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# **dpy-syntaxer**

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This library will help you with syntax analyzing.



## API REFERENCE

## 1.1 Syntax class

```
class discord.ext.syntaxer.Syntax(command: discord.ext.commands.core.Command, description:
    Optional[str] = None, *, default_format: str =
    '{prefix}{variable_prefix}{command_name}{variable_suffix}{suffix}',
    kwarg_format: str =
    '{prefix}{variable_prefix}{command_name}{variable_suffix}',
    required_formats: Tuple[str, str] = ('<', '>'), optional_formats:
    Tuple[str, str] = ('[', ']'), variable_formats: Tuple[str, str] = ('', '...'))
```

Analyze command and make Syntax object.

This inherits [SpaceList](#), so :func:str will return a formatted syntax.

**Parameters**

- **command** (*commands.Command*) – Command to analyze syntax.
- **description** (*str*, *optional*) – Description of the command. If None, use docstring.
- **default\_format** (*str*, *optional*) – Format of regular argument, by default “{prefix}{variable\_prefix}{command\_name}{variable\_suffix}{suffix}”
- **kwarg\_format** (*str*, *optional*) – Format of keyword argument, by default “{prefix}{variable\_prefix}{command\_name}{variable\_suffix}”
- **required\_formats** (*tuple*, *optional*) – Prefix and suffix of required argument, by default (“<”, “>”)
- **optional\_formats** (*tuple*, *optional*) – Prefix and suffix of optional argument, by default (“[”, “]”)
- **variable\_formats** (*tuple*, *optional*) – Prefix and suffix of variable argument, by default (“”, “...”)

**property args**

Returns SpaceList with command arguments.

**property names**

Return SpaceList with command name and parents.

## 1.2 Syntax elements

**class** discord.ext.syntaxer.**CommandName**(*name: str, parent: Optional[discord.ext.syntaxer.main.ParentName] = None*)

Represents name of a command.

### Parameters

- **name** (*str*) – Name of the command.
- **parent** (*ParentName*) – Parent of the command, None if the command doesn't have a parent.

**class** discord.ext.syntaxer.**CommandArgument**(*name: str, required: bool, description: str, formatted: str, flag: discord.ext.syntaxer.main.ArgumentType, default: Any, param: inspect.Parameter*)

Represents a command argument.

*str* returns formatted value.

### Parameters

- **name** (*str*) – Name of the argument.
- **required** (*bool*) – The argument is required or optional.
- **description** (*str*) – Description of the argument.
- **formatted** (*str*) – Formatted value for the argument.
- **flag** (*int*) – Type flag of the argument.
- **default** (*Optional[Any]*) – Default value of the argument if any.
- **param** (*:class:inspect.Parameter*) – Parameter for the argument.

**property optional**

Same as not `self.required`.

## 1.3 Other classes

**class** discord.ext.syntaxer.**SpaceList**(*iterable=(), /*)

A special list. When you pass this list to `str`, content will be converted with `:func:str`, and joins them with space.



## EXAMPLE


## 2.1 Simple



```
1 import os
2 from textwrap import dedent
3
4 import discord
5 from discord.ext import commands, syntaxer
6
7 bot = commands.Bot(
8     "b ",
9     help_command=None,
10    allowed_mentions=discord.AllowedMentions(everyone=False, replied_user=False)
11 )
12
13
14 @bot.event
15 async def on_ready():
16     print(f"Logged in as: {bot.user}")
17
18
19 @bot.command("help", aliases=["?"])
20 async def _help(ctx, *, command_name=None):
21     """
22     Gets help of the command.
23     Command Name: Command name to get help, return all command name if None.
24     """
25     if command_name is None:
26         return await ctx.reply(" ".join([f"`{c}`" for c in bot.commands]))
27     command = bot.get_command(command_name)
28     if command is None:
29         return await ctx.reply("Unknown command.")
30     syntax = syntaxer.Syntax(command)
31     e = discord.Embed(
32         title=f"Help of `{command}`",
33         description=dedent(f"""
34             ``` {syntax} ```
35             {command.callback.__doc__}
36             """))
37     return await ctx.reply(embed=e)
```


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```
38
39
40 @bot.command()
41 async def foo(ctx, argument):
42     """
43     Says bar.
44     Arg: Test argument
45     """
46     await ctx.reply("bar, passed" + argument)
47
48
49 @bot.command()
50 async def echo(ctx, *, text):
51     """
52     Says text.
53     Text: text to say.
54     """
55     await ctx.send(text)
56
57
58 @bot.command()
59 async def neko(ctx, count=1):
60     """
61     I am neko.
62     Times: Times to say, default by 1.
63     """
64     for _ in range(count):
65         await ctx.send("Nyan")
66
67 bot.run(os.getenv("token"))
```

 **Nanashi.** 今日 06:32  
b help

 Nanashi, b help  
 **test bot lol** ボット 今日 06:32  
neko echo help foo


 **Nanashi.** 今日 06:32  
b help help



 Nanashi, b help help  
 **test bot lol** ボット 今日 06:32

#### Help of help

help [Command Name]

Gets help of the command.  
Command Name: Command name to get help, return all command name if None.


 **Nanashi.** 今日 06:32  
b help foo



 Nanashi, b help foo  
 **test bot lol** ボット 今日 06:32

#### Help of foo

foo <Arg>

Says bar.  
Arg: Test argument


 **Nanashi.** 今日 06:32  
b help echo



 Nanashi, b help echo  
 **test bot lol** ボット 今日 06:32

#### Help of echo

echo <Text>

Says text.  
Text: text to say.

 **Nanashi.** 今日 06:32  
b help neko

 Nanashi, b help neko  
 **test bot lol** ボット 今日 06:32

#### Help of neko

neko [Times]

I am neko.  
Times: Times to say, default by 1.


## 2.2 Customize



---

**Note:** Code is as same as first, except help.

---

```
19 @bot.command("help", aliases=["?"])
20 async def _help(ctx, *, command_name=None):
21     """
22     Gets help of the command.
23     Command Name: Command name to get help, return all command name if None.
24     """
25     if command_name is None:
26         return await ctx.reply(" ".join([f"`{c}`" for c in bot.commands]))
27     command = bot.get_command(command_name)
28     if command is None:
29         return await ctx.reply("Unknown command.")
30     syntax = syntaxer.Syntax(
31         command,
32         default_format="{prefix}:{command_name}{variable_suffix}",
33         kwarg_format="{prefix}:{command_name}{variable_suffix}--",
34         required_formats=("R", ""),
35         optional_formats=("O", ""),
36         variable_formats="", "+"
37     )
38     e = discord.Embed(
39         title=f"Help of `{command}`",
40         description=dedent(f"""
41         ``` {syntax} ```
42         {command.callback.__doc__}
43         """))
44     return await ctx.reply(embed=e)
```

 **Nanashi.** 今日 06:58  
b help help


 Nanashi. b help help  
 **test bot lol** ボット 今日 06:58



#### Help of help

```
help O:Command Name--
```

Gets help of the command.

Command Name: Command name to get help, return all command name if None.

 **Nanashi.** 今日 06:58  
b help foo


 Nanashi. b help foo  
 **test bot lol** ボット 今日 06:58



#### Help of foo

```
foo R:Arg
```

Says bar.

Arg: Test argument

 **Nanashi.** 今日 06:58  
b help echo


 Nanashi. b help echo  
 **test bot lol** ボット 今日 06:58



#### Help of echo

```
echo R:Text--
```

Says text.

Text: text to say.

 **Nanashi.** 今日 06:58  
b help neko

 Nanashi. b help neko  
 **test bot lol** ボット 今日 06:58

#### Help of neko

```
neko O:Times
```

I am neko.

Times: Times to say, default by 1.



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