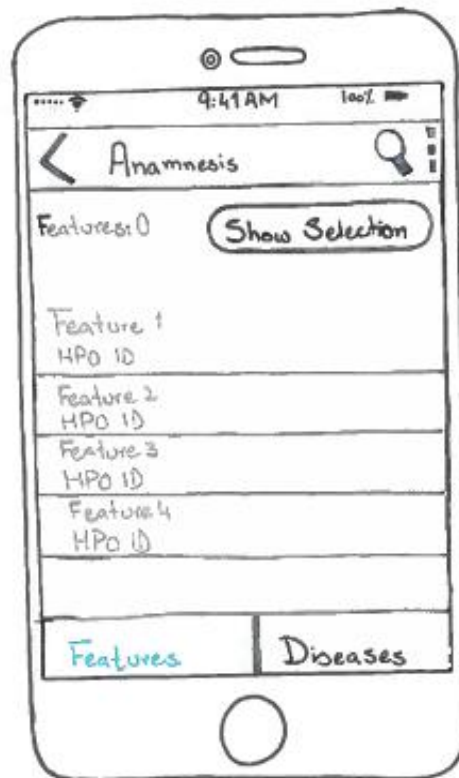## Getting diagnosis by searching for phenotype'sname or HPO Id

1   Press new query button

Welcome Screen

9:41 AM   100%

PHENOMIZER
New version available
displayed here

Update Database

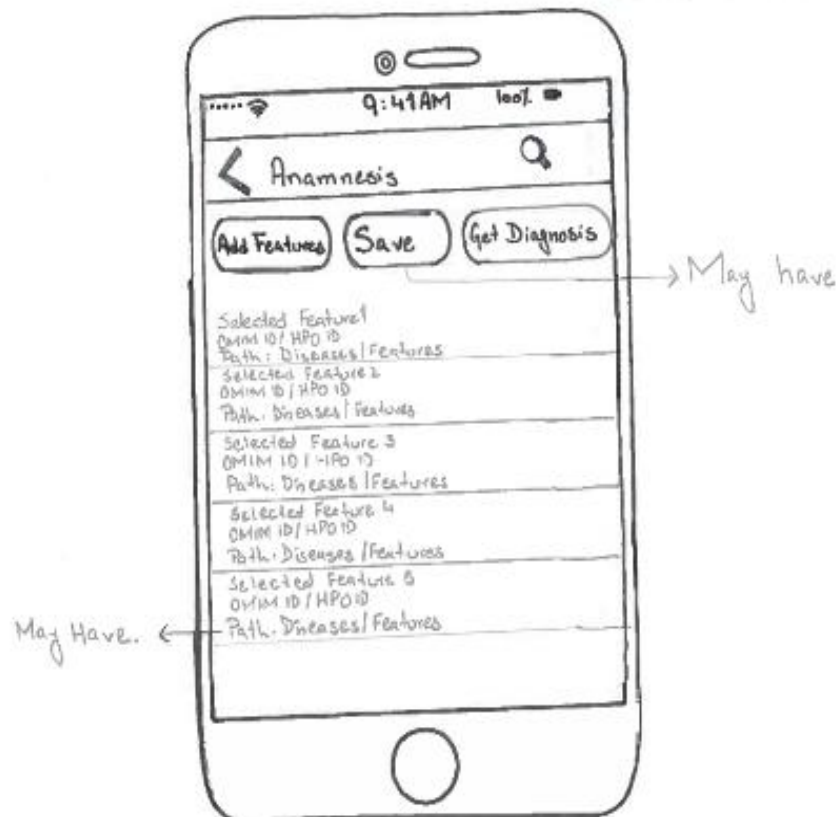New Query

Load Query   ✕ ——— May Have

Help

2   Select search option from navigation bar, type in phenotype name or id, select phenotype (multiple phenotypes can be selected)
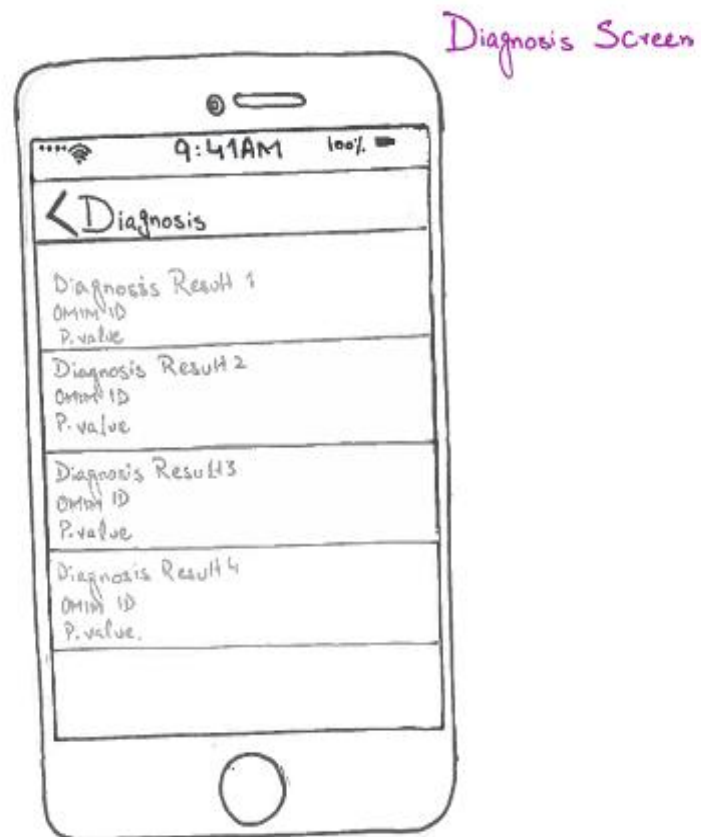

Features Screen

3   Press show selection on the features screen

Show Selection Screen

4   Press get diagnosis – diagnosis results are displayed

Diagnosis Screen

Exception 1: No internet connection available

Exception #3
Users tries to get diagnosis without an internet connection. Error message is displayed.

Screen content:
9:41 AM 100%

< Anamnesis

Add Features   Save   Get Diagnosis

No Internet connection available. Please connect your device to Internet!

OK

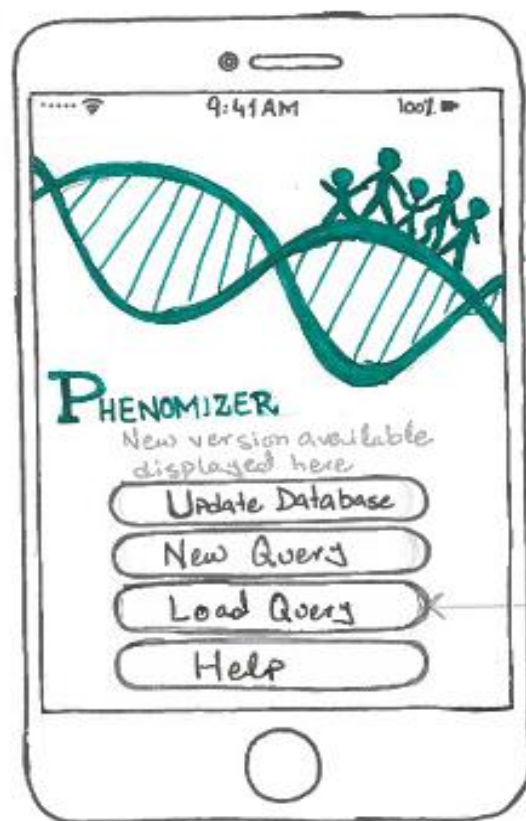# Exception 2: Database is never updated

Exception #2
User select New Query
& database is not
updated at all. Empty
Features & Diseases
screen

GUI Prototype for Use Case 3

Getting diagnosis by selecting phenotype(s) from diseases screen
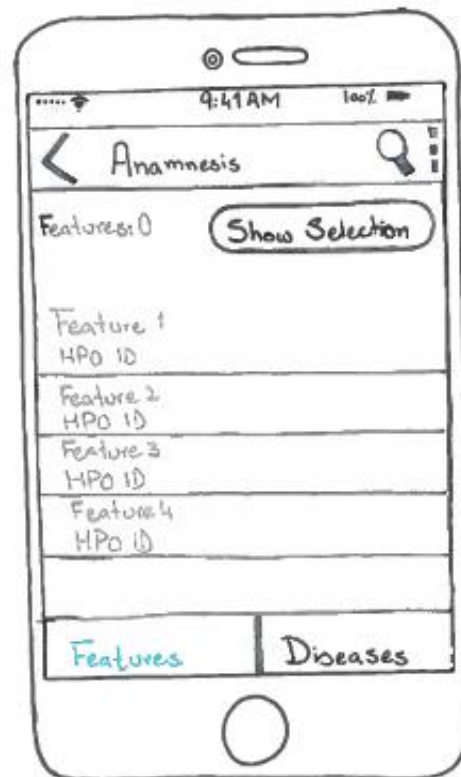
1   Press new query button

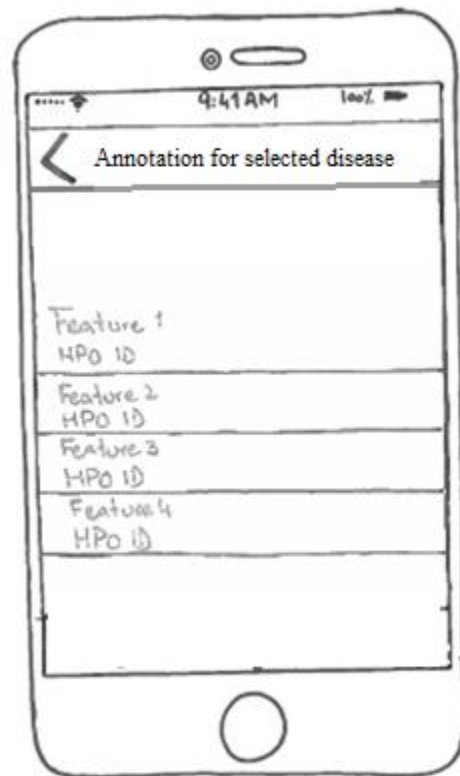## 2   User is directed to features screen

Features Screen

3   Selected diseases tab from the features screen, select disease (one selection possible at a time)
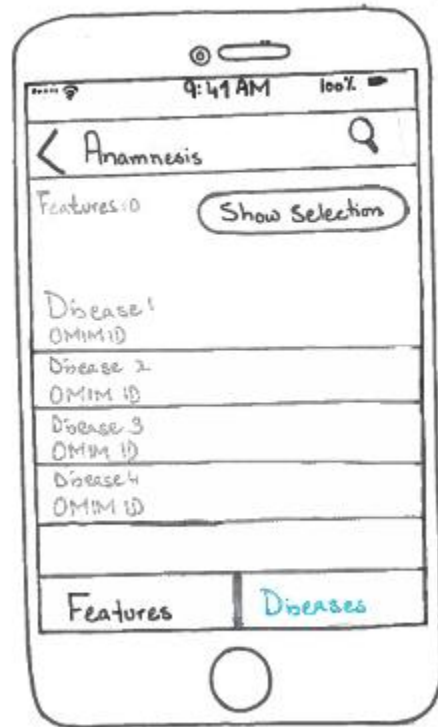
4 **User is directed to selected disease screen displaying annotation for selected disease. Here user can select phenotypes related to selected disease (multiple selection possible)**
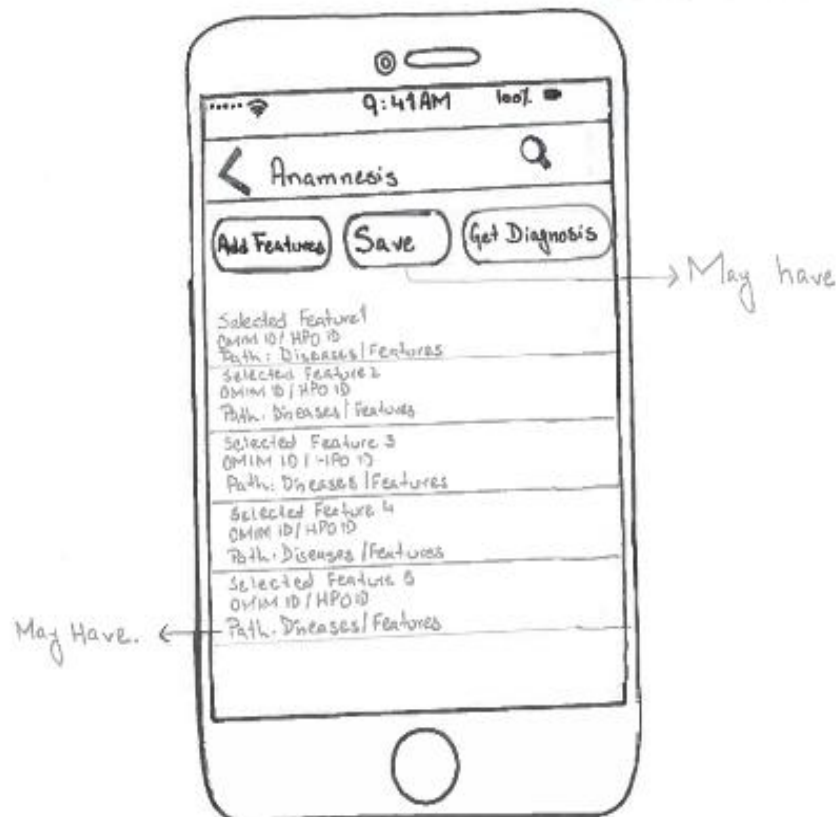

Selected Disease Screen

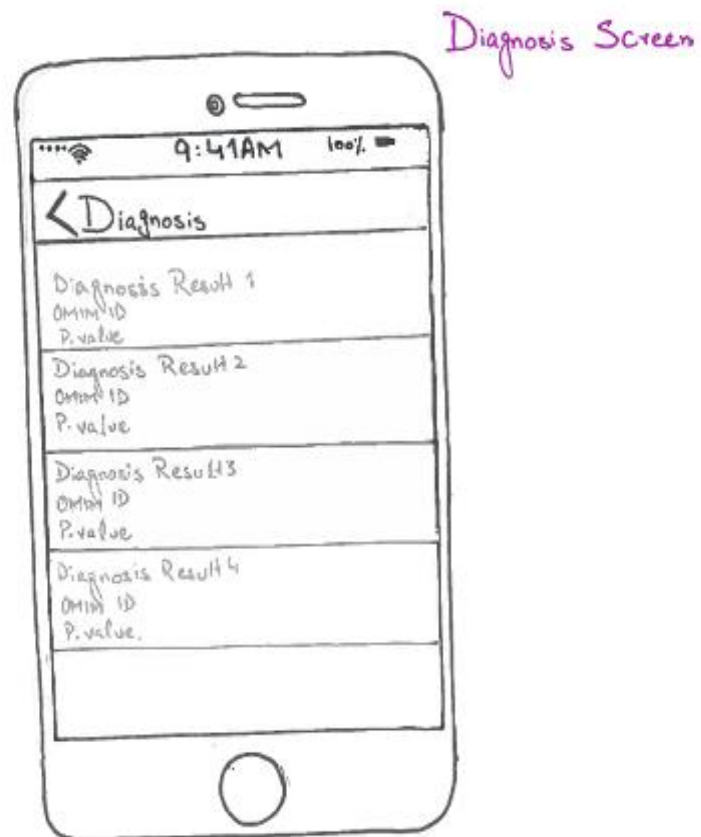**5** **User is again directed to diseases screen on pressing back button**

Diseases Screen

6   Press show selection on the diseases screen

Show Selection Screen

May have

May Have.

7   Press get diagnosis – diagnosis results are displayed

Diagnosis Screen

Diagnosis

Diagnosis Result 1
OMIM ID
P. value

Diagnosis Result 2
OMIM ID
P. value

Diagnosis Result 3
OMIM ID
P. value

Diagnosis Result 4
OMIM ID
P. value.

Exception 1: No internet connection available

Exception # 3
Users tries to get
diagnosis without an
internet connection.
Error message is displayed.

Screen content:
9:41 AM 100%

Anamnesis

Add Features | Save | Get Diagnosis

No Internet connection
available. Please connect
your device to Internet!

OK

Exception 2: Complete update of database is not performed

Exception #2
User select New Query
& database is not
updated at all. Empty
Features & Diseases
screen

GUI Prototype for Use Case 4

Getting diagnosis by searching fordisease'sname or OMIM Id
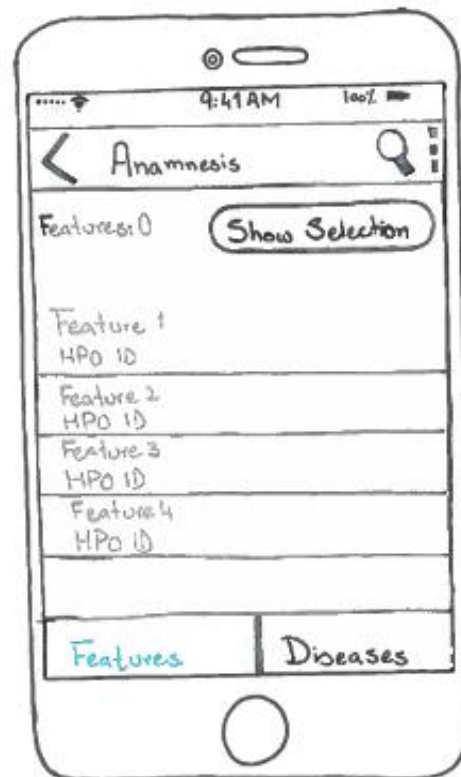
1   Press new query button
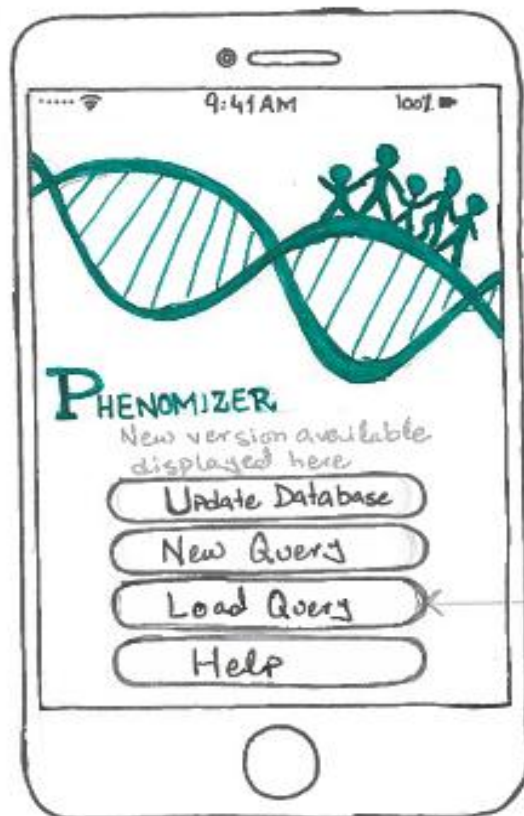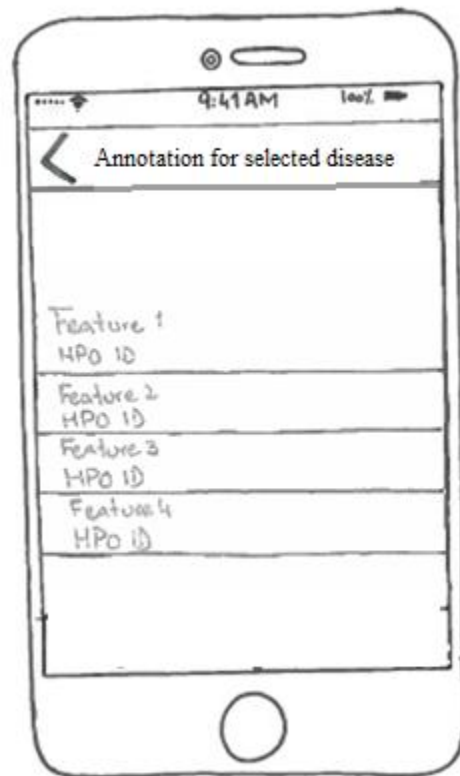
2 User is directed to features screen

Features Screen

3   Selected diseases tab from the features screen, select search option from navigation bar, type in disease name or id, select disease (one selection possible at a time)
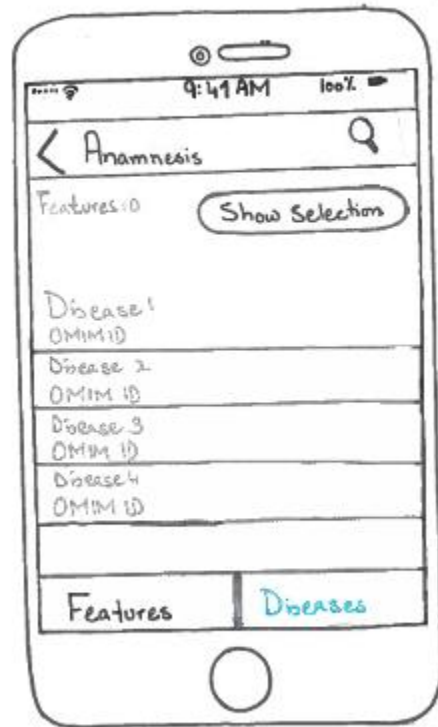

Diseases Screen

4 **User is directed to selected disease screen displaying annotation for selected disease. Here user can select phenotypes related to selected disease (multiple selection possible)**
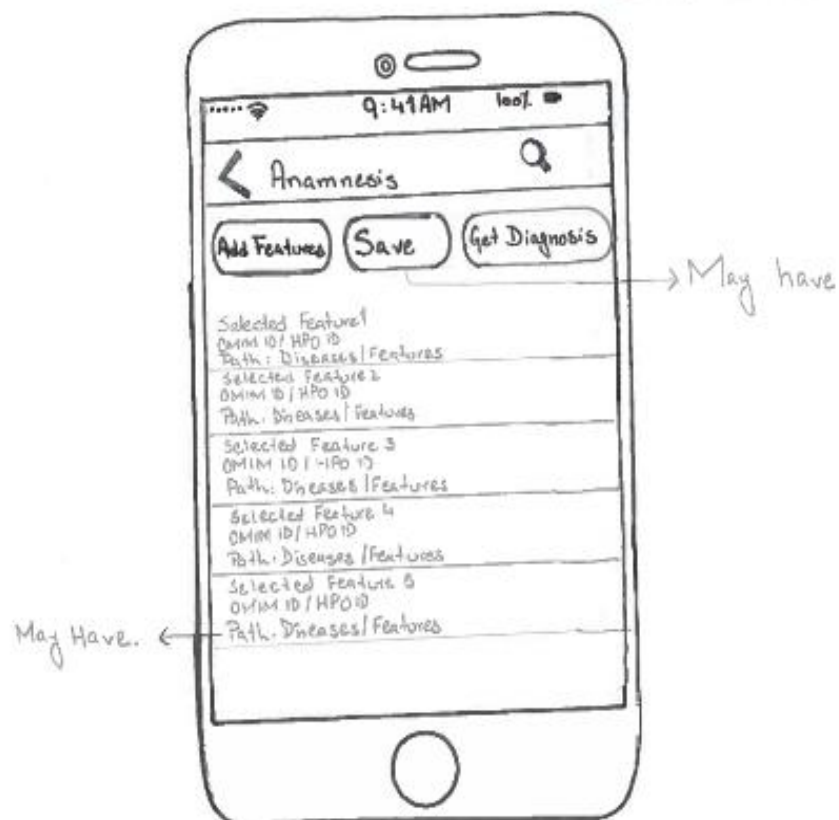

Selected Disease Screen

5   User is again directed to diseases screen on pressing back button
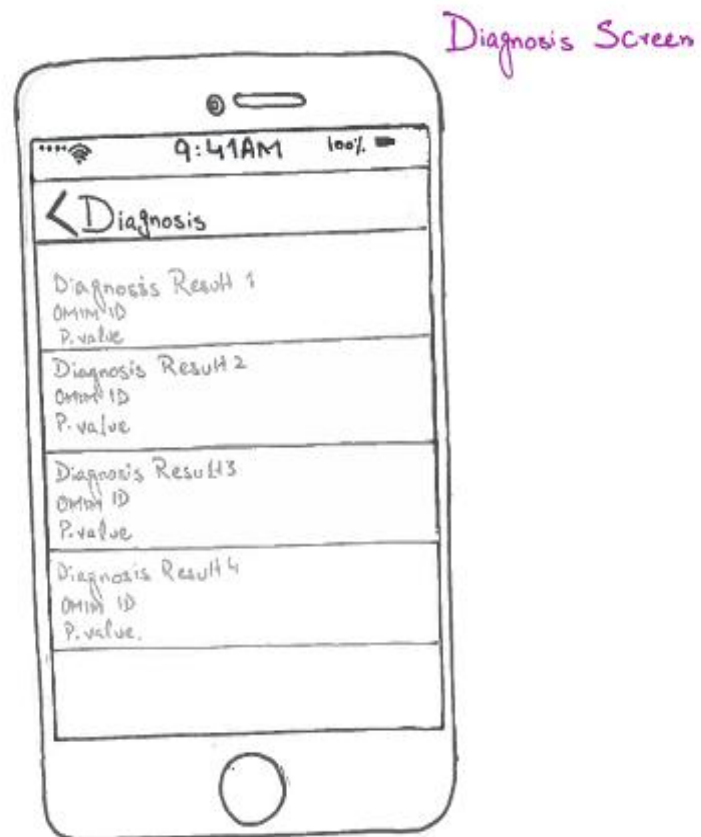

Diseases Screen

6   Press show selection on the diseases screen

Show Selection Screen

7   Press get diagnosis – diagnosis results are displayed

Diagnosis Screen

Diagnosis

Diagnosis Result 1
OMIM ID
P. value

Diagnosis Result 2
OMIM ID
P. value

Diagnosis Result 3
OMIM ID
P. value

Diagnosis Result 4
OMIM ID
P. value.

Exception 1: No internet connection available

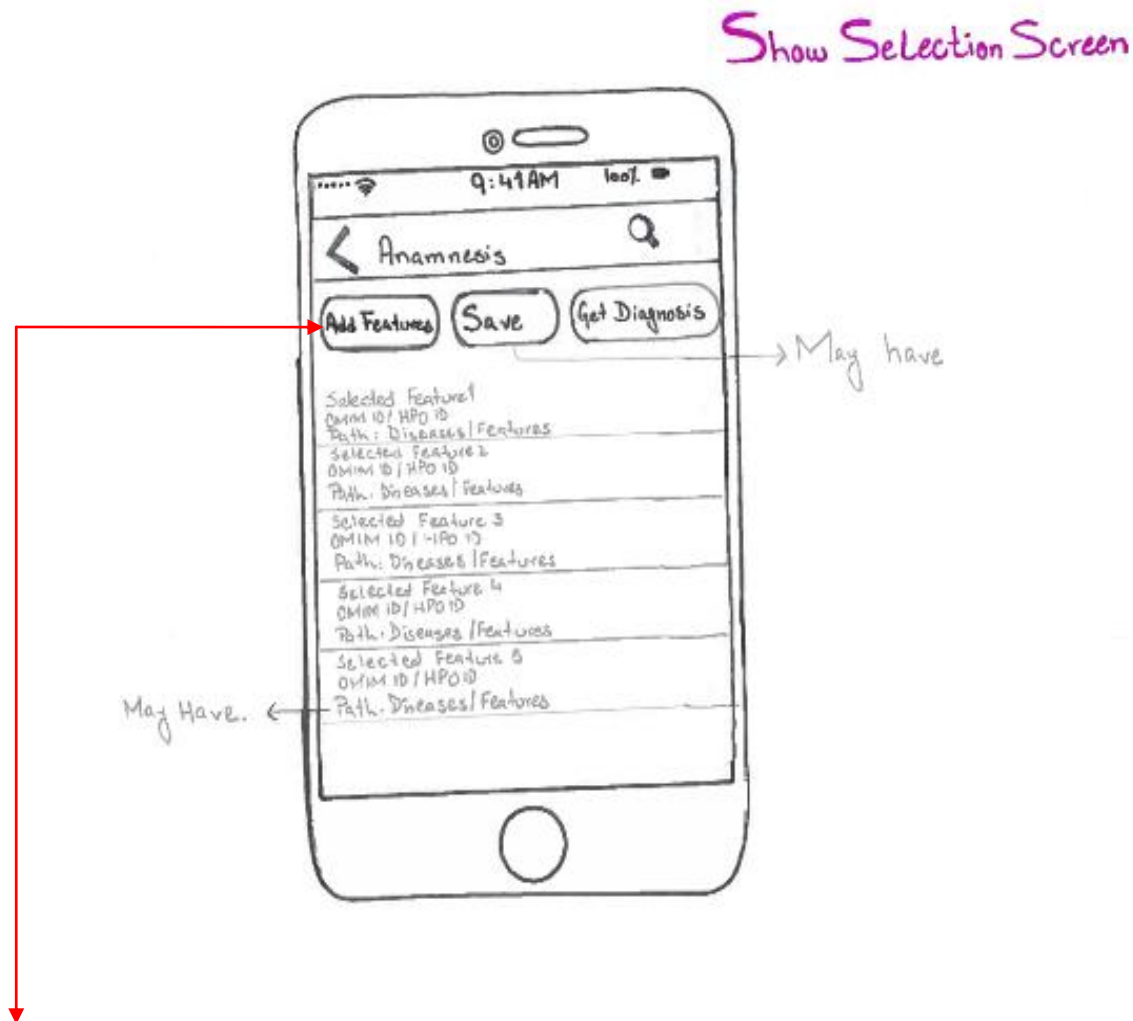**Exception 2: Full update of database is not performed**

Exception #2
User select New Query
& database is not
updated at all. Empty
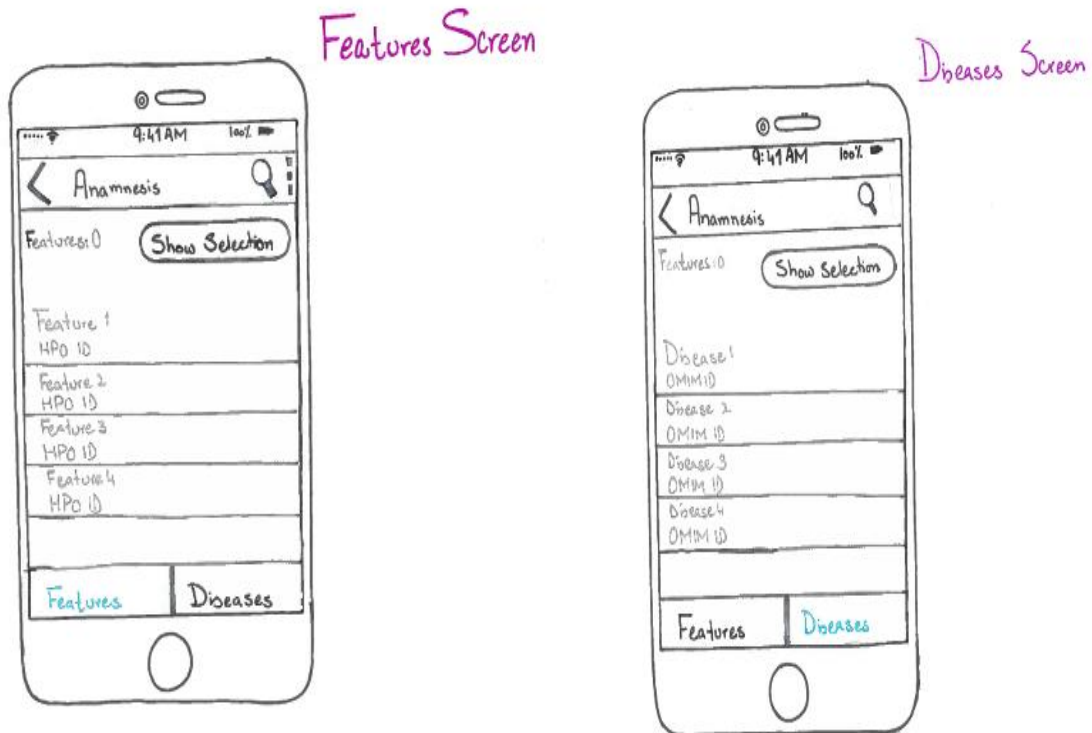Features & Diseases
screen

GUI Prototype for Use Case 5

Adding more phenotype(s) to the selected phenotype(s)

1   Select add features from show selection screen

2 **User is directed to diseases screen or features screen depending on from which screen show selection option was selected. User adds more phenotypes.**

Features Screen

Diseases Screen

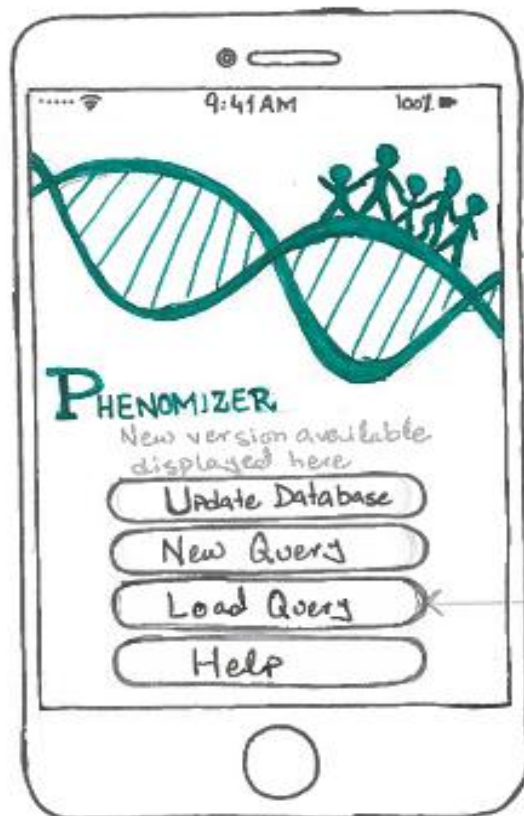**Exception: Neither full nor minimum update of database is performed**

Exception #2
User select New Query
& database is not
updated at all. Empty
Features & Dieases
screen

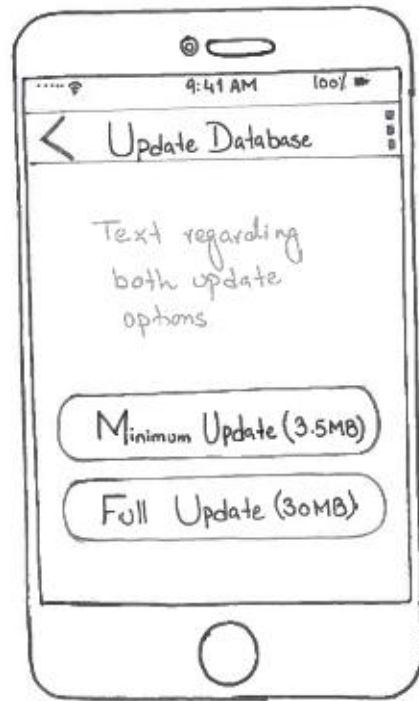# GUI Prototype for Use Case 6

Getting full update of the database

1   Press update database button

Welcome Screen

PHENOMIZER

New version available displayed here

- Update Database
- New Query
- Load Query ✗ ——————— May Have
- Help

2   Select full update

Update Database

Update Database screen mockup showing:
- Text regarding both update options
- Minimum Update (3.5MB)
- Full Update (30MB)

Exception: Internet connection not available
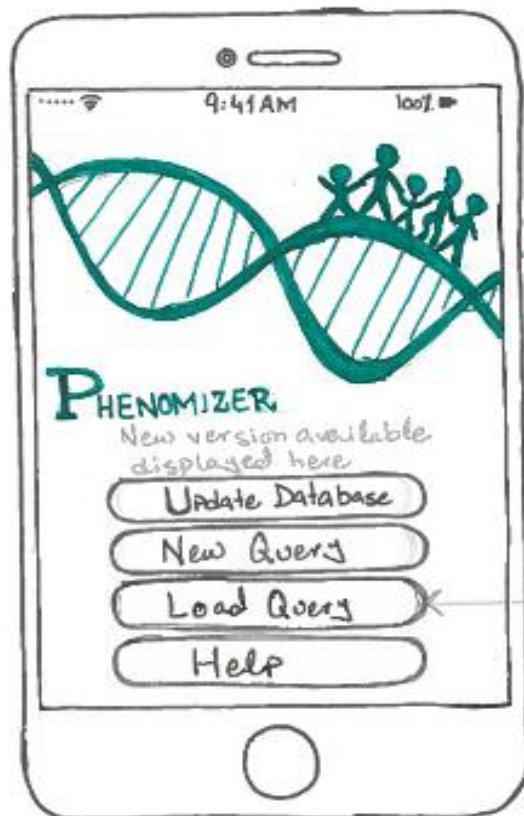
GUI Prototype for Use Case 7

Getting minimum update of the database

1   Press update database button

Welcome Screen

PHENOMIZER
New version available
displayed here

Update Database
New Query
Load Query
Help

May Have

2   Select minimum update
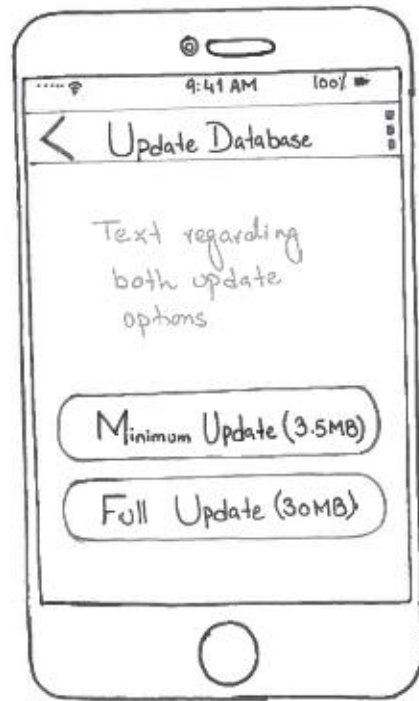
Update Database

Update Database

9:41 AM   100%

< Update Database

Text regarding
both update
options

Minimum Update (3.5MB)

Full Update (30MB)

Exception: Internet connection not available
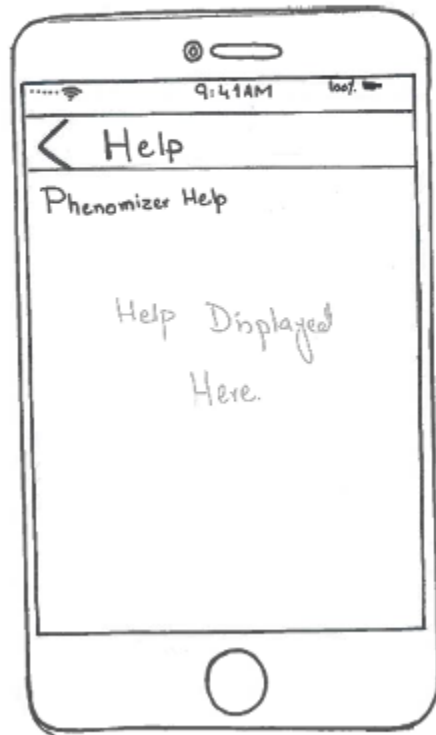
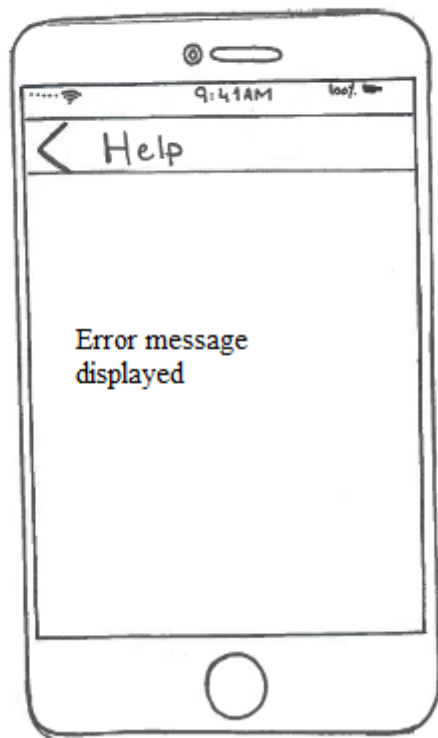# GUI Prototype for Use Case 8

<u>Help</u>

1   Press help button
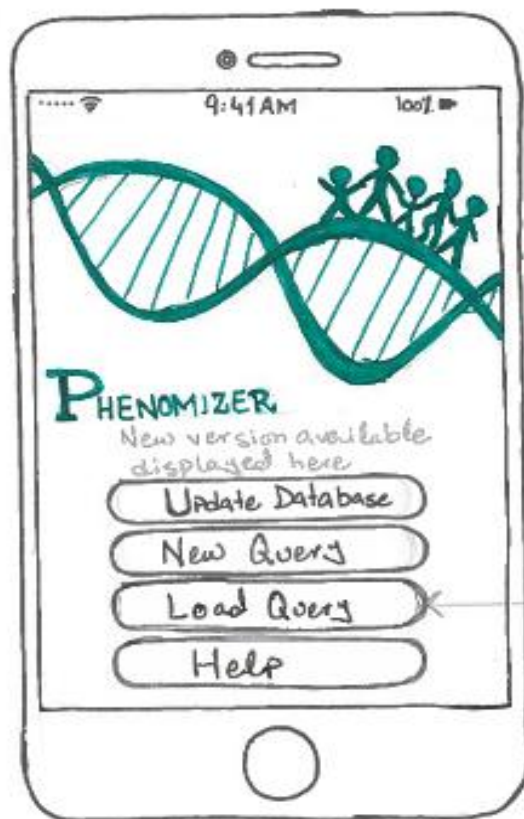
2 Help page is displayed

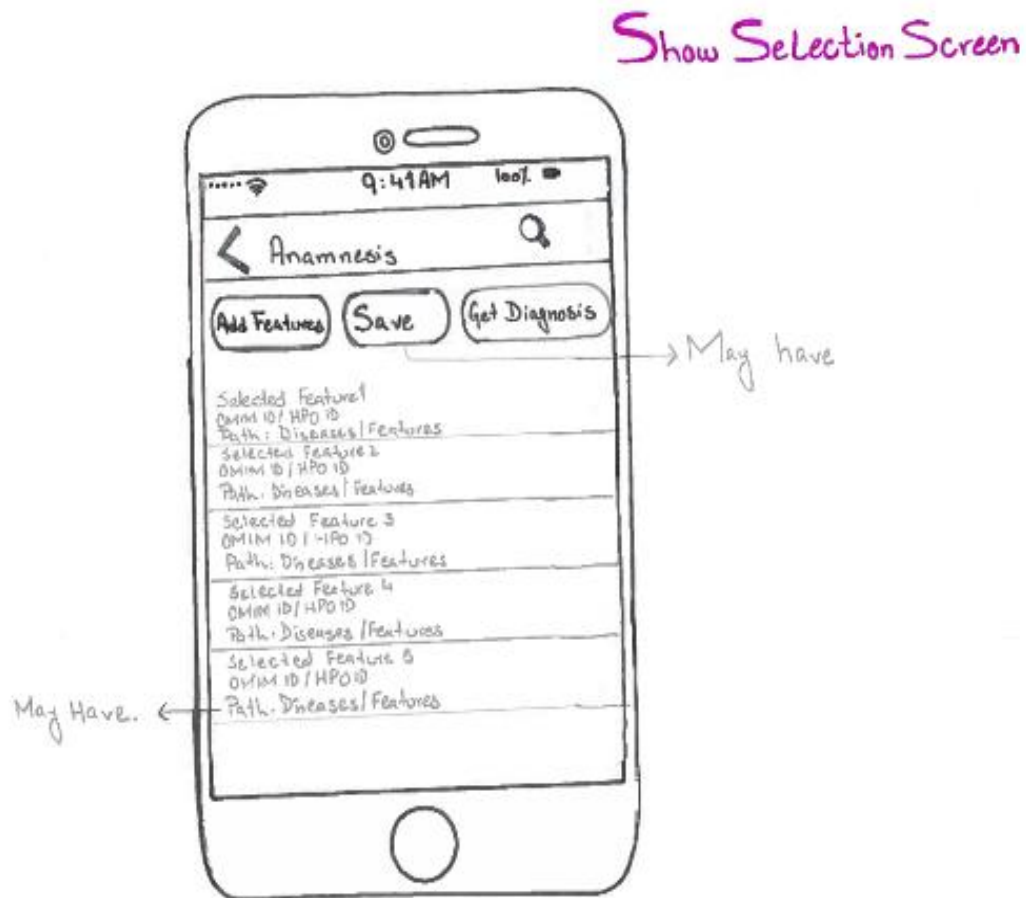**Exception: Internet connection not available, empty help screen is displayed with error message**

Help Screen

Help

Error message
displayed

GUI Prototype for Use Case 9

Save query

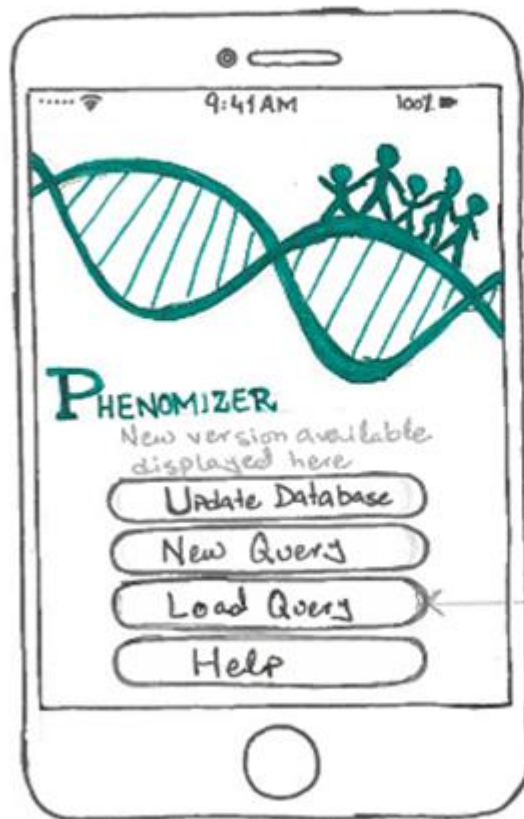**1   Select save option on show selection screen, query is saved**

Show Selection Screen

GUI Prototype for Use Case 10

<u>Load query</u>

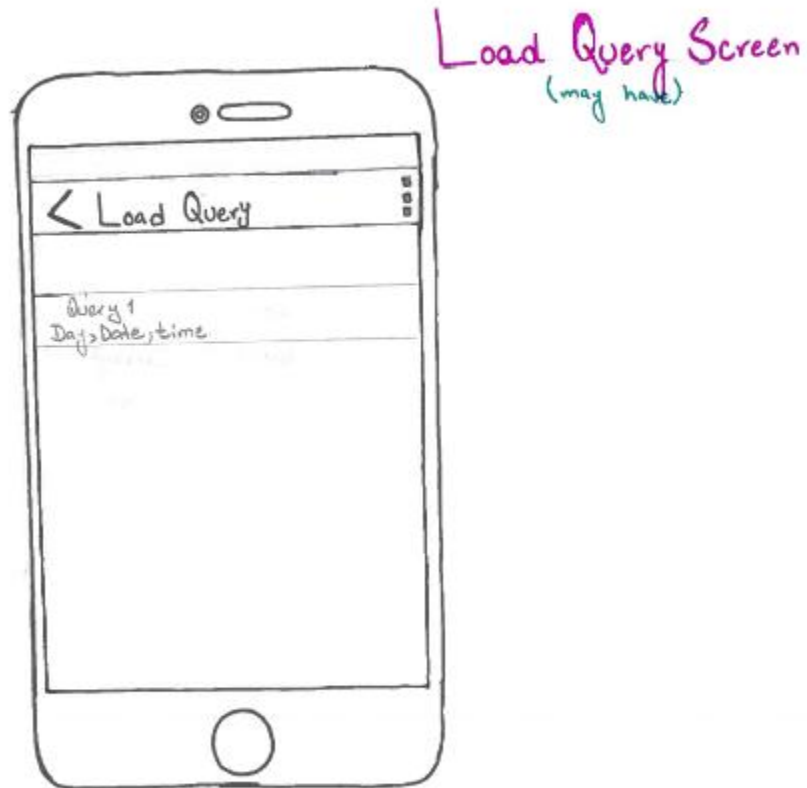**1   Select load query from welcome screen**

2   User is directed to load query screen list of saved queries is displayed, select a query

Load Query Screen
(may have)

Load Query

Query 1
Day, Date, time

3   User is directed to show selection screen after loading selected query

GUI Prototype for Use Case 11

<u>Edit query</u>

1   Select load query from welcome screen

2   User is directed to load query screen list of saved queries is displayed, select a query

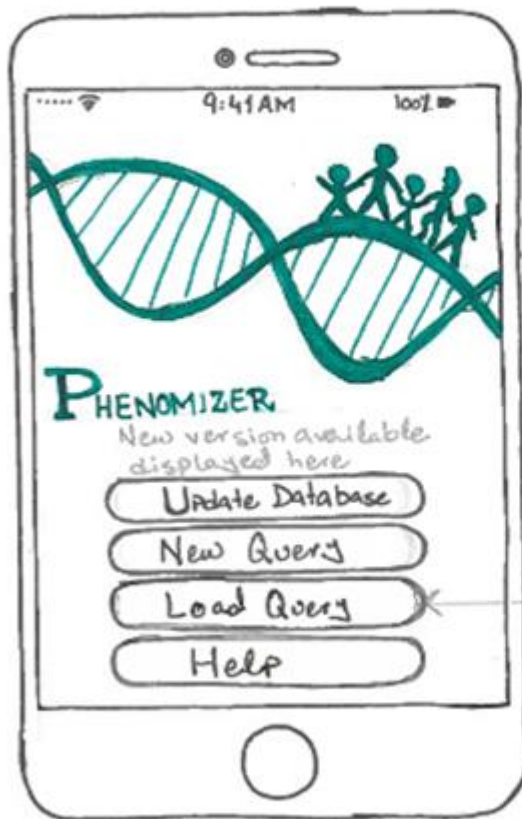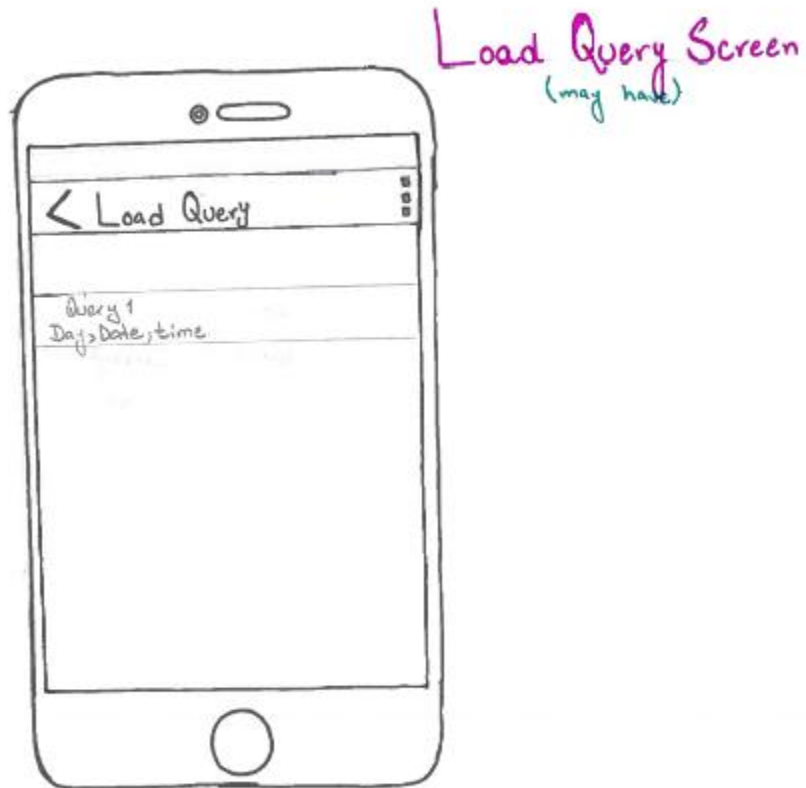**3   User is directed to show selection screen after loading selected query, performs changes to the query, selects save**