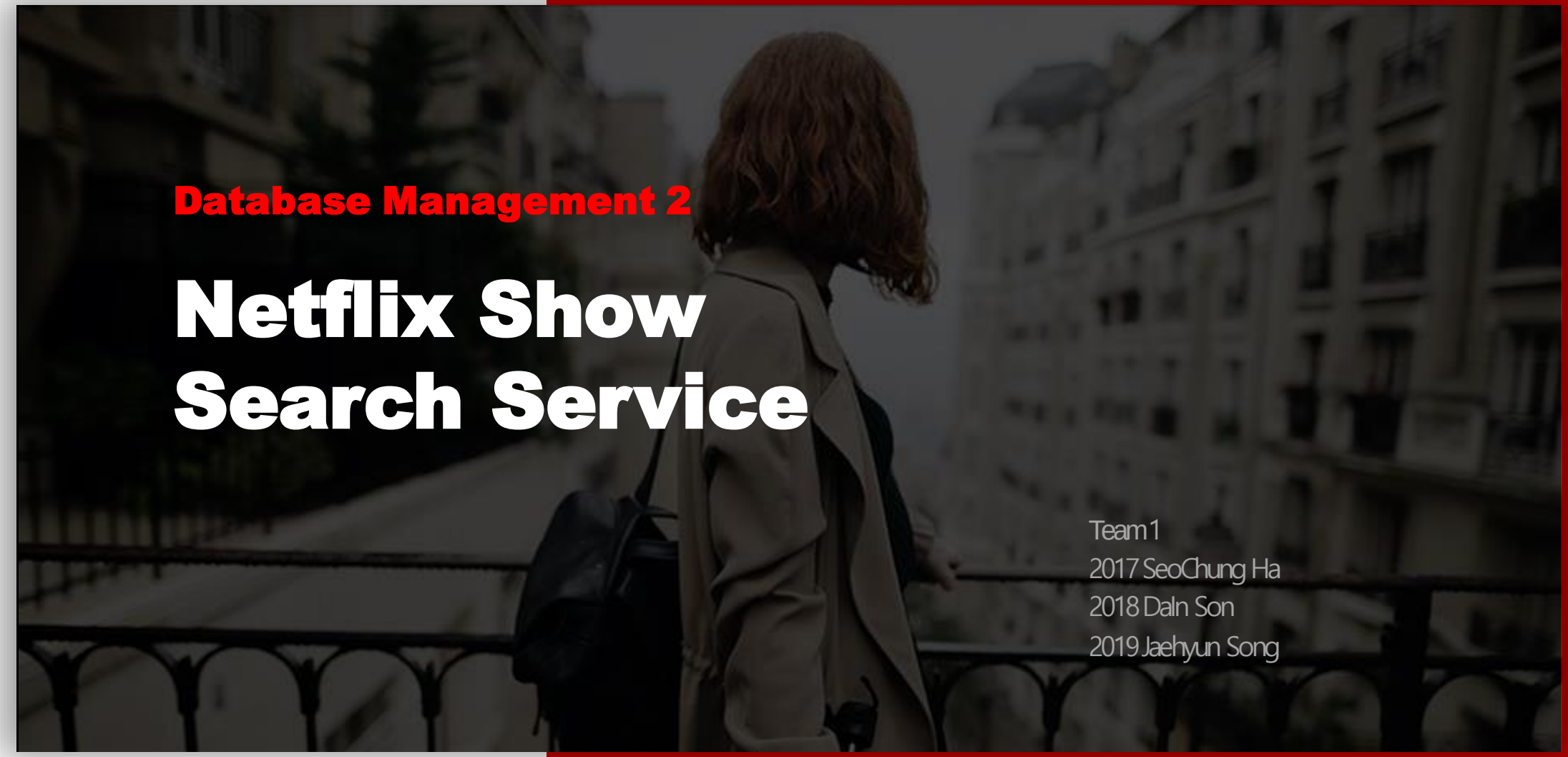


Database Management 2

Netflix Show Search Service

Team 1
2017 SeoChung Ha
2018 Daln Son
2019 Jaehyun Song

NETFLIX

Outline

About Service

DB structure

Main points

Lesson Learned

START

About service

: Netflix Show Search Service

Python pandas for preprocess
MySQL for DB
Tkinter for GUI

Users

Who we designed it for

1. If you often use Netflix to watch movies
2. If you often do not know what would be interesting to whatching
3. If you are looking for a movie but you remember its director / genre / part of the name

Original CSV

Size of 12 x 8979

Show_id is StringType, changed to IntegerType

```
df['show_id'] = df['show_id'].apply(lambda x: int(x[1:]))
df
```

	show_id	type	title	director	cast	country	date_added	re
0	1	Movie	Dick Johnson Is Dead	Kirsten Johnson	NaN	United States	September 25, 2021	
1	2	TV Show	Blood & Water	NaN	Ama Qamata, Khosi Ngema, Gail Mabalane, Thaban...	South Africa	September 24, 2021	
2	3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Tracy Gotoas, Samuel Jouy, Nabi...	NaN	September 24, 2021	
3	4	TV Show	Jailbirds New Orleans	NaN	NaN	NaN	September 24, 2021	
4	5	TV Show	Kota Factory	NaN	Mayur More, Jitendra Kumar, Ranjan Raj, Alam K...	India	September 24, 2021	
...	...	...	...	...	...	...	...	

show_id	ype	title		duratio	listed_in	description
s1	Movie	Dick Joh		90 min	Documentaries	As her father nears the e
s2	TV Show	Blood &		2 Seasons	International TV Shows, T	After crossing paths at a
s3	TV Show	Ganglanc		1 Season	Crime TV Shows, Internati	To protect his family fro
s4	TV Show	Jailbirds		1 Season	Docuseries, Reality TV	Feuds, flirtations and toi
s5	TV Show	Kota Fac		2 Seasons	International TV Shows, R	In a city of coaching cen
s6	TV Show	Midnight		1 Season	TV Dramas, TV Horror, TV	The arrival of a charisma
s7	Movie	My Little		91 min	Children & Family Movies	Equestria's divided. But a
s8	Movie	Sankofa		125 min	Dramas, Independent Mov	On a photo shoot in Gha
s9	TV Show	The Grea		9 Seasons	British TV Shows, Reality	A talented batch of ama
s10				104 min	Comedies, Dramas	A woman adjusting to li
s11	TV Show	Vendetta		1 Season	Crime TV Shows, Docuser	Sicily boasts a bold "Ant
s12	TV Show	Bangkok		1 Season	Crime TV Shows, Internati	Struggling to earn a livir
s13	Movie	Je Suis K		127 min	Dramas, International Mo	After most of her family

Original CSV

Many values in director, cast, country, listed_in

show_id	type	title	director	cast	country	date_added	release_year	rating	duratio	listed_in	description
s1	Movie	Dick Johnson Is Dead	Kirsten Johnson		United States	25-Sep-21	2020	PG-13	90 min	Documentaries	As her father nears the e
s2	TV Show	Blood & Water		Ama Qamata, Khos	South Africa	24-Sep-21	2021	TV-MA	2 Seasons	International TV Shows, T	After crossing paths at a
s3	TV Show	Ganglands	Julien Leclercq	Sami Bouajila, Trac	Gotoas, Samuel Jouy,	24-Sep-21	2021	TV-MA	1 Season	Crime TV Shows, Internati	To protect his family fro
s4	TV Show	Jailbirds New Orleans				24-Sep-21	2021	TV-MA	1 Season	Docuseries, Reality TV	Feuds, flirtations and toi
s5	TV Show	Kota Factory		Mayur More, Jitend	India	24-Sep-21	2021	TV-MA	2 Seasons	International TV Shows, R	In a city of coaching cen
s6	TV Show	Midnight Mass	Mike Flanagan	Kate Siegel, Zach G	lford, Hamish Linklate	24-Sep-21	2021	TV-MA	1 Season	TV Dramas, TV Horror, TV	The arrival of a charisma
s7	Movie	My Little Pony: A Ne	Robert Cullen, Jos찹	Vanessa Hudgens,	imiko Glenn, James M	24-Sep-21	2021	PG	91 min	Children & Family Movies	Equestria's divided. But a
s8	Movie	Sankofa	Haile Gerima	Kofi Ghanaba, Oyat	United States, Ghana,	24-Sep-21	1993	TV-MA	125 min	Dramas, Independent Mov	On a photo shoot in Gha
s9	TV Show	The Great British Bak	Andy Devonshire	Mel Giedroyc, Sue	United Kingdom	24-Sep-21	2021	TV-14	9 Seasons	British TV Shows, Reality T	A talented batch of ama
s10	Movie	The Starling	Theodore Melfi	Melissa McCarthy,	United States	24-Sep-21	2021	PG-13	104 min	Comedies, Dramas	A woman adjusting to li
s11	TV Show	Vendetta: Truth, Lies	and The Mafia			24-Sep-21	2021	TV-MA	1 Season	Crime TV Shows, Docuser	Sicily boasts a bold "Ant
s12	TV Show	Bangkok Breaking	Kongkiat Komesiri	Sukollawat Kanarot	Sushar Manaying, Pav	23-Sep-21	2021	TV-MA	1 Season	Crime TV Shows, Internati	Struggling to earn a livir
s13	Movie	Je Suis Karl	Christian Schwocho	Luna Wedler, Janni	Germany, Czech Repu	23-Sep-21	2021	TV-MA	127 min	Dramas, International Mo	After most of her family

Preprocess

Separated director, cast, country, listed_in

show_id	type	title	director	cast	listed_in	description
s1	Movie	Dick Johnson Is Dead	Kirsten Johnson		Documentaries	As her father nears the e
s2	TV Show	Blood & Water		Ama Qa	International TV Shows,	After crossing paths at a
s3	TV Show	Ganglands	Julien Leclercq	Sami Bou	Crime TV Shows, Interna	To protect his family fro
s4	TV Show	Jailbirds New Orleans			Docuseries, Reality TV	Feuds, flirtations and toi
s5	TV Show	Kota Factory		Mayur M	International TV Shows,	In a city of coaching cen
s6	TV Show	Midnight Mass	Mike Flanagan	Kate Sieg	TV Dramas, TV Horror, T	The arrival of a charisma
s7	Movie	My Little Pony: A Nev	Robert Cullen, Jos	Vanessa	Children & Family Movie	Equestria's divided. But a
s8	Movie	Sankofa	Haile Gerima	Kofi Gha	Dramas, Independent Mo	On a photo shoot in Gha
s9	TV Show	The Great British Baki	Andy Devonshire	Mel Gieo	British TV Shows, Reality	A talented batch of ama
s10	Movie	The Starling	Theodore Melfi	Melissa M	Comedies, Dramas	A woman adjusting to li
s11	TV Show	Vendetta: Truth, Lies and The Mafia			Crime TV Shows, Docuse	Sicily boasts a bold "Ant
s12	TV Show	Bangkok Breaking	Kongkiat Komesiri	Sukollaw	Crime TV Shows, Interna	Struggling to earn a livir
s13	Movie	Je Suis Karl	Christian Schwochov	Luna We	Dramas, International Mo	After most of her family

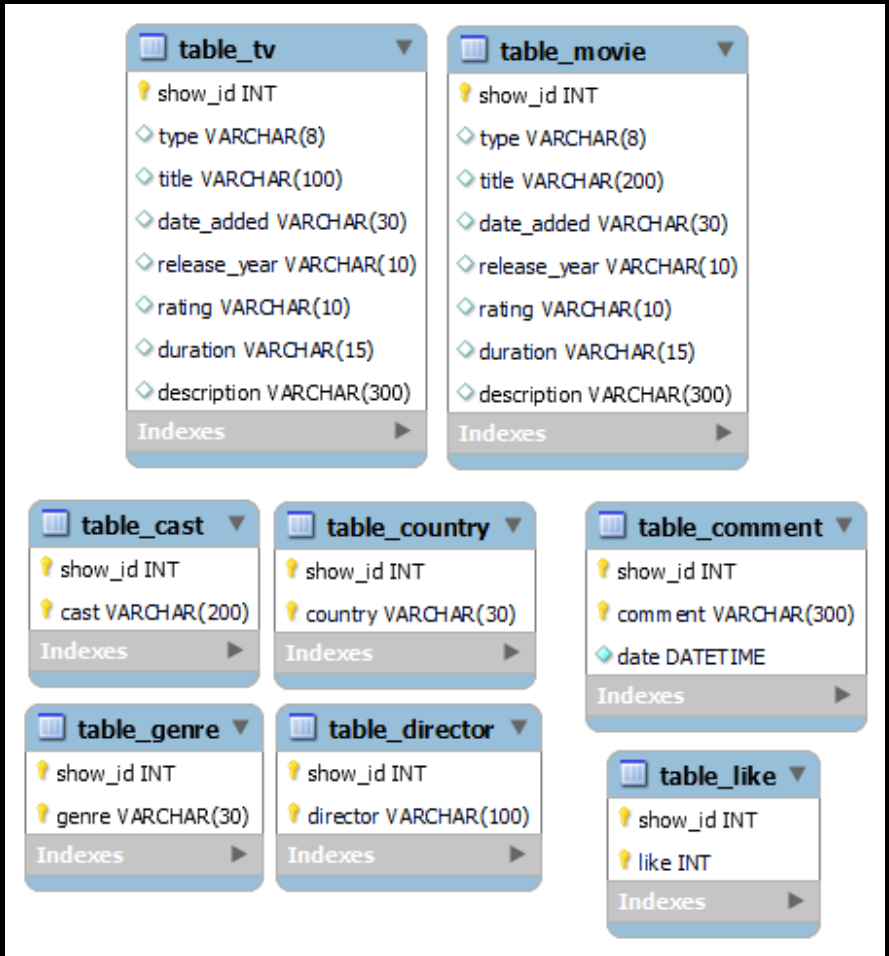
```
listt = []
df_list_m = pd.DataFrame([],columns=['show_id', 'genre'])
for i in range(len(df_list)):
    listed_in = df_list.loc[i,'listed_in']
    genres = listed_in.split(',')

    for y in genres:
        ap = {
            'show_id': df_list.loc[i,'show_id'],
            'genre': y
        }
        df_list_m = df_list_m.append(ap, ignore_index=True)
df_list_m
```

	show_id	genre
0	s1	Documentaries
1	s2	International TV Shows
2	s2	TV Dramas
3	s2	TV Mysteries
4	s3	Crime TV Shows
...	...	...
19318	s8806	Children & Family Movies
19319	s8806	Comedies
19320	s8807	Dramas
19321	s8807	International Movies
19322	s8807	Music & Musicals

DB Model

Separated director, cast, country, listed_in



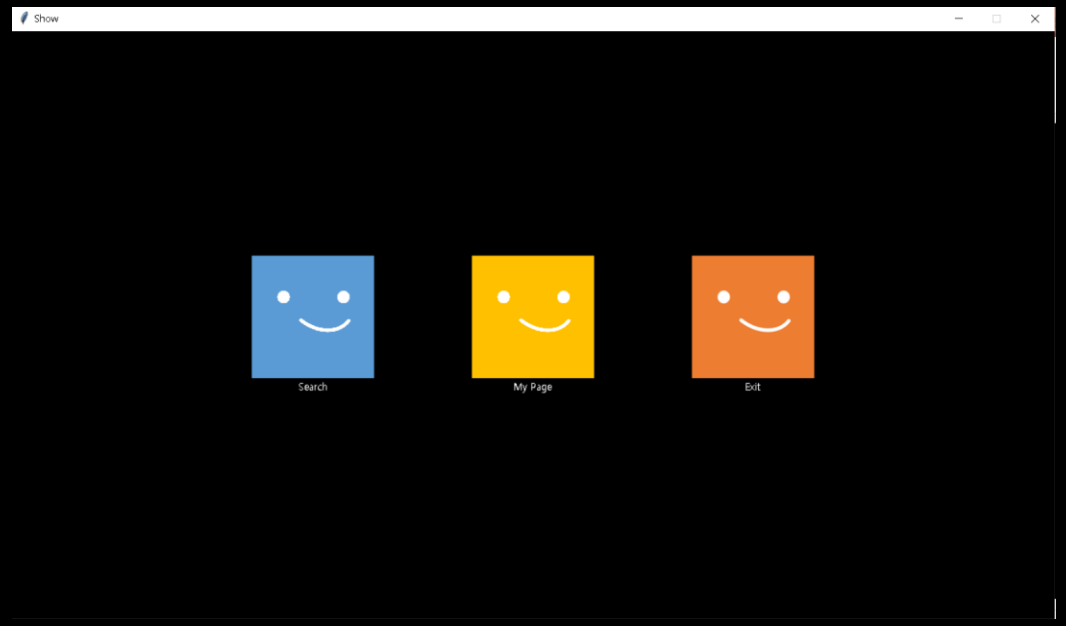

```
maketable = '''CREATE TABLE table_Movie(
show_id int not null primary key,
type varchar(8),
title varchar(200),
date_added varchar(30),
release_year varchar(10),
rating varchar(10),
duration varchar(15),
description varchar(300)
)
'''

myCursor.execute("DROP TABLE IF EXISTS table_Movie")
myCursor.execute(maketable)
mydb.commit()
```

```
df = pd.read_csv('MovieOnly.csv')
for index, row in df.iterrows():
    tu = [row.show_id, row.type, row.title, row.date_added, row.release_year, row.rating, row.duration, row.description]
    for i in tu:
        if(pd.isnull(i)):
            tu[tu.index(i)]=''

    myCursor.execute(
        """INSERT INTO table_Movie (show_id,type,title,date_added,release_year,rating,duration,description)
    VALUES (%s,%s,%s,%s,%s,%s,%s,%s)"""
    ,tu)
    mydb.commit()
```

Main Points in our UI



1. SEARCH

Find the exact movie you want by searching and filtering.

2. EDITION

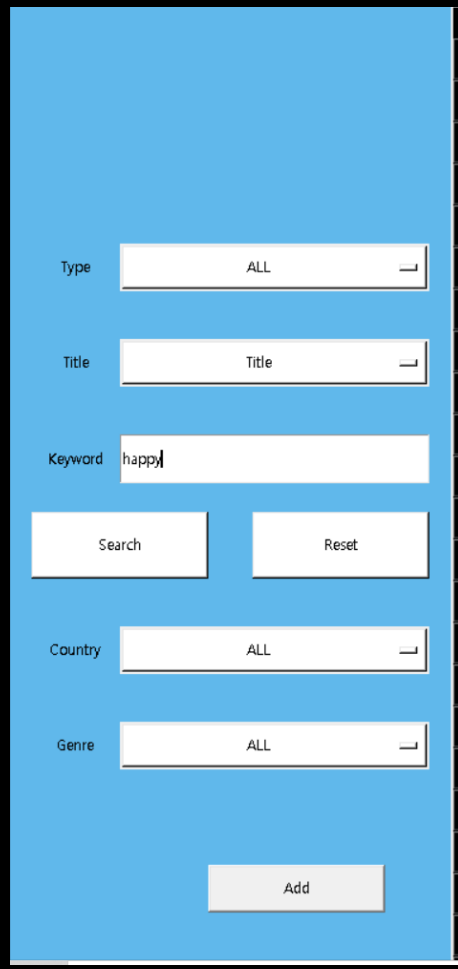
Users can change records as resources are added or subtracted

3 . MY PAGE

Build your own movie collection

1. SEARCH

STEP1
- Type the key words
- Title, Director or Cast



Title	Genre	Director	Release Year	Duration	Country
The Happytime Murders	Comedies	Brian Henson	2018	91 min	Canada
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	Canada
The Happytime Murders	Comedies	Brian Henson	2018	91 min	China
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	China
The Happytime Murders	Comedies	Brian Henson	2018	91 min	United States
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	United States
Happy Old Year	International Movies	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy Old Year	Romantic Movies	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy Old Year	Dramas	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Italy
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Italy
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Italy
Happy Go Lucky	International Movies	Amarpreet G S Chabbra	2014	129 min	India

1. SEARCH

STEP2
- Choose the country and Genre

In this situation, User wants to find movies which title has keyword ‘happy’ and Canada country and Comedies genre…

Option menu consisting of value in the prior output result table

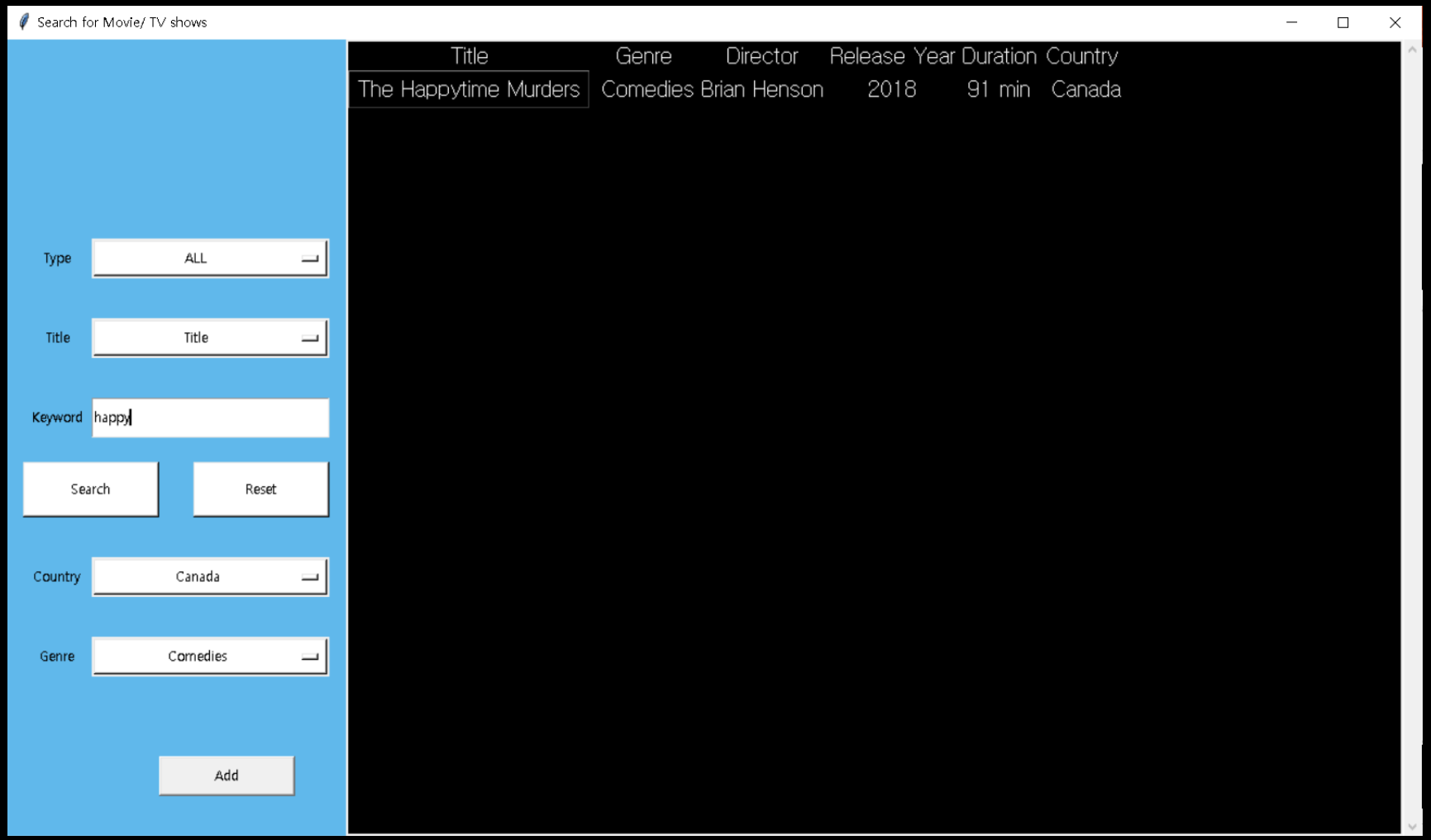
Title	Genre	Director	Release Year	Duration	Country
The Happytime Murders	Comedies	Brian Henson	2018	91 min	Canada
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	Canada
The Happytime Murders	Comedies	Brian Henson	2018	91 min	China
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	China
The Happytime Murders	Comedies	Brian Henson	2018	91 min	United States
The Happytime Murders	Action & Adventure	Brian Henson	2018	91 min	United States
Happy Old Year	International Movies	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy Old Year	Romantic Movies	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy Old Year	Dramas	Nawapol Thamrongrattanarit	2019	113 min	Thailand
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	France
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Germany
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Switzerland
Happy as Lazzaro	Independent Movies	Alice Rohrwacher	2018	127 min	Italy
Happy as Lazzaro	International Movies	Alice Rohrwacher	2018	127 min	Italy
Happy as Lazzaro	Dramas	Alice Rohrwacher	2018	127 min	Italy
Happy Go Lucky	International Movies	Amarpreet G S Chabbra	2014	129 min	India

1. SEARCH

STEP3
- Find the extract show

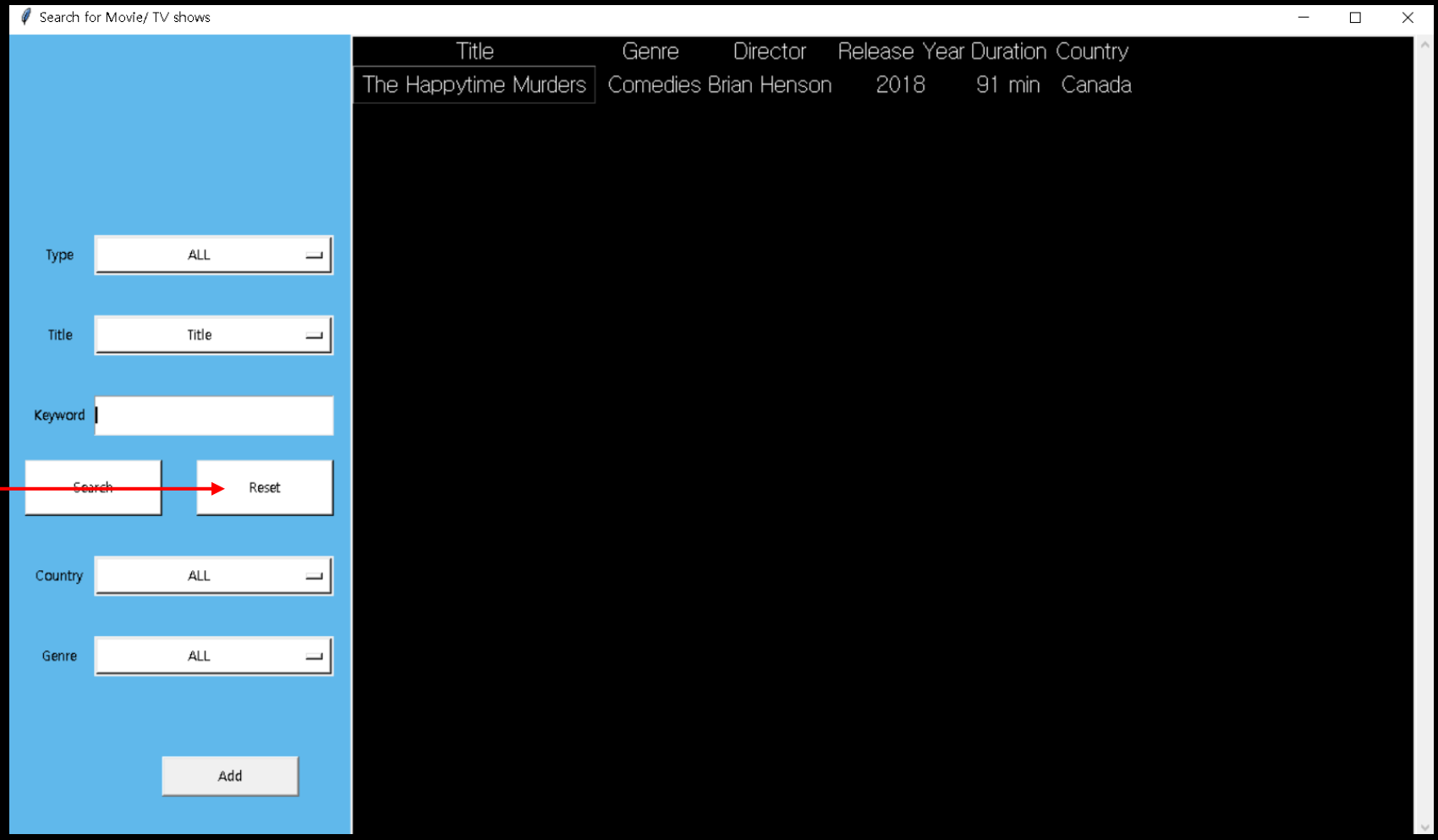
In this situation, User wants to find movies which title has keyword ‘happy’ and Canada country and Comedies genre…

Result



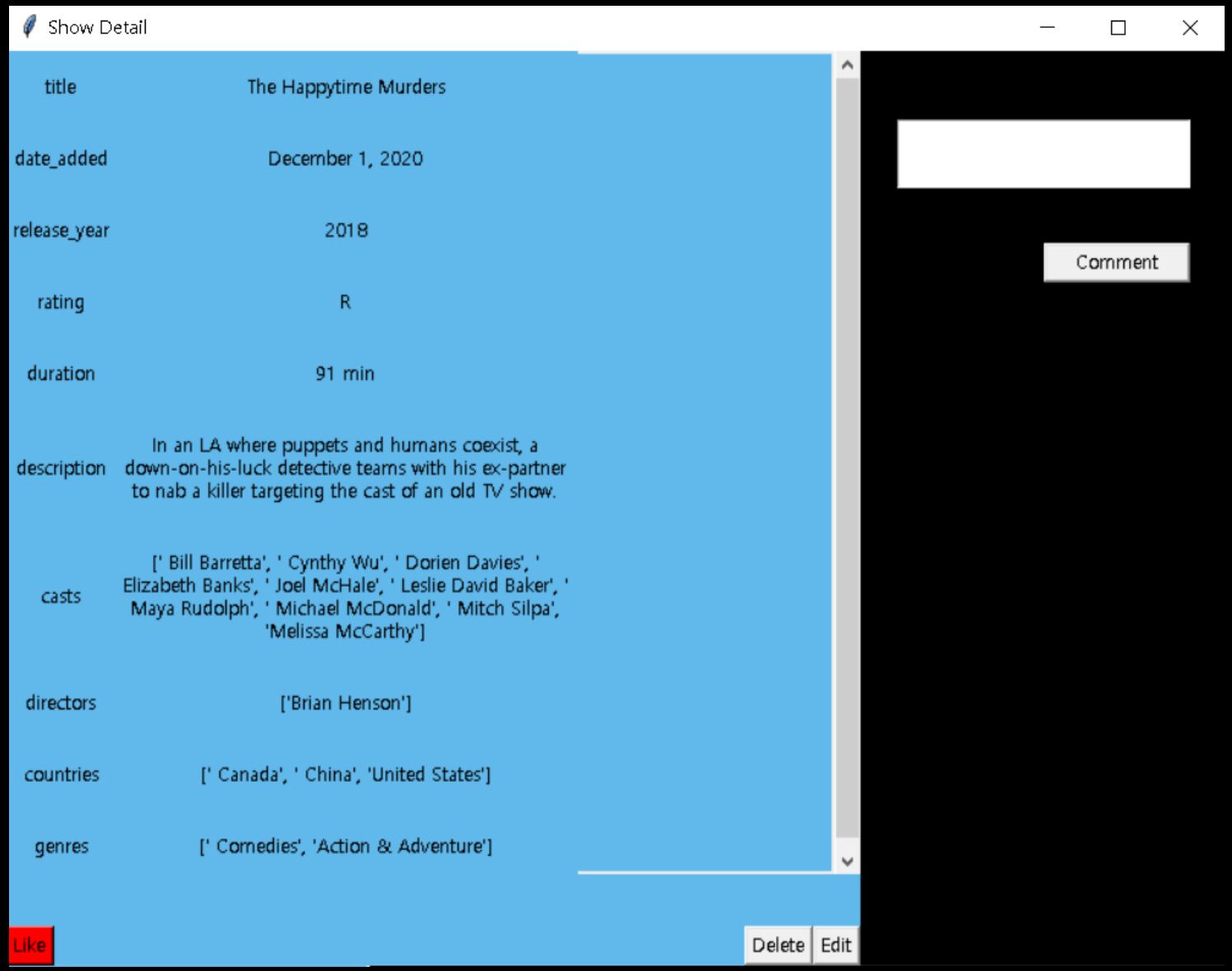
1. SEARCH

pressing the reset button makes to return all selected values back to their default values.



Specific information

When users click the title of the show in the table,
A page containing detailed information about the show appears.



2. EDITION

Users can change records as resources are added or subtracted

1 ADD

When new TV shows and movies are released, users can add program recordings

2 DELETE

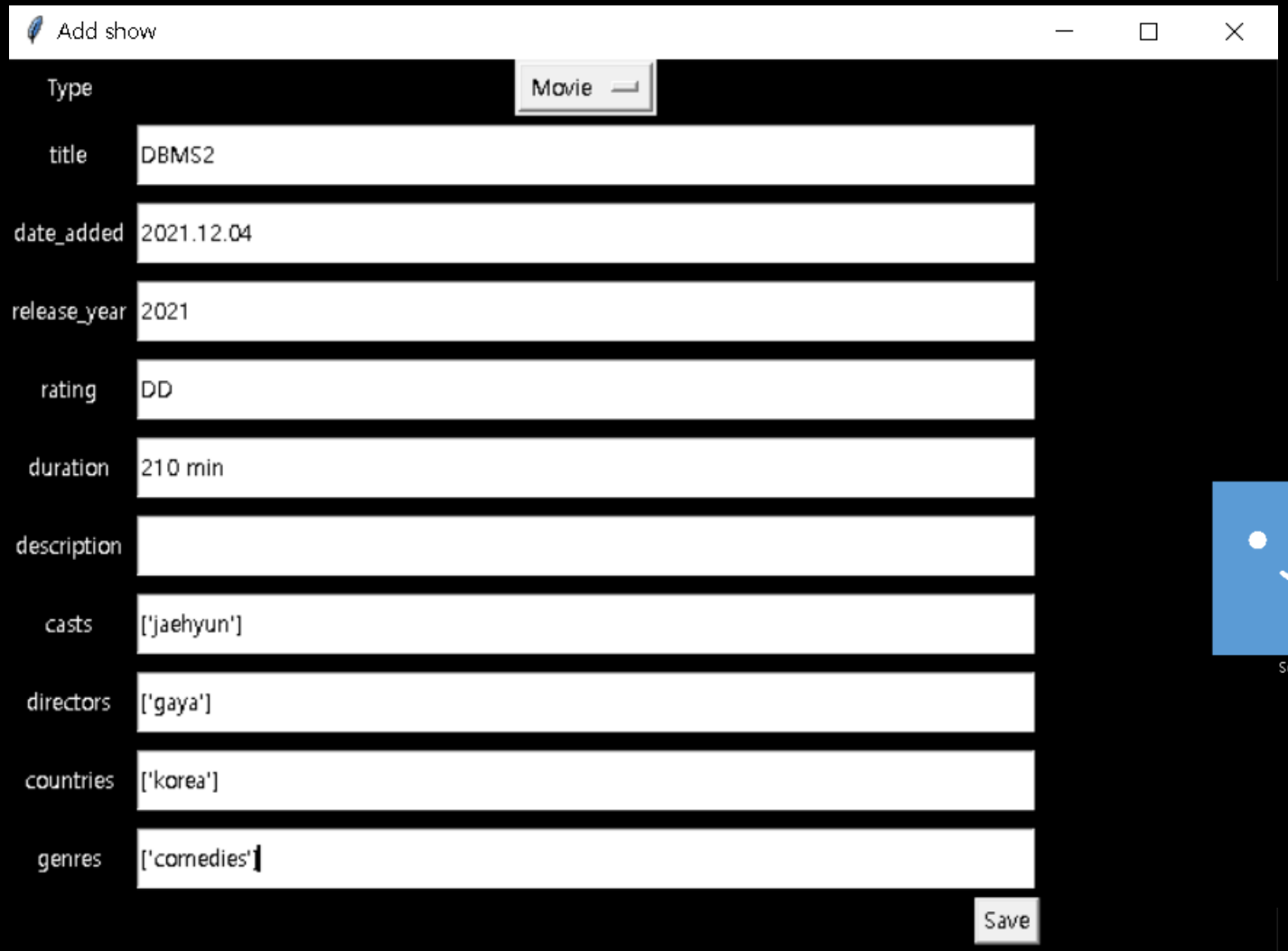
When some of the movies are not available for viewing due to copyright expiration, users can delete the records themselves

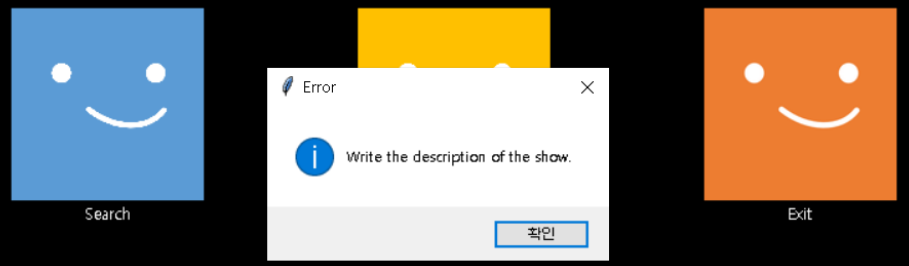
3 MODIFY

If the content of the record is incorrect, the record can be modified

1 **ADD**

When new TV shows and movies are released, users can add program recordings



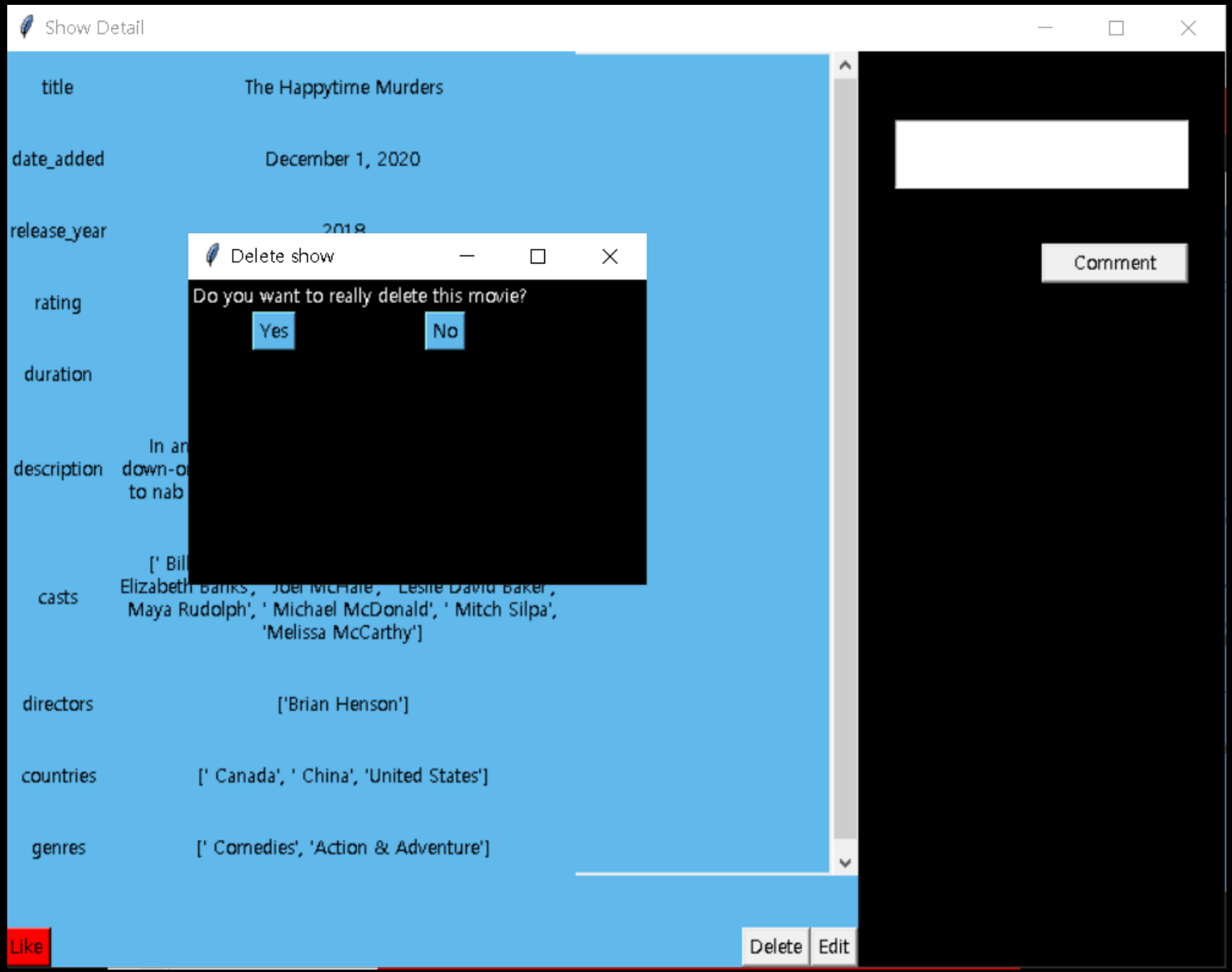


If user miss the any value (in this case, description)

It can't be stored in the database system, and error message pop up

2 DELETE

When some of the movies are not available for viewing due to copyright expiration, users can delete the records themselves

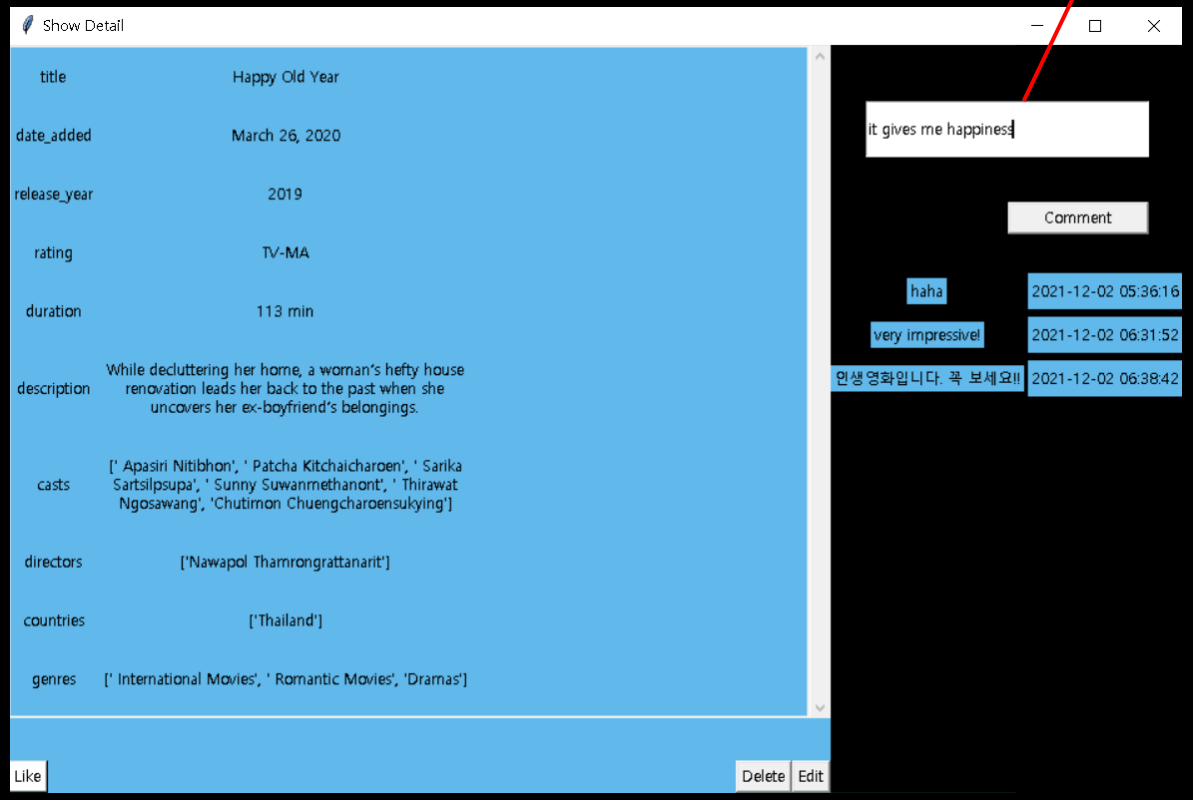


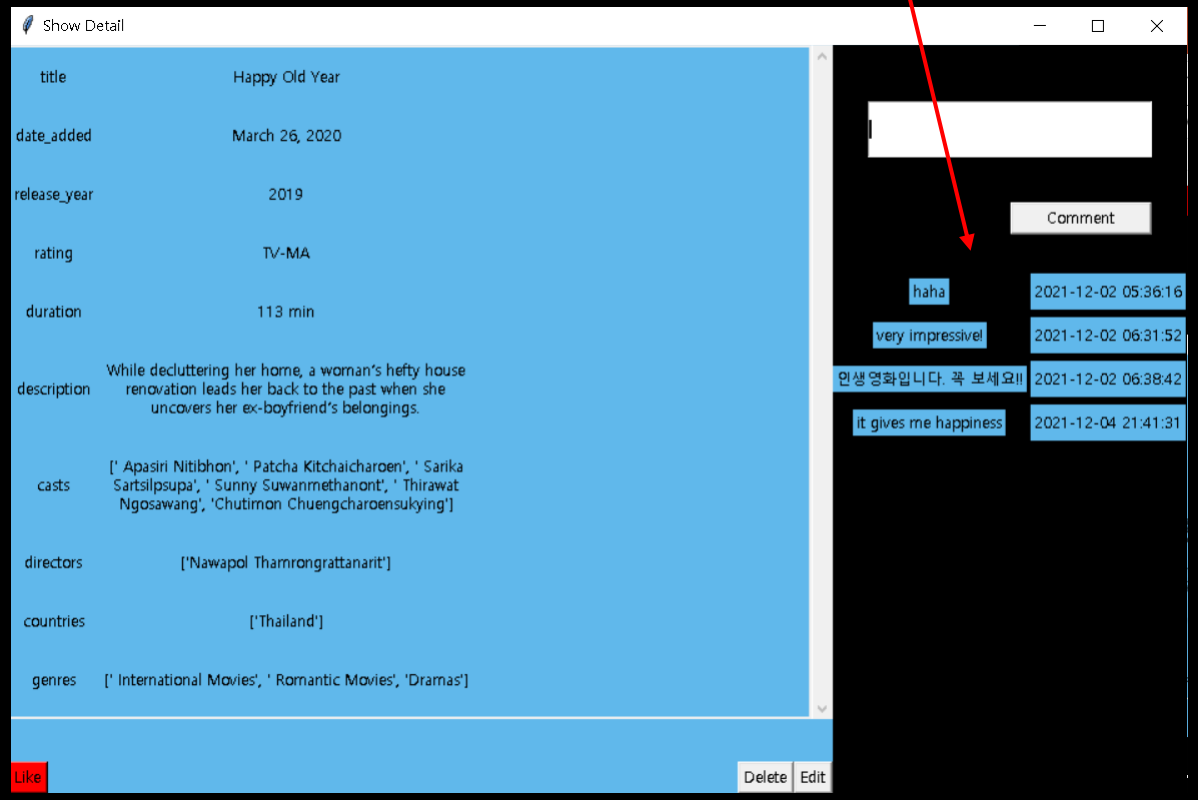
3 MODIFY

If the content of the record is incorrect, the record can be modified

3. MY PAGE

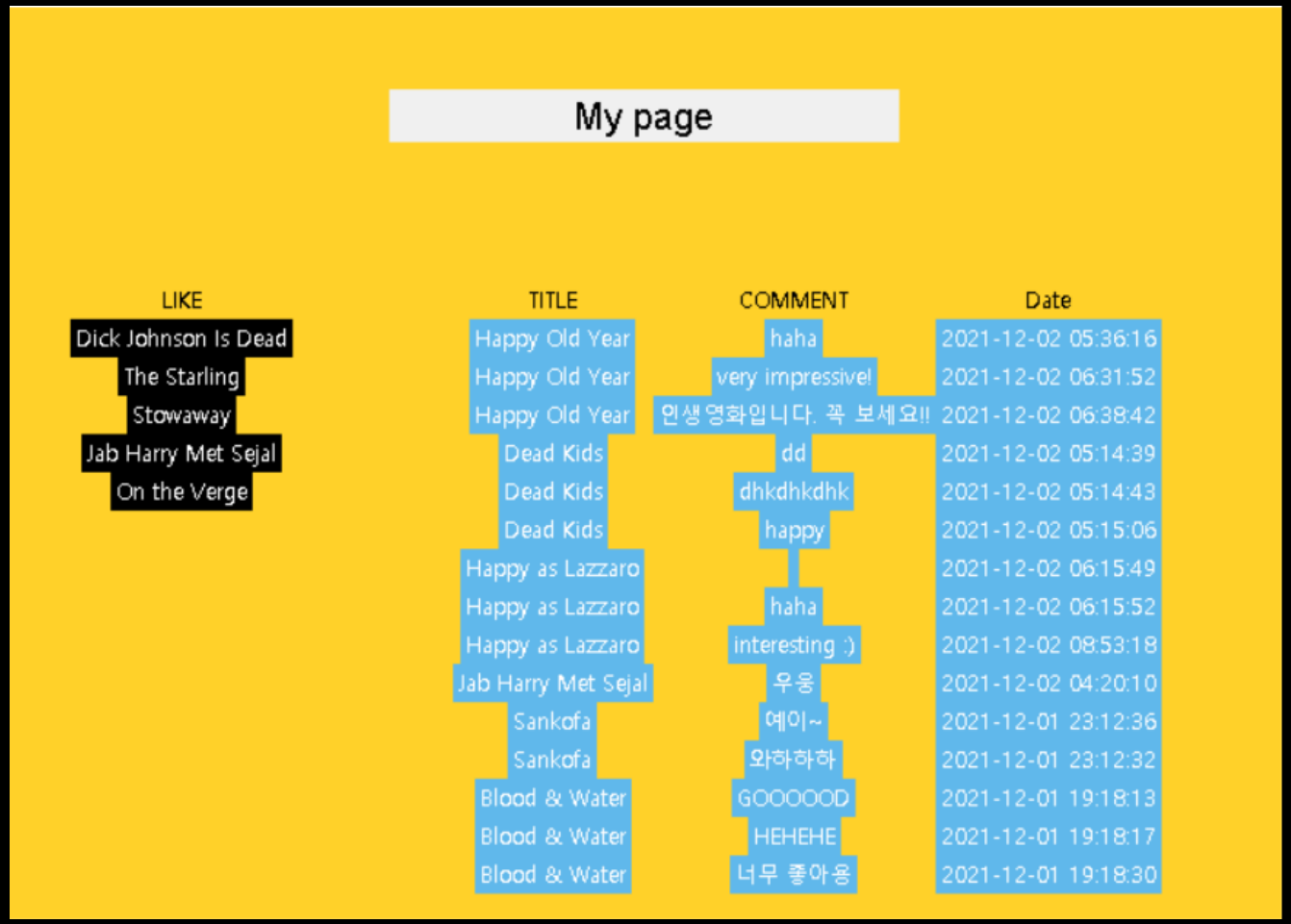
If user want to comment the show, they can write the comments and it is stored in the database





If user likes the show or want to save to see later, user could press the 'like button' and it is stored in the database.
If user press the button last time, it would be maintained.

3. MY PAGE Build your own movie collection



User can see the data of likes that user has pressed and comments that user has left before at a glance

What do we learned from this project :

It's a long way from learning a skill to applying it better.

Da In

Develop more features of the program

One of the first challenges we encountered was how to use the limited data to provide more services to our customers. With different query methods, data can be used in different combinations to solve various problems. In order to design a logical and reasonable way to query data, we tried to look at data from multiple perspectives. For example, the viewer perspective for finding movie information, the developer perspective for studying the characteristics of Netflix content.

Jaehyun

Generate more interest of people

The second problem we encountered was how we could make our customers happy with the results of their queries. This involves the amount of information that needs to be presented in each layer of the query, and the need to make the customer confirm that the result is what they specified as much as possible within the amount of information that is as concise as possible, and to be able to explain the target content clearly at the same time, which is something worth thinking about

Seo Chung

Explore more possibilities of data

Exploring more possibilities in limited data is the third challenge we encountered. By designing different types of data query patterns, providing users with the possibility of secondary data development through different combinations of data, and finally being able to find more value from the data, is also one of the things we have repeatedly thought about.

Thank you for listening