

## Api Documentation

This is an API written in Python Flask with SQLAlchemy Database under the strong bridge of Design Patterns

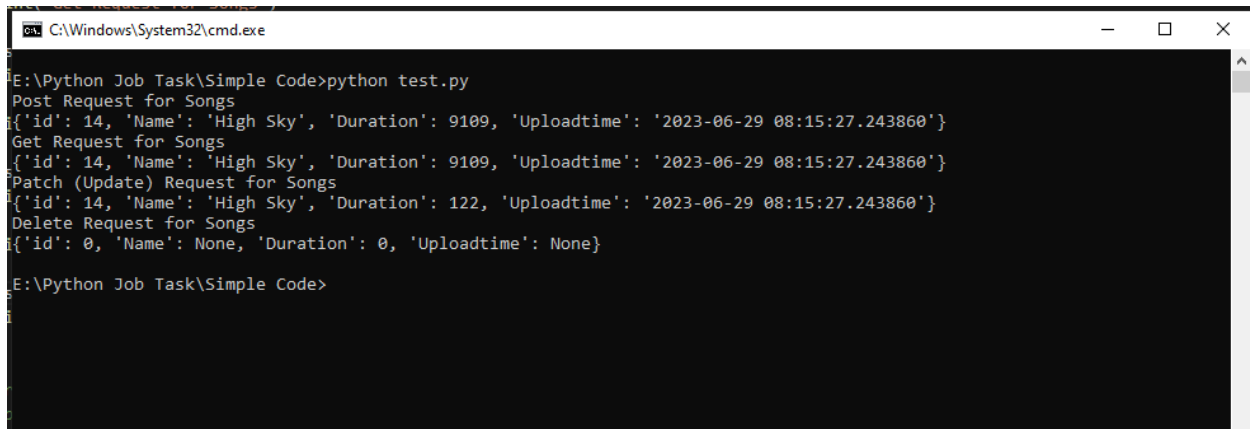
### Following Design Patterns use in this project

- Singleton
  - This is used to create a single instance of database, Flask App and Api
- Factory Pattern
  - Index is a factory class in this project. Factory Class is suppose to call the respective classes (Songs , Podcast , Audiobook) when API is called.
  - I have Created 1 interface Abstract Class and Inherit Songs , Podcast and Audiobook Class.

### Coding Files System

- There are total of 3 .py files are used in order to reduce the complexity of switching and increase the understanding of how things are working.
- Index.py contains the Factory and DB Module
- Function.py contains the functions used on this project
- Test.py created to run the endpoints of Apis (Use For testing Purpose)

### ScreenShots of Output from Api.



```
C:\Windows\System32\cmd.exe
E:\Python Job Task\Simple Code>python test.py
Post Request for Songs
{'id': 14, 'Name': 'High Sky', 'Duration': 9109, 'Uploadtime': '2023-06-29 08:15:27.243860'}
Get Request for Songs
{'id': 14, 'Name': 'High Sky', 'Duration': 9109, 'Uploadtime': '2023-06-29 08:15:27.243860'}
Patch (Update) Request for Songs
{'id': 14, 'Name': 'High Sky', 'Duration': 122, 'Uploadtime': '2023-06-29 08:15:27.243860'}
Delete Request for Songs
{'id': 0, 'Name': None, 'Duration': 0, 'Uploadtime': None}
E:\Python Job Task\Simple Code>
```

### Important Things to Note

- Uploading time is in UTC, Example: 2023-06-29 08:15:27.243860
- Participants contains the Python List, Example List = ['Module1' , 'Module2'..]

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## **Example of Requests**

### **Samples of Post Request**

BASE = 'http://127.0.0.1:5000/'

```
requests.post(BASE + 'Song/14' , {'Name':'High Sky' , 'Duration':9109 , 'Uploadtime':x})
```

```
requests.post(BASE + 'Podcast/1' , {'Name':'podcast_name11' , 'Duration':912 , 'Uploadtime':x ,  
'Host':'Podcast_host_11' , 'Participant': ['song1' , 'song2' , 'song3' , 'song4' , 'song' , 'song6' , 'song7' ,  
'song8' , 'song9' , 'spng10' ] })
```

```
requests.post(BASE + 'Audiobook/1' , {'Name':'Audiobook2'  
, 'Title':'Audiobook_title2', 'Author':'Audiobook_author2', 'Narrator':'Audiobook_narr2', 'Duration':9109 ,  
'Uploadtime':x})
```

### **Samples of Get Request**

```
response = requests.get(BASE + 'Song/14')
```

```
response = requests.get(BASE + 'Podcast/1')
```

```
response = requests.get(BASE + 'Audiobook/1')
```

### **Sample Patch (Update) Request**

```
requests.patch(BASE + 'Podcast/1' , {'Participant':[ 'song3' , 'song4'] })
```

### **Sample Delete Request**

```
requests.delete(BASE + 'Audiobook/3')
```