

```

import telebot
from telebot import types
from enum import Enum
from vedis import Vedis
import cmath

bot = telebot.TeleBot('<Токен>')

db_file = "db.vdb"
CURRENT_STATE = "CURRENT_STATE"

def degree(a, b):
    return a ** b

def summ(a, b):
    return a + b

def multiply(a, b):
    return a * b

class States(Enum):
    STATE_START = "STATE_START" # Начало нового диалога
    STATE_FIRST_NUM = "STATE_FIRST_NUM"
    STATE_SECOND_NUM = "STATE_SECOND_NUM"
    STATE_OPERATION = "STATE_OPERATION"

# получить
def get(key):
    with Vedis(db_file) as db:
        try:
            return db[key].decode()
        except KeyError:
            return States.S_START.value

# записать
def set(key, value):
    with Vedis(db_file) as db:
        try:
            db[key] = value
            return True
        except:
            return False

# ключ
def make_key(chatid, keyid):
    res = str(chatid) + '__' + str(keyid)
    return res

@bot.message_handler(commands=['start'])
def cmd_start(message):
    bot.send_message(message.chat.id, 'Я - бот-калькулятор! __')
    bot.send_message(message.chat.id, 'Сначала введите 2 числа, потом действие')
    set(make_key(message.chat.id, CURRENT_STATE),
        States.STATE_FIRST_NUM.value)
    bot.send_message(message.chat.id, 'Число:')

```

```

@bot.message_handler(commands=['reset'])
def cmd_reset(message):
    bot.send_message(message.chat.id, 'Сброс')
    set(make_key(message.chat.id, CURRENT_STATE),
        States.STATE_FIRST_NUM.value)

@bot.message_handler(func=lambda message: get(make_key(message.chat.id,
CURRENT_STATE)) == States.STATE_FIRST_NUM.value)
def first_num(message):
    text = message.text
    if not text.replace('.', '', 1).isdigit():
        bot.send_message(message.chat.id, '- -')
        return
    else:
        set(make_key(message.chat.id, CURRENT_STATE),
            States.STATE_SECOND_NUM.value)
        set(make_key(message.chat.id, States.STATE_FIRST_NUM.value), text)
        bot.send_message(message.chat.id, 'Число:')

@bot.message_handler(
    func=lambda message: get(make_key(message.chat.id, CURRENT_STATE)) ==
    States.STATE_SECOND_NUM.value)
def second_num(message):
    text = message.text
    if not text.replace('.', '', 1).isdigit():
        bot.send_message(message.chat.id, '- -')
        return
    else:
        set(make_key(message.chat.id, CURRENT_STATE),
            States.STATE_OPERATION.value)
        set(make_key(message.chat.id, States.STATE_SECOND_NUM.value), text)
        markup = types.ReplyKeyboardMarkup(row_width=2)
        b1 = types.KeyboardButton('^')
        b2 = types.KeyboardButton('√')
        b3 = types.KeyboardButton('+')
        b4 = types.KeyboardButton('-')
        b5 = types.KeyboardButton('*')
        b6 = types.KeyboardButton('/')
        markup.add(b1, b2, b3)
        markup.add(b4, b5, b6)
        bot.send_message(message.chat.id, 'Действие:', reply_markup=markup)

@bot.message_handler(func=lambda message: get(make_key(message.chat.id,
CURRENT_STATE)) == States.STATE_OPERATION.value)
def operation(message):
    # Текущее действие
    op = message.text
    fv1 = float(get(make_key(message.chat.id, States.STATE_FIRST_NUM.value)))
    fv2 = float(get(make_key(message.chat.id,
        States.STATE_SECOND_NUM.value)))
    res = 0
    if op == '^':
        res = degree(fv1, fv2)
    elif op == '√':
        res = degree(fv1, 1/fv2)
    elif op == '+':
        res = summ(fv1, fv2)
    elif op == '-':
        res = summ(fv1, -fv2)

```

```
elif op == '*':
    res = multiply(fv1, fv2)
elif op == '/':
    res = multiply(fv1, 1 / fv2)
markup = types.ReplyKeyboardRemove(selective=False)
if op == '√':
    bot.send_message(message.chat.id,
                      f'{get(make_key(message.chat.id,
States.STATE_SECOND_NUM.value))}{op}{get(make_key(message.chat.id,
States.STATE_FIRST_NUM.value))}={str(res)}',
                      reply_markup=markup)
    elif op == '^' or op == '+' or op == '-' or op == '*' or op == '/':
        bot.send_message(message.chat.id,
                          f'{get(make_key(message.chat.id,
States.STATE_FIRST_NUM.value))}{op}{get(make_key(message.chat.id,
States.STATE_SECOND_NUM.value))}={str(res)}',
                          reply_markup=markup)

    set(make_key(message.chat.id, CURRENT_STATE),
States.STATE_FIRST_NUM.value)
    bot.send_message(message.chat.id, 'Число:')

if __name__ == '__main__':
    bot.infinity_polling()
```