

# Health Ledger Using Blockchain

## *Demonstration*

The below shown are screenshots of the ledger program:

### Option 1: Create profile.

When selected this option executes as shown. Finally adding a new block to the chain.

```
Please enter among the below numbers to continue:
1.Create profile
2.View profile
3.Update profile
4.View other's profile
0.Exit program
1
0
NK : cbb7d1c1d280b95ebc7f829a36661edc83a7b8ba34acd7ca67224320d0e36226
in mine:
Mining: 1
Mining: 2
Mining: 3
Mining: 4
Mining: 5
Mining: 6
Mining: 7
Mining: 8
Mining: 9
Mining: 10
Mining: 11
Mining: 12
Mining: 13
Mining: 14
Mining: 15
Mining: 16
Mining: 17
Mining: 18
Mining: 19
Mining: 247
Mining: 248
Mining: 249
Mining: 250
Mining: 251
Mining: 252
Mining: 253
Mining: 254
Mining: 255
Mining: 256
Mining: 257
Mining: 258
Mining: 259
Mining: 260
Mining: 261
Mining: 262
Key (nonce value): 262
Block mined successfully!
```

### Option 2: View profile

When selected it asks for key value. The profile details are shown as below:

```
Please enter among the below numbers to continue:

1.Create profile
2.View profile
3.Update profile
4.View other's profile
0.Exit program
2

Enter your key to view details:
262
.....Data.....
Name:  NK
Age:   20
Health condition(s):  Cold,Cough
Permitted users:  Punith,Manoj
```

### Option 3: Update profile

When selected the program asks user to enter key.

The user is asked if wishes to update health condition field.

If yes, he is prompted to update.

After all the fields are updated, the block is mined and added to the chain as shown below.

```
Please enter among the below numbers to continue:

1.Create profile
2.View profile
3.Update profile
4.View other's profile
0.Exit program
3

Enter your key to update:
262

Update health condition(s)? (y/n)
y

Enter updated health condition(s):
Headache,Leg cramps

Update age? (y/n)
n

Update permitted names? (y/n)
n

in mine:
Mining:  1
Mining:  2
Mining:  3
Mining:  4
Mining:  5
Mining:  6
Mining:  7
Mining:  8
Mining:  9
Mining: 10
```

#### Option 4: View other's profile

When selected the user is asked details as below.

Upon successfully completing the zero knowledge proof, the user is shown the data.

```
Please enter among the below numbers to continue:

1.Create profile
2.View profile
3.Update profile
4.View other's profile
0.Exit program
4

Enter patient's encrypted name:
b3e82ca42bbc2b5cd7ead94206edcc078a1f8d681201f7ccd4251a3904fa0bcb

Enter your name:
NK
Executing zero knowledge proof

Hey Prover!
Enter a prime number:
11

Hey Prover!
Enter a random number b/w 2 and(prime -1)
7

Hey Verifier!
Enter a random bit 0 or 1
1
Verifying transaction:
Inside gcd() 2

Inside gcd() 2
```

[Verification in progress]

```
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
.....Data.....
Name: Punith
Age: 22
Health condition(s): Flu,Cold
Permitted users: NK
```