This project includes two parts:

1. **berlin-event:** Updating event information from three websites: [Deutsche Oper Berlin](), [GORKI]() and [Berghain Berlin](). This part is programmed with python and docker.
2. **myapp:** Web application built on Ruby on Rails for visitors to filter events based on three criteria: web source, date and event title.

Following are the process of deployment:

1. Change the directory to **myapp**, run `rails db:migrate`, this will initialize the database, create a new schema called **myapp_development** in the localhost server and a table called **events**.

2. Run the following SQL Script to make sure the default behavior of the column **created_at** and **updated_at** remain the same in the update process.

   ```
   ALTER TABLE `myapp_development`.`events`
   CHANGE COLUMN `created_at` `created_at` DATETIME NOT NULL DEFAULT
   CURRENT_TIMESTAMP ,
   CHANGE COLUMN `updated_at` `updated_at` DATETIME NOT NULL DEFAULT
   CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP ;
   ```

3. Since the first part of this project is dockerized, [Docker]() needs to be installed to run this project.

4. Change the directory to **berlin-event**, run `make exec`. After it enters the bash terminal of this docker container, run `python main.py`. This will update event information from three websites sequentially.

   This implementation uses some useful libraries:
   - [Beautiful Soup]() and [Selenium]() are used for scraping and parsing the html information from different websites.
   - [PyMySQL]() and [SQLAlchemy]() are used for communicating with database, adding and updating event information.

5. Last but not least, change the directory to **myapp** again, run `rails server`. Navigate the browser to [http://localhost:3000/](), you will see message like this

   Hello, Berliners!
   Here are some [Berlin events]() you might be interested!

   Click on [Berlin events]() and start to search the events.

Here are some examples of the application

Default event page shows all the events

Search events

Web source [   ]
// please input the corresponding number
1: Deutsche Oper Berlin
2: GORKI
3: Berghain Berlin

Date
[mm/dd/yyyy]

Partial or complete text from event title
[   ]

[Search]

Web source	Date	Title	
Berghain Berlin	2018-10-01 00:00:00 UTC	TIMO LASSY & TEPPO MÄKYNEN	Show
Berghain Berlin	2018-10-02 00:00:00 UTC	BERLIN SYNDROME | WE HAVE TO LEAVE	Show
Berghain Berlin	2018-10-02 00:00:00 UTC	REVOLTING	Show
Berghain Berlin	2018-10-04 00:00:00 UTC	KOMETENMELODIEN: NEGATIVE GEMINI | JINKA | R&D	Show
Berghain Berlin	2018-10-04 00:00:00 UTC	OASE	Show
Berghain Berlin	2018-10-05 00:00:00 UTC	FINEST WHITIES	Show
Berghain Berlin	2018-10-06 00:00:00 UTC	ABOUT FACE: 17,000 ROSES	Show

Click Show to see details

Web source: Berghain Berlin
Item ID: 2579
Date: 2018-10-01 00:00:00 UTC
Title: TIMO LASSY & TEPPO MÄKYNEN
Back to events

Filter events on both web source and date

Search events

Web source [2]
// please input the corresponding number
1: Deutsche Oper Berlin
2: GORKI
3: Berghain Berlin

Date
[11/11/2018]

Partial or complete text from event title
[   ]

[Search]

Web source	Date	Title	
GORKI	2018-11-11 18:00:00 UTC	GET DEUTSCH OR DIE TRYIN'	Show
GORKI	2018-11-11 19:00:00 UTC	You are not the hero of this story	Show

Partial text search on title

Search events

Web source [   ]
// please input the corresponding number
1: Deutsche Oper Berlin
2: GORKI
3: Berghain Berlin

Date
[mm/dd/yyyy]

Partial or complete text from event title
[of]

[Search]

Web source	Date	Title	
Berghain Berlin	2018-10-19 00:00:00 UTC	BROKOF	Show
Deutsche Oper Berlin	2018-11-03 00:00:00 UTC	25. Grand Opera Gala in aid of the Deutsche AIDS-Stiftung	Show
GORKI	2018-11-03 19:00:00 UTC	Glaube Liebe Hoffnung	Show
GORKI	2018-11-04 19:00:00 UTC	You are not the hero of this story	Show
GORKI	2018-11-11 19:00:00 UTC	You are not the hero of this story	Show
Deutsche Oper Berlin	2018-11-17 00:00:00 UTC	Final Concert of the National Song Contest	Show
Deutsche Oper Berlin	2018-11-19 00:00:00 UTC	Opera Lecture: Les Contes d'Hoffmann	Show
Deutsche Oper Berlin	2018-11-24 00:00:00 UTC	Songs between the Euphrates and the Elbe - The World of Yesterday	Show
Berghain Berlin	2018-11-29 00:00:00 UTC	JOAN OF ARC	Show
GORKI	2018-11-29 20:00:00 UTC	The Making-of	Show
GORKI	2018-11-30 20:00:00 UTC	The Making-of	Show

Search event on all the criteria

Search events

Web source [1]
// please input the corresponding number
1: Deutsche Oper Berlin
2: GORKI
3: Berghain Berlin

Date
[11/17/2018]

Partial or complete text from event title
[of]

[Search]

Web source	Date	Title	
Deutsche Oper Berlin	2018-11-17 00:00:00 UTC	Final Concert of the National Song Contest	Show