

IBM Challenge – BucksBot

We have created a chatbot named BucksBot, which serves the customer with the following-

1. Balance enquiry – provide your account number and BucksBot will tell you the current balance in your account.
2. Fixed deposit opening – BucksBot will open a fixed deposit in your existing account. Provide your account number, amount for the deposit and the tenure. You can create multiple FDs in your account if you are having sufficient balance. We've assumed accounts to be of 0 balance, which means that you can open FDs till your balance is greater than 0. Minimum amount for a FD is Rs. 1000.

We have assumed that a customer can login with BucksBot only after verifying their credentials, so we have just used the account number for the services provided.

One account has been created with Account Number - 123456789034, which you can use to test our chatbot.

Database Structure:

We have created a NoSql database on Bluemix Cloudant for the bank system and integrated it with chatbot. “_id” is the unique account number of the user. An example document -

```

1 {
2   "_id": "123456789034",
3   "_rev": "44-e1588d99359b691496effce6cd4dc98f",
4   "name": "Avni malhan",
5   "amount": "108500",
6   "fixed-deposit": {
7     "0": {
8       "amount": 1000,
9       "tenure": 5
10    },
11    "1": {
12      "amount": 1000,
13      "tenure": 3
14    },
15    "2": {
16      "amount": 1000,
17      "tenure": 3
18    }
19  }
20 }

```

Steps to run the file:

We have created chatbots for Slack and Facebook Messenger.

Steps for Slack –

1. You can only chat when we add you to the team '*IBM Challenge*'. So kindly send your slack handle and we'll add you to the team so that you can test the bot.
2. Coding has been done using node.js with JSON response.
3. Simply run the file '*BucksBotSlack.js*' on the server and you can chat with *bucksbot* on Slack.
4. Command - node BucksbotSlack.js
5. Also, we have hosted the code on *Heroku server*. Once you get added to the team, you can directly chat with the bot.

Steps for Facebook Messenger –

1. We have created a page, *IBMChallenge – BucksBot*, with which you can chat.
2. Due to some permission constraints, we couldn't make the bot public. So please mail your facebook id to any one of us, so that we can add you as a developer and you could test the bot.
3. Command - node BucksbotFB.js

4. Code has been put on *Heroku server*, so it's live throughout.
We've tried adding constraints on invalid input wherever possible and make the chatbot work efficiently.

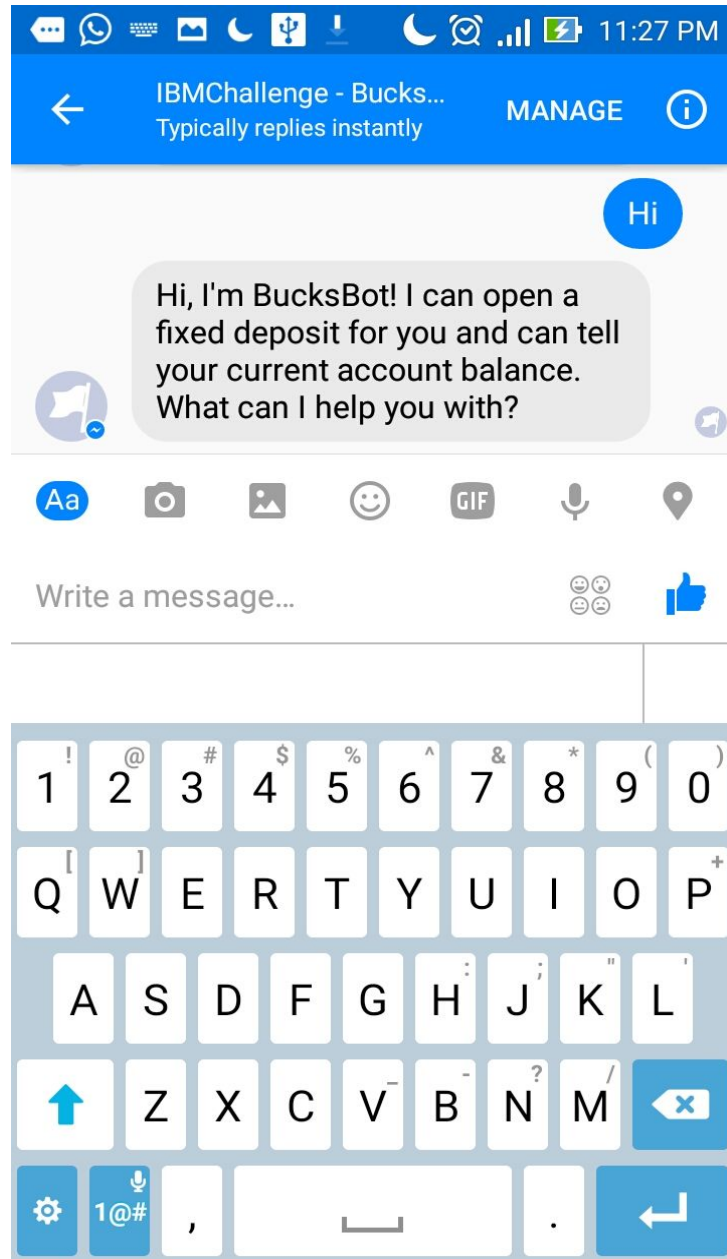
Code and screenshots of the working applications on Slack and Messenger have been attached.

Code for messenger - BucksbotFB.js

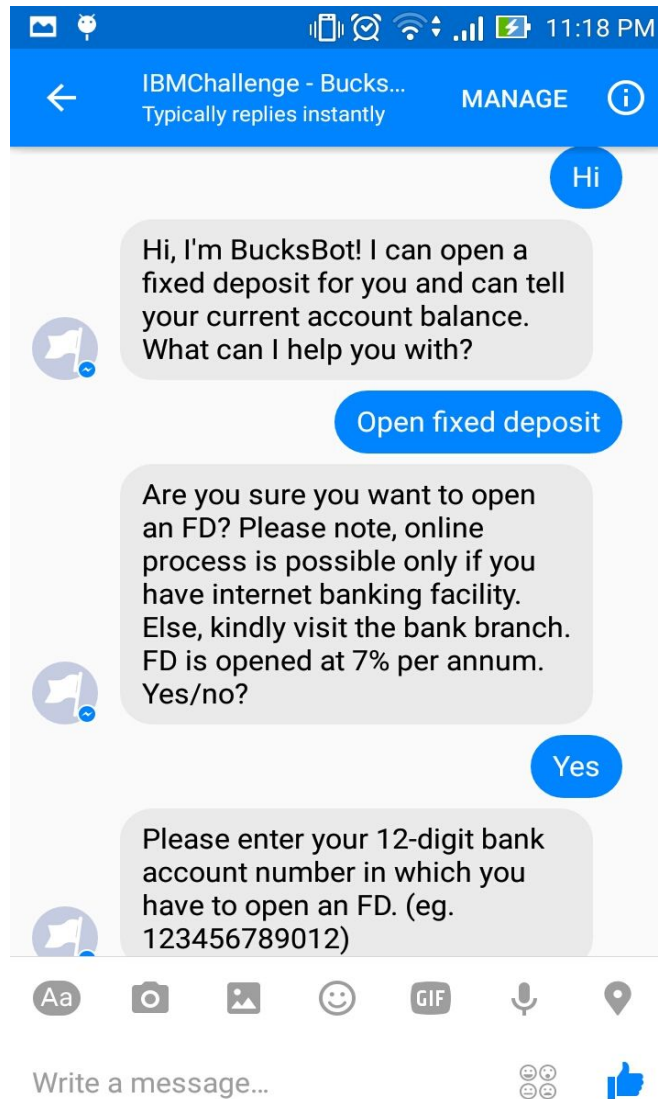
Code for slack - BucksbotSlack.js

Screenshots for messenger -

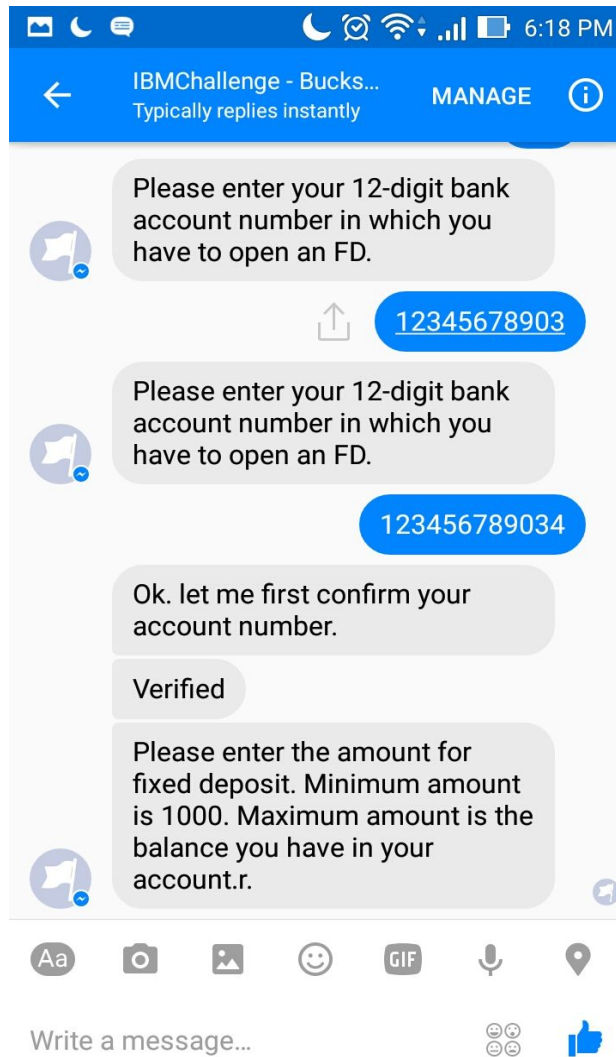
- 1) Bot gives reply of "Hi", and asks for both the options - Open fixed deposit account or to know the current account balance.



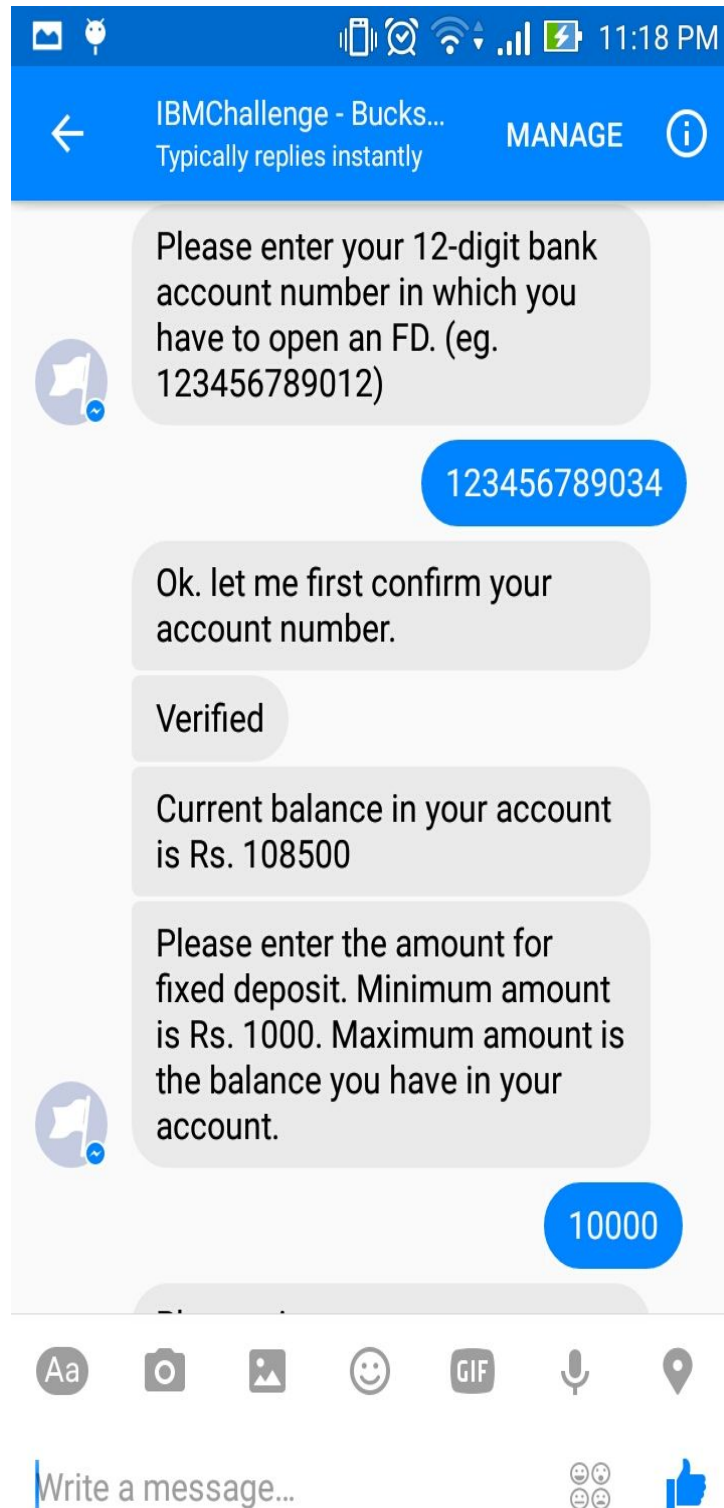
- 2) If a user asks for the option - to open the fixed deposit account, bot asks questions accordingly.



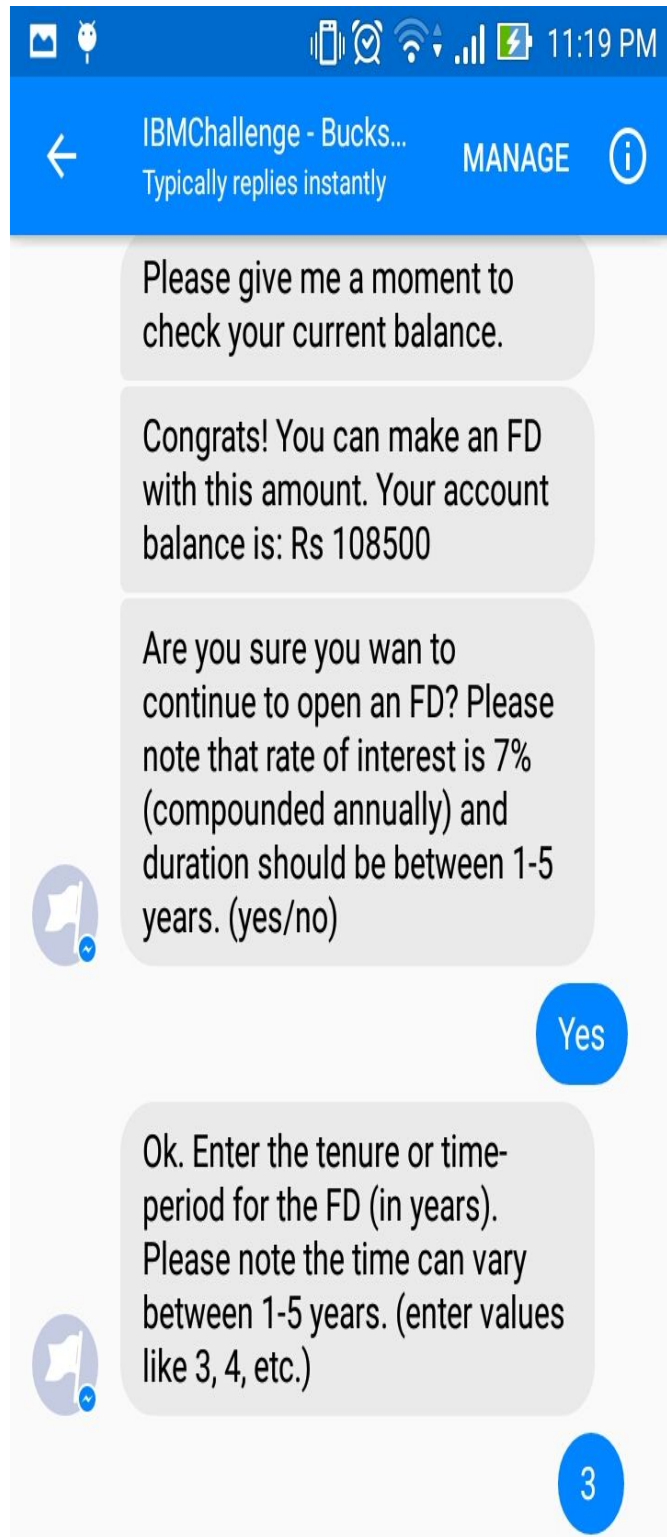
- 3) If the user gives incorrect account number for which the account is not already created, then bot asks again to enter the account number.



4) As sufficient balance is present, so fixed deposit account can be opened.



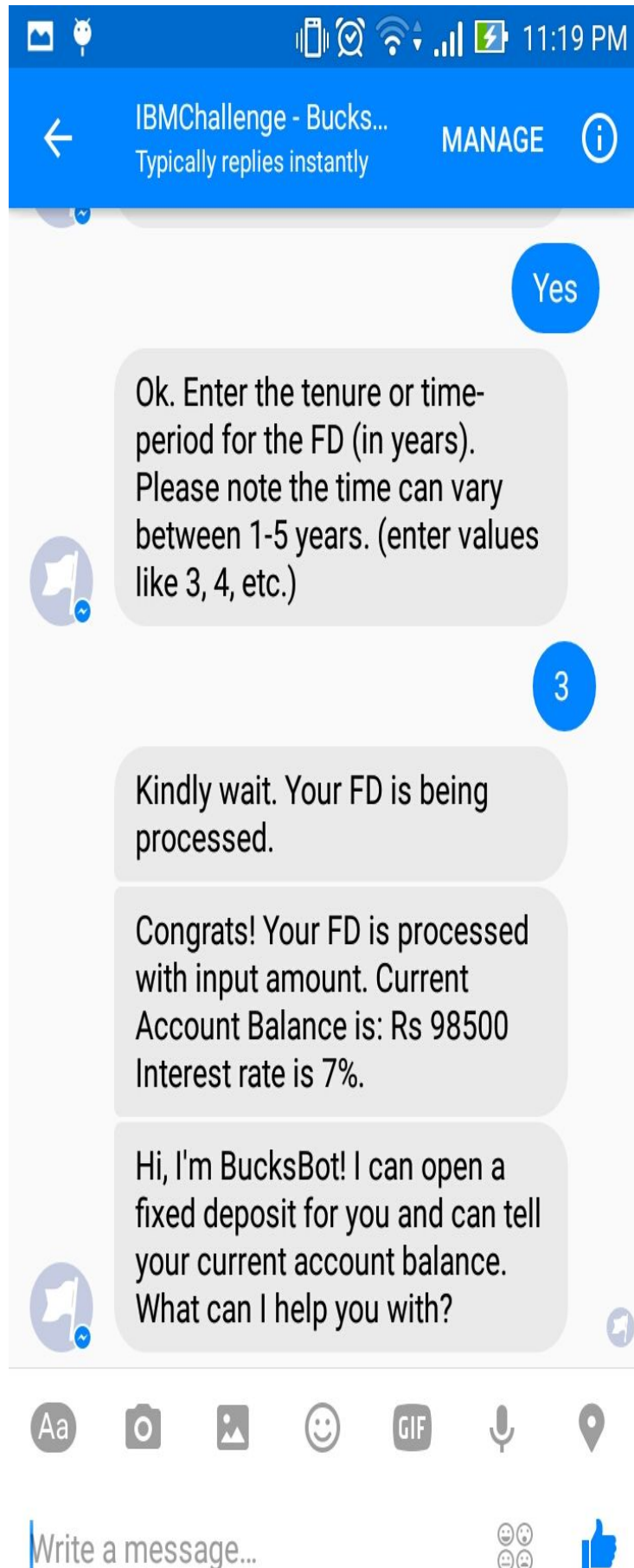
5) Other information is taken.



Write a message...



6) As everything goes fine, fixed deposit account is created.



7) If a user wants to create one more FD with the same account number.



Hi, I'm BucksBot! I can open a fixed deposit for you and can tell your current account balance. What can I help you with?

Open fd



Are you sure you want to open an FD? Please note, online process is possible only if you have internet banking facility. Else, kindly visit the bank branch. FD is opened at 7% per annum. Yes/no?

Yes



Please enter your 12-digit bank account number in which you have to open an FD. (eg. 123456789012)

123456789034

8) In this case, the amount is not sufficient.



IBMChallenge - Bucks...

Typically replies instantly

MANAGE



Please enter your 12-digit bank account number in which you have to open an FD. (eg. 123456789012)

123456789034

Ok. let me first confirm your account number.

Verified

Current balance in your account is Rs. 98500



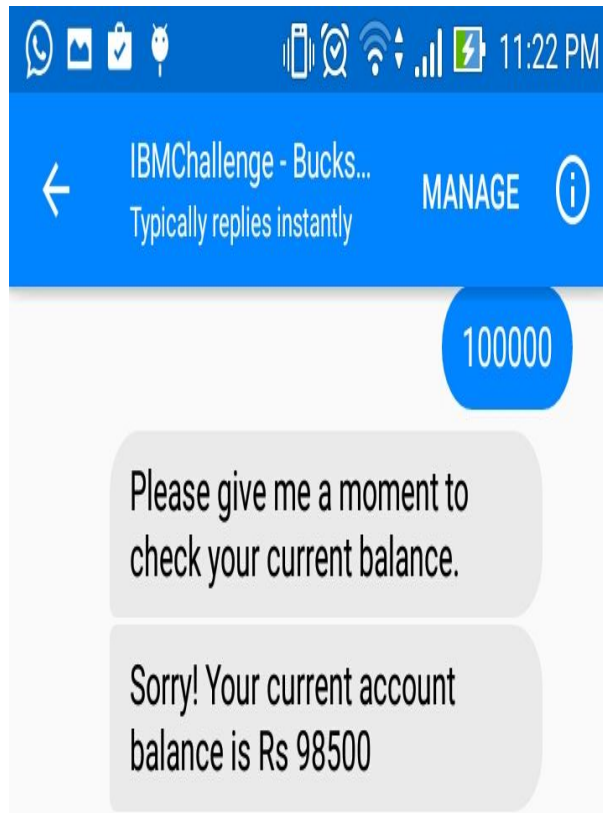
Please enter the amount for fixed deposit. Minimum amount is Rs. 1000. Maximum amount is the balance you have in your account.

100000

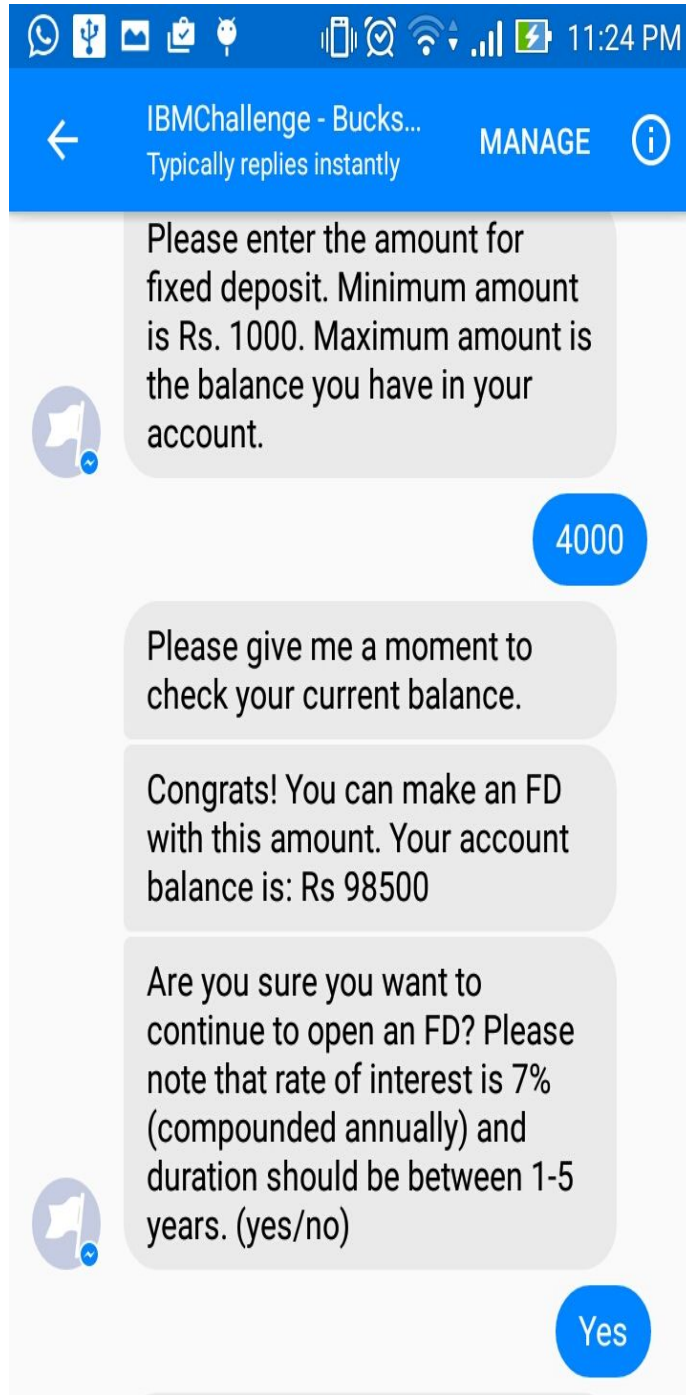


Write a message...





9) Account can be created within the available balance.



IBMChallenge - Bucks...

Typically replies instantly

MANAGE



Please enter the amount for fixed deposit. Minimum amount is Rs. 1000. Maximum amount is the balance you have in your account.

4000

Please give me a moment to check your current balance.

Congrats! You can make an FD with this amount. Your account balance is: Rs 98500



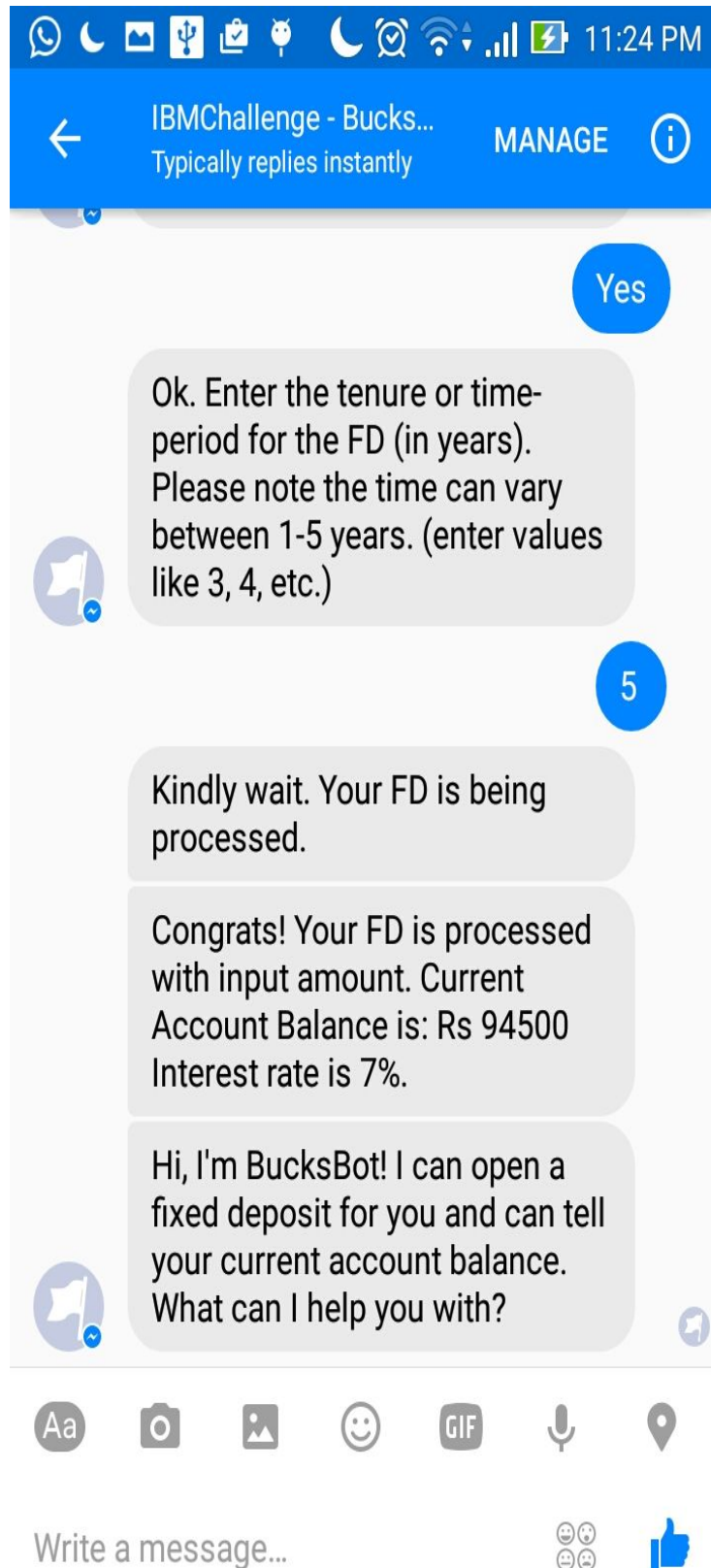
Are you sure you want to continue to open an FD? Please note that rate of interest is 7% (compounded annually) and duration should be between 1-5 years. (yes/no)

Yes



Write a message...





10) If the user opts of another option - to know the current account balance.



IBMChallenge - Bucks...

Typically replies instantly

MANAGE



Hi, I'm BucksBot! I can open a fixed deposit for you and can tell your current account balance. What can I help you with?

Can I know my balance



Do you wish to enquire about the current balance in your account? (yes/no)

Yes



Please enter your 12-digit bank account number. (eg. 123456789012)

123456789034

Please give me a moment to verify your account number.

Verified



Write a message...



11) After verifying the account balance, current balance is displayed.



IBMChallenge - Bucks...

Typically replies instantly

MANAGE



current balance in your account?
(yes/no)

Yes



Please enter your 12-digit bank
account number. (eg.
123456789012)

123456789034

Please give me a moment to
verify your account number.

Verified

Your account balance is Rs
94500



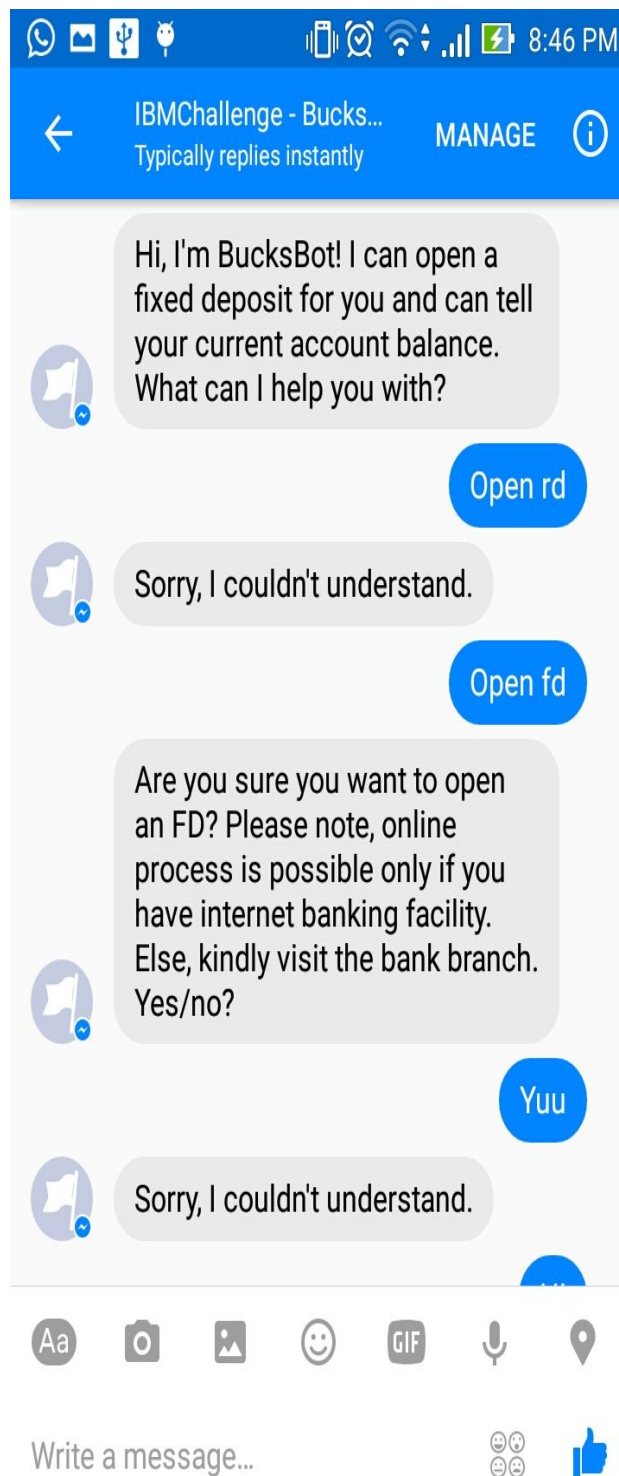
Hi, I'm BucksBot! I can open a
fixed deposit for you and can tell
your current account balance.
What can I help you with?



Write a message...

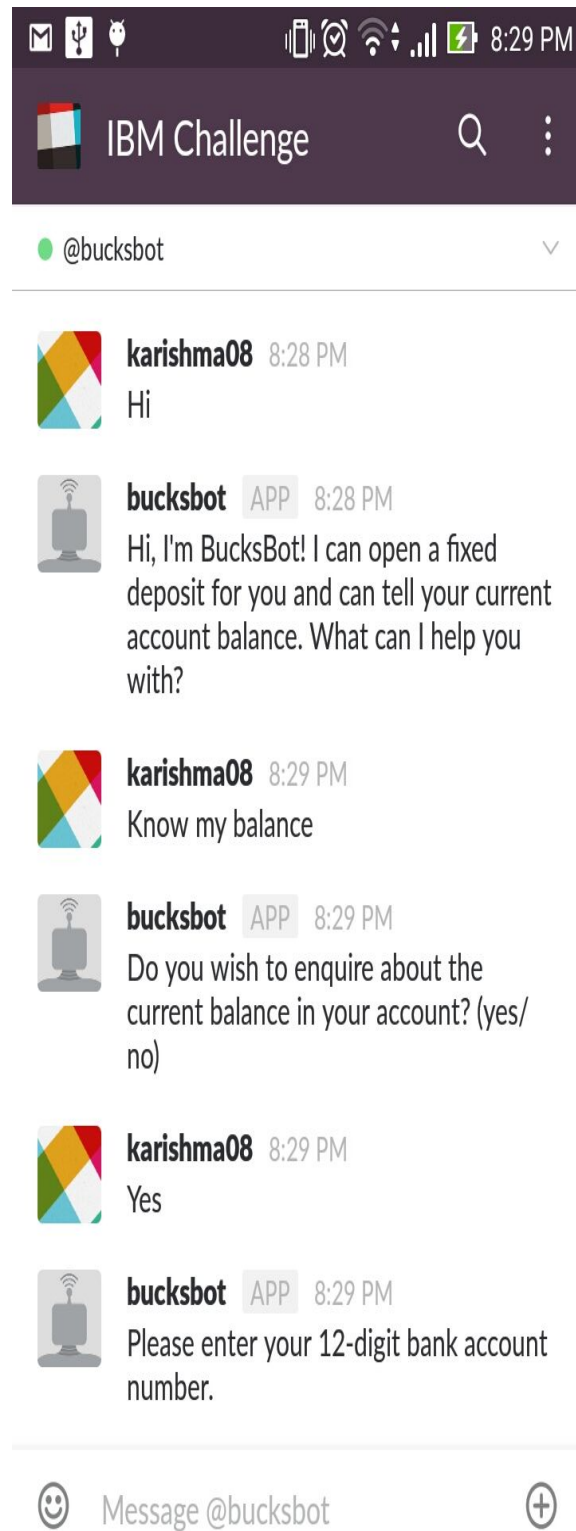


- 12) If the user gives the input which is not the part of Bot's intent, this means Bot does not understand what to reply in that case. Bot handles those cases as displayed in the below screenshot-

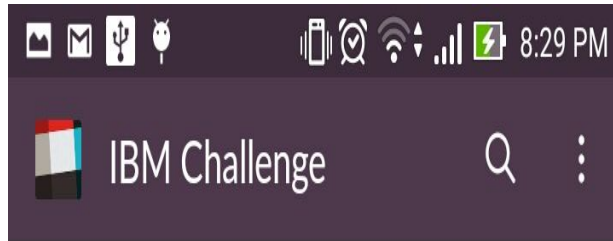


Screenshots for slack -

- 1) Bot gives reply of “Hi”, and asks for both the options - Open fixed deposit account or to know the current account balance. Here, user opts to know the account balance.



- 2) As everything goes well, so the account balance is displayed.



@bucksbot

current balance in your account? (yes/
no)



karishma08 8:29 PM

Yes



bucksbot APP 8:29 PM

Please enter your 12-digit bank account
number.



karishma08 8:29 PM

123456789034



bucksbot APP 8:29 PM

Please give me a moment to verify your
account number.

Verified

Your account balance is Rs 10000

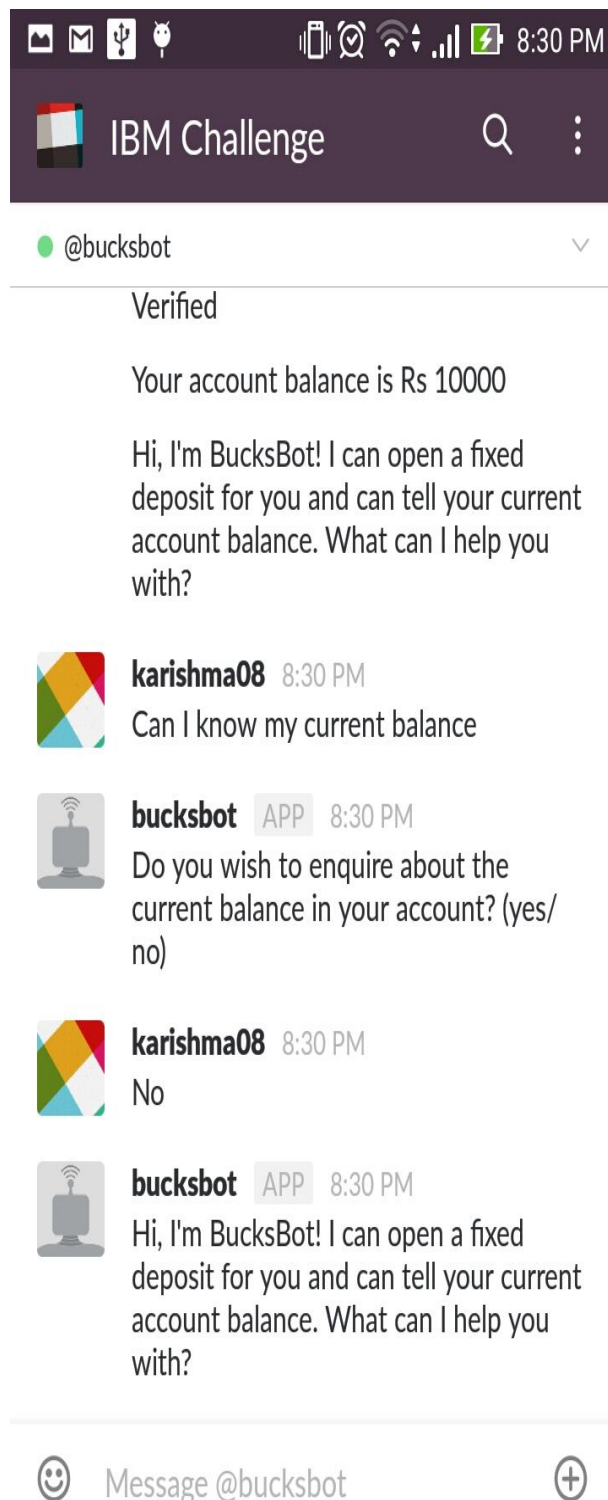
Hi, I'm BucksBot! I can open a fixed
deposit for you and can tell your current
account balance. What can I help you
with?



Message @bucksbot



3) If the user wishes not to see the account balance.



It works similarly in the case of opening fixed deposit as well.