

# Bot Documentation

[Telegram](#) Bot build for the *BeuthBot*-Project, with easy extensibility and customization in mind.

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## Getting Started

These instructions will get you a copy of the project up and running on your local machine for development and testing purposes.

### Prerequisites

You will need a current version of [node & npm](#).

### Installing

After cloning the repository, install the dependencies. You can then run the project.

```
# install dependencies  
> npm install
```

```
# serve at localhost:8000  
> npm start
```

## Overview

The bot is basically a *Node-Express-Backend*. Incoming requests are checked and specifically handled.

## Structure

The bot is separated into two files. `index.js` contains the fundamental logic. The bot get created with its token and waits for incoming events. For example an incoming message. The bot then calls a handler function.

These handlers can be found in the second file, `commands.js`. This file contains the available commands as an Object. Furthermore does ist contain functions to determine if a message contains a commands and to answer the several requests a user can make.

## Functionalities

### User Requests

The bot supports three different kinds of user requests:

- **Message:** A user sends a message to the bot. We then check if the message contains a command. Commands are declared with a prefixed '/' in *Telegram*.
- **Callback Queries:** The bot can answer with a question, providing the user a simple interface, using a button matrix. When the user clicks on of these buttons we get a *callback query*.
- **Inline Queries:** Users can call our bot from within another chat by prefixing the botname with an '@'. The user can then send a text to the bot, which results in an inline query. The result that the bot gives back is inserted in the chat, where the user called the bot from.

### Commands

The `commands.js`-file contains an `commands`-object. Every entry of this object is a supported command. The Key is always the command string, prefixed with '/', eg: '/help'. The value for these keys is an object containing an description, and options object and the reference to the function that renders the answer for the specific command.

```
const commands = {
  '/help': {
    answer: renderHelpString,
    description: 'Get a helpful list of all available commands and
functionalities',
    options: {
      parse_mode: 'Markdown'
    }
  }
}
```

```

    },
    '/date': {
      answer: (message => 'What date format do you prefer?'),
      description: 'Get the current timestamp in a chooseable format',
      options: {
        parse_mode: 'Markdown',
        reply_markup: {
          // this initiates a callback query
          // by giving the user two buttons to answer with
          inline_keyboard: [
            [
              {
                text: 'Zulu',
                callback_data: JSON.stringify({
                  command: 'date',
                  payload: 'zulu'
                })
              },
              {
                text: 'German',
                callback_data: JSON.stringify({
                  command: 'date',
                  payload: 'german'
                })
              }
            ]
          ]
        }
      }
    }
  }
}

```

## Functions

The 'commands.js'-file provides several functions. Eg. functions to check if a message contains an command and to find out if the requested command is in the 'commands'-object, which means it is an supported command.

Further are functions provided to handle Messages (containing normal *Commands*), *Callback Queries* and *Inline Queries*.

The bot has the following functionalities, that a user can request and use:

- getTimestamp: Get the timestamp of the moment the message containing this command was send.
- getFormattedTimestamp: Renders the timestamp in Zulu or German format, this is a function used to answer a *Callback Query*.
- renderHelpString: Iterates over the *commands*-object and prints all available commands and there description.
- supportedMarkdown: This function gives the User a list of supported [Markdown](#) markup by

Telegram.

## BotFather

The [BotFather](#) allows so configure our bot. You can just write the *BotFather* with Telegram and the bot will guide you through everything. The *BotFather* enables you among others to change the profile picture, description and about text of your bot.

Further you can register the commands and inline queries your bot supports. This allows a cleaner user experience since the bot will then suggest commands and inline queries while the user types. So absolutely do register them!

The necessary commands are:

- '/setcommands' - '/setinline'

## Further Development

New commands can simply added to the 'commands'-object but have to follow the presented structure under [commands](#).

## Further Reading

- [Telegram Bot API](#)

## Built With

- [Node.js](#) - [Express.js](#) - [Node-Telegram-Bot-API](#)

## Versioning

We use [SemVer](#) for versioning. For the versions available, see the [tags on this repository](#).

## Authors

- **Tobias Klatt** - *Initial work* - [GitHub](#)

See also the list of [contributors](#) who participated in this project.

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