St. Xavier's School, Nevta

Informatics Practices

'Melody Hub'

2023-24

Made By:

Board Roll No:

ACKNOWLEDGEMENT

In the accomplishment of this project successfully, many people have best owned upon me their blessings and the heart pledged support, this time I am utilizing to thank all the people who have been concerned with this project.

Primarily I would thank God for being able to complete this project with success. Then I would like to thank my Principal ***Rev. Fr. Sangeeth Raj S.J.*** and Academic Coordinator ***Mr. Abin Varghese***.

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Last but not the least I would like to thank my classmates who have helped me a lot.

RUDRAKSH TANK

(Class: XII - A)

St. Xavier's School, Nevta

LABORATORY CERTIFICATE

This is to certify that **RUDRAKSH TANK** of Class **XII - A** has successfully completed his/her project work on " **ANALYSIS ON SPOTIFY** " in *Informatics Practices (Code 065)* and hereby submitting his/her report as an evidence of the project work for the session 2023 - 2024.

Fr. Sangeeth Raj S.J.   **Pankaj Chadha**

Principal   **PGT IP**
St. Xavier's School, Nevta   **St. Xavier's School, Nevta**

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PROJECT DESCRIPTION

INTRODUCTION:

This software, Melody Hub, on the topic 'Analysis of Spotify' aims to conduct an in-depth analysis of the Spotify app, one of the world's leading music streaming platforms and to uncover trends and patterns in music consumption. The software seeks to give insight into user preferences, popular music choices, well-known podcasts and the impact of this on the music industry.

The changing music of a decade or timeline can indicate a lot about the cultural and societal aspects of that period. Whether it be important insight into values and aspirations of the people, or a vision of youth culture, or seeing the mirror of important historical events through melodies, or understanding generation shifts and the changing form of nostalgia, or perceiving the legacy of artists and changing musical creativity, trends in music are an important aspect in the analysis of the above.

The choice of analyzing trends in music is a testament to the power of music as a cultural and societal force. Trends in music reflect the changing tastes and preferences of people as time progresses. On a global scale, this leads to the emergence of distinct musical eras, characterized by different artists and dominant music genres, effectively chronicling the mainstream music of each period.

Objective:

The software contains both an admin and a user interface with a variety of functions available to both. Through the software, the owner/manager will be able to:
1) Add, update, view, search, sort records and perform a lot of other useful operations.
2) Perform changes on the database of artists, users and trends observed in various Page 2 of 8 countries.
3) Add or remove artists, users, records of countries, songs and podcasts
4) Visualize data in the form of graphs to analyze data and get better insight.

The user shall be able to perform the following functions: View, search, sort records and perform a lot of other useful operations. Visualize data in the form of graphs to analyze data and gain better insight.

Reason:

The reasons for us choosing this topic are:

1. Trends in music reflect the changing choices of people with changing times. This, on a global level, leads to the creation of new musical eras with different artists, different music genres on top, helping to understand all that consisted the mainstream music of the timeline.
2. Not only does it help companies to suggest content that is loved by the user, but it also helps record labels and software developers take informed decisions and navigate the changing landscape of the music industry.
3. Can provide insights into the age, location, cultural background based on the music genres or languages preferred by them.
4. Is a strong indicator of prevalent youth culture and the present face cultural and societal landscapes

Conclusion:

Melody Hub is more than just a tool for dissecting musical data; it's a window into the ever-evolving world of music, culture, and society. With its ability to extract valuable insights, it empowers the music industry to adapt, create, and innovate, ensuring that the art of music remains a vibrant, dynamic, and enduring force in our lives.

DATA SOURCE

(a) Structure of CSV Files:

1) Country

Country_Name,Continent,No_Of_Users,Popular_Genre,AvgUserTime

2) Users

User_ID,User_Name,User_Email,Password,Registration_Date,Gender,Subscription, User_Review,User_Rating

3) Songs

Song_ID,Track_Name,Artist(s)_Name,Released_Year,In_Spotify_Playlists, Views

4) Playlists

Playlist_ID,Playlist_Name,Playlist_Creator,Song_ID's,No_Of_Views,Playlist_Duration 5) Podcast

Podcast_Name,Playlist_Creator,Podcast_Genre,Language,No_Of_Episodes,Podcast_Rati ng

6) Artists

Artist_ID,Artist_Name,Artist_Nationality,Artist_Ranking,Followers,Monthly_Listeners

(b) Data Sources

1. kaggle.com

A. https://www.kaggle.com/datasets/maharshipandya/-spotify-tracks-dataset
B. https://www.kaggle.com/datasets/meeraajayakumar/spotify-user-behavior-dataset
C. https://www.kaggle.com/datasets/nelgiriyewithana/top-spotify-songs-2023

2. mockaroo.com

CSV FILES

1. User

User ID	User Name	User Email	Password	Registration	Gender	Subscription	User review	Rating
U01	Moly Neaux	smolyneaux0@gmail.com	****	9/24/2023	Male	Premium	Great music service, audio is h	5
U02	Adil Ferran	aferran1@yahoo.com	****	06-10-2023	Male	Free	Please ignore previous negati	5
U03	Khenkins Thomas	khenkens2@gmail.com	****	1/15/2023	Female	Free	This pop-up"Get the best Spot	4
U04	Michal Goldstein	mgoldstein@yahoo.com	****	2/14/2023	Female	Free	Really buggy and terrible to us	1
U05	Bob Demann	bdemann4@gmail.com	****	08-11-2023	Female	Free	Dear Spotify why do I get song	1
U06	Thomas Histon	histonth@gmail.com	****	12/20/2021	Male	Free	Nice but lags in between	3
U07	Thomas Shelby	tshelbyworth6@gmail.com	****	1/14/2023	Male	Free	I love the selection and the ly	5
U08	Carol Willows	cwillows7@gmail.com	****	06-09-2023	Female	Premium	Still extremely slow when cha	3
U09	Sarah Jhon	sjhon@gmail.com	****	9/18/2023	Female	Free	It's a great app and the best m	5
U10	Daniel Bourget	dbourget@yahoo.com	****	12/20/2022	Male	Premium	I'm deleleting this app becaus	1
U11	Dolly Grey	gmccloughlina@gmail.com	****	01-08-2023	Female	Free	Love Spotify, and usually this	2
U12	Henna Gols	hgolsworthyb@gmail.com	****	2/14/2023	Male	Free	Can't play Spotify when on Wi	1
U13	Ada Campbell	acampbell@yahoo.com	****	07-02-2023	Female	Premium	I had amazon premium music	1
U14	Garry Oak	oak@gmail.com	****	12-07-2022	Male	Free	Worst app always says I'm offl	1
U15	Doss Matkovice	dmatkovice@gmail.com	****	07-03-2023	Male	Free	Really good, crashes sometim	5
U16	Ada White	awhittenburyf@gmail.com	****	12-09-2022	Male	Free	Improve the IA to recommend	5
U17	Arthur Clinton	kcrankhorng@gmail.com	****	3/23/2023	Female	Free	Android user-there are loads	2
U18	Oracle Alexander	tlovemoreh@yahoo.com	****	12-07-2022	Male	Free	I can't listen to my DOWNLOA	3
U19	Rkin Mondi	rkinmondi@gmail.com	****	02-04-2023	Female	Premium	It always crashing down; unab	1
U20	Franklin Henry	henryconstantlaw@gmail.com	****	05-09-2023	Male	Free	I know ads are the cost to free	1
U21	Rudraksh Tank	tankrudraksh@gmail.com	****	10-09-2022	Male	Premium	Nice but many bugs	3

2. Podcast

Podcast Name	Podcast Artist	Genre	Language	Episodes	Rating
Bhagvad Gita	Swami Adgadanand	Devotion	Hindi	18	5
Nightmare Tales	Kat Wolfgang	Horror	English	14	4.6
Shivaji Maharaj	Aditya Davane	History	Hindi	34	4.9
Indian Silicon Valley	Jivraj Singh Sachar	Technology	English	133	4.7
Far From Fat	Keshav Naidu	Comedy	English	259	4.3
Climate Emerger	Suno India	Educatonal	English	61	4.7
Mahabharatam	Titanis Studios	History	Sanskrit	15	4.8
Bhoot Bhulaiya	Kommune	Horror	Hindi	7	4.7
Getting Meta	IVM Podcasts	Motivation	English	7	4.8
Heirs of Pandavas	WYN Studio	Story	English	10	4.6
Zindgi Diaries	IVM Podcasts	Books	Hindi	20	5
Ek Aur Kahani	Spotify Studios	Books	Hindi	12	4.6
The Internet said so	Varun Thakur	Comedy	English	175	4.9
Rotten Mango	StephanieSoo&Ramble	Horror	English	272	4.9
Founders Unfiltered	A Junior VC	Business	English	81	4.9
Srimad Bhagvad Gita	Shemaroo	Motivational	Hindi	18	4.8
Chol Rajvansh	Channel 176Productions	History	Hindi	10	4.9
Abhijit Chavda Podcas	Abhijit Chavda	Politics	Hindi	35	5
All About Movies	Spotify Studios	Arts&Entertainment	Hindi	250	4.7
Malgudi Days	RK Narayan	Drama	Hindi	35	4

3. Country

Name	Continent	Users(in M)	Popular Genre	AvgUserTime(in hrs)
Bharat	Asia	55.36	Hip-Hop	3.7
USA	North America	88.79	Rock	3.8
Spain	Europe	47.51	Pop	1.5
France	Europe	64.62	Pop	2
UK	Europe	3.72	Lo-fi	3
Norway	Europe	1.13	Symphonic	0.5
South Korea	Asia	4.37	K-Pop	1.5
Japan	Asia	5.46	Acoustic	0.27
Canada	North America	11.82	Hip-Hop	3.2
Argentina	South America	6.28	Tango	2.5
Australia	Oceana	9.78	Rock	1.3
Germany	Europe	21.27	Hip-Hop	2
Pakistan	Asia	23.5	Ghazal	4
Italy	Europe	7.88	Jazz	3
Mexico	North America	2.5	K-Pop	1
Portugal	Europe	1.2	Tango	0.5
Mongolia	Asia	2.5	Hip-Hop	2.2
Peru	South America	3.6	Acoustic	3.3
Singapore	Asia	1.3	Rock	1
France	Europe	3.4	Jazz	1.2

4. Playlist

Playlist ID	Playlist	Creator	Song ID	Views (in M)	Duration (in hrs)
PL01	Motivation	Rudra	S12,S21,S23,S24	13.4	3.4
PL02	Alan Wallker	Divyansh	S01,S02,11,S16	8.7	1.35
PL03	The Four Seasons	Romilda	S13,S15,S19,S20,S23,S24,S25	12.3	7.35
PL04	Lofi-beats	David	S10,S13,S14,S15,S18,S19,S20,S23	5	6.35
PL05	Homework Vibes	Spotify	S10,S13,S14,S15,S16	11.3	7.9
PL06	Punjabi Rap	Ghanika	S21,S23,S24,S25	30	2.4
PL07	Electro Dance	Kriti	S19,S20,S23,S24,S25	14.8	3.9
PL08	Ghosts	Ghost1	S06,S07,S09,S10,S13	18.4	3.15
PL09	Miracle	EllieGoulding	S11,S12,S13,S15,S17	12	5.11
PL10	Relax and Jazz	Rose	S21,S23,S24,S25	21.4	5.3
PL11	Sitar Instrumental	ShivamSinha	S21,S22,S24,S25,S26	9.4	2
PL12	Storytime	Daniella Walter	S01,S02,S03,S05,S06	6	1.2
PL13	Latin Beats	Hemant	S11,S12,S13,S15,S17,S18,S20,S21	20.7	6.36
PL14	Lofi chill	Spotify	S01,S04,S07,S08,S09,S11,S12,S13,S15,S17,S18,S20,S21,S23,S24,S25,S26	17.4	20.4
PL15	Maneskin	Daisy	S12,S15,S16,S19	24.7	1.4
PL16	G.O.A.T	Kundan	S01,S02,S03,S04,S07,S08,S09,S11,S12,S13,S14,S15,S17,S18,S20,S21,S22	5.2	27.5
PL17	Plentitude	Camila Saraiva Viera	,S11,S12,S13,S14,S15,S17,S18	6.3	3.5
PL18	Pagode	Pedrolenci	,S11,S12,S13,S17,S18	13.1	2.5
PL19	Driving	Pulkit Agarwal	S10,S13,S14,S15,S18,S19,S20,S23	11.7	6.9
PL20	Vibes	Rajasi	S11,S21,S23,S26	3.1	1.1

5. Song

Song_ID	track_name	artist(s)_name	released_year	in_spotify_playlists	streams (in M)
S01	Seven (feat. Latto)	Latto, Jung Kook	2019	553	12.1
S02	LALA	Myke Towers	2020	1474	11.6
S03	vampire	Olivia Rodrigo	2022	1397	10.1
S04	Cruel Summer	Taylor Swift	2021	7858	21.1
S05	WHERE SHE GOES	Bad Bunny	2018	3133	22
S06	Sprinter	Dave, Central Cee	2017	2186	15.6
S07	Ella Baila Sola	Eslabon Armado, Peso Pluma	2019	3090	14.8
S08	Columbia	Quevedo	2021	714	18.7
S09	fukumean	Gunna	2023	1096	17.2
S10	La Bebe - Remix	Peso Pluma, Yng Lvcas	2022	2953	10
S11	un x100to	Bad Bunny, Grupo Frontera	2019	2876	19.3
S12	Super Shy	NewJeans	2020	422	27.3
S13	Flowers	Miley Cyrus	2023	12211	21.1
S14	Daylight	David Kushner	2023	3528	20.9
S15	As It Was	Harry Styles	2021	23575	25.1
S16	Kill Bill	SZA	2022	8109	11.6
S17	Cupid - Twin Ver.	Fifty Fifty	2018	2942	10.9
S18	What Was I Made For?	Billie Eilish	2017	873	30.5
S20	Like Crazy	Jimin	2021	596	36.3
S21	Chore NCR Aale	Paradox, MC SQUARE	2020	202	18
S22	ON	BTS	2022	246	99
S23	It's Only A Paper Moon	Ella Fitzgerald	2023	160	64
S24	Red	Taylor Swift	2021	223	29.6
S25	Believer	Imagine Dragons	2018	890	17.5
S27	Believer	Imagine Dragons	2018	890	16.7

6. Artist

Artist_ID	Artist	Nationality	Ranking	Followers(in M)	Monthly_Listener(in M)
A01	Ed Sheeran	British	3	11.29	83.86
A02	Arjit Singh	Bhartiya	79	81.46	37.07
A03	Billie Eilish	American	30	82.11	54.99
A04	Dua Lipa	Albanian	4	41.27	70.7
A05	Taylor Swift	American	2	77.56	91.76
A06	BTS	South Korean	67	66.4	40.14
A07	The Weeknd	Canadian	1	70.35	106.9
A08	Zayn	British	183	22.67	20.7
A09	Pritam	Bhartiya	96	19.36	30.43
A10	Blackpink	South Korean	241	44.75	23.5
A11	Justin Bieber	Canadian	11	73.88	70.2
A12	Shakira	Columbian	16	31.05	60.61
A13	Rihanna	Barbadian	7	57.41	70.5
A14	Charlie Puth	British	67	21.14	40.1
A15	Alan Walker	Norwegian	90	39.16	30.2
A16	Himesh Reshamiya	Bhartiya	469	11.5	1.5
A17	Katy Perry	Australia	34	5.6	5.3
A18	Vishal Shekhar	Bhartiya	209	1.5	2.4
A19	PJ Harvey	British	344	5.6	7.13
A20	Rahat Fateh Ali Khan	Pakistan	271	2	1.3

MENU LAYOUT

1. ADMIN CONSOLE:

1.1 Import File to Dataframe
      1.1.1 User
      1.1.2 Podcast
      1.1.3 Country
      1.1.4 Artist
      1.1.5 Playlist
      1.1.6 Songs

1.2 Add a New Record
      1.2.1 User
      1.2.2 Podcast
      1.2.3 Country
      1.2.4 Artist
      1.2.5 Playlist
      1.2.6 Songs

1.3 Delete a Record
      1.3.1 User
      1.3.2 Podcast
      1.3.3 Country
      1.3.4 Artist
      1.3.5 Playlist
      1.3.6 Songs

1.4 Modify a Record
      1.4.1 User
            1.4.1.1 User Name
            1.4.1.2 User Email
            1.4.1.3 Password
            1.4.1.4 Subscription
            1.4.1.5 Review and Rating
      1.4.2 Podcast
            1.4.2.1 Podcast Name
            1.4.2.2 No Of Episodes
            1.4.2.3 Rating
      1.4.3 Country
            1.4.3.1 No Of Users
            1.4.3.2 Popular Genre
\`   1.4.3.3 Avg User Time

2.3.5 Playlist
    2.3.5.1 by Views
        2.3.5.1.1 In Ascending Order
        2.3.5.1.2 In Descending Order
    2.3.5.2 by Duration
        2.3.5.2.1 In Ascending Order
        2.3.5.2.2 In Descending Order

2.3.6 Songs
    2.3.6.1 by Released Year
        2.3.6.1.1 In Ascending Order
        2.3.6.1.2 In Descending Order
    2.3.6.2 by In Spotify Playlists
        2.3.6.2.1 In Ascending Order
        2.3.6.2.2 In Descending Order
    2.3.6.3 by Views
        2.3.6.3.1 In Ascending Order
        2.3.6.3.2 In Descending Order

2.4 Create a Report
    2.4.1 User
        2.4.1.1 Users With Subscription
        2.4.1.2 Users with Rating above
        2.4.1.3 Users of Gender

    2.4.2 Podcast
        2.4.2.1 Podcast of Genre
        2.4.2.2 Podcast of Language
        2.4.2.3 Podcast with Episodes above
        2.4.2.4 Podcast with Ratings above

    2.4.3 Country
        2.4.3.1 Country of Continent
        2.4.3.2 Countries with Users above
        2.4.3.3 Countries with AvgUserTime above
        2.4.3.4 Countries with Popular Genre

    2.4.4 Artist
        2.4.4.1 Artist with Nationality
        2.4.4.2 Artist with Ranking Above
        2.4.4.3 Artist with Followers above
        2.4.4.4 Artist with Monthly Listeners above

    2.4.5 Playlist
        2.4.5.1 Playlist with Views above
        2.4.5.2 Playlist with Duration above

SOURCE CODE

ADMIN CONSOLE

```python
import pandas as pd
import matplotlib.pyplot as plt
import time
### CSV files
df1=pd.read_csv('User.csv')
df2=pd.read_csv('Podcast.csv')
df3=pd.read_csv('Country.csv')
df4=pd.read_csv('Playlist.csv')
df5=pd.read_csv('Song.csv')
df6=pd.read_csv('Artist.csv')


print(' ~~ * ~~ '*12)
print(' ~~ * ~~ '*12)
print(' '
```



```python
''')
print(' ~~ * ~~ '*12)
print(' ~~ * ~~ '*12)
print('''
```

```python
''')
ch0=int(input('Enter Your Choice >>> '))

####### ADMIN

if ch0==1:

    while True:
        #### MAIN MENU

        input('Press ENTER to see main menu...')
        print('''
```



```python
''')
        print('''
                        1. Add a new Record
                        2. Delete a Record
                        3. Modify a Record
                        4. Export Dataframe to CSV
                        5. Exit


~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
        ''')
        ch=int(input('Enter your Choice from Main Menu -----> '))

        ### SELECTION 1
        if ch==1:

            print('''
```

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               In which File do you want to Add a record ?         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                               1. Users                            *
*                               2. Podcast                          *
*                               3. Country                          *
*                               4. Playlist                         *
*                               5. Songs                            *
*                               6. Artist                           *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
''')
ch2= int(input('Enter Your Choice from above Menu -----> '))

if ch2==1:## add in users

    ni= max(df1.index)+1
    ui=input('Enter User ID: ')
    un=input('Enter User Name: ')
    ue=input('Enter Email: ')
    ps=input('Enter Password: ')
    rd=input('Enter Registration Date(DD-MM-YYYY): ')
    gn=input('Enter Gender(Male/Female): ')
    sb=input('Enter User Subscription(Free/Premium): ')
    rv=input('Enter Review(in 10 Words or less): ')
    rt=int(input('Enter Rating (out of 5): '))
    df1.loc[ni]=[ui,un,ue,ps,rd,gn,sb,rv,rt]
    df1.to_csv('User.csv',index=False)
    print('Congrats! Your record has been added')
    input('Press ENTER to see Record...')
    print(df1.loc[[ni]])


elif ch2==2:## add in podcast

    ni= max(df2.index)+1
    pn=input('Enter Podcast name: ')
    cr=input('Enter Creator: ')
    pg=input('Enter Podcast Genre: ')
    pl=input('Enter Podcast Language: ')
    ep=int(input('Enter No. of Episodes: '))
```

```python
            rt=int(input('Enter Rating(Out of 5): '))
            df2.loc[ni]=[pn,cr,pg,pl,ep,rt]
            df2.to_csv('Podcast.csv',index=False)
            print('Congrats! Your record has been added')
            input('Press ENTER to see Record...')
            print(df2.loc[[ni]])


        elif ch2==3:## add in country

            ni= max(df3.index)+1
            cn= input('Enter Country Name: ')
            ct= input('Enter Continent Name: ')
            us= float(input('Enter No of Users(in M): '))
            pg= input('Enter Popular Genre: ')
            at= float(input('Enter Avg User Time(in hrs): '))
            df3.loc[ni]=[cn,ct,us,pg,at]
            df3.to_csv('Country.csv',index=False)
            print('Congrats! Your record has been added')
            input('Press Enter to see Record...')
            print(df3.loc[[ni]])


        elif ch2==4:## add in playlist

            ni= max(df4.index)+1
            pi=input('Enter Playlist ID: ')
            pn=input('Enter Playlist Name: ')
            cr=input('Enter Creator: ')
            ns= input("Enter Song ID's: ")
            vw=float(input('Enter Views(in M): '))
            dr=float(input('Enter Duration(in hrs): '))
            df4.loc[ni]=[pi,pn,cr,ns,vw,dr]
            df4.to_csv('Playlist.csv',index=False)
            print('Congrats! Your record has been added')
            input('Press Enter to see Record...')
            print(df4.loc[[ni]])


        elif ch2==5:## add in song
```

```python
            ni= max(df5.index)+1
            si=input('Enter Song ID: ')
            tn=input('Enter Track Name: ')
            an=input('Enter Artist Names: ')
            ry=int(input('Enter Released Year: '))
            sp=int(input('Enter in Spotify Playlist: '))
            st=float(input('Enter no of Streams(in M): '))
            df5.loc[ni]=[si,tn,an,ry,sp,st]
            df5.to_csv('Song.csv',index=False)
            print('Congrats! Your record has been added')
            input('Press ENTER to see Record...')
            print(df5.loc[[ni]])


        elif ch2==6:## add in artist

            ni= max(df6.index)+1
            ai=input('Enter Artist ID: ')
            an=input('Enter Artist Name: ')
            nt=input('Enter Artist Nationality: ')
            rk=int(input('Enter Artist Ranking: '))
            fl=float(input('Enter Artist Followers(in M): '))
            ml=float(input('Enter Monthly Listeners(in M): '))
            df6.loc[ni]=[ai,an,nt,rk,fl,ml]
            df6.to_csv('Artist.csv',index=False)
            print('Congrats! Your record has been added')
            input('Press ENTER to see Record...')
            print(df6.loc[[ni]])


    else:
        print('! Invalid Selection !')

### SELECTION 2
elif ch==2:



    print('''
```

```
******************************************
*         In which File do you want to Delete a record ?        *
******************************************
*                         1. Users                         *
*                         2. Podcast                         *
*                         3. Country                         *
*                         4. Playlist                         *
*                         5. Songs                         *
*                         6. Artist                         *
******************************************
''')
ch3= int(input('Enter Your Choice from above Menu -----> '))

if ch3==1:## del in users
    print(df1)
    di=int(input('Enter INDEX to delete: '))
    df1=pd.read_csv('User.csv')

    if di in df1.index:
        df1.drop(di,axis=0,inplace=True)
        df1.to_csv('User.csv',index=False)
        print('Your Record has been removed')
        input('Press ENTER to see File...')
        print(df1)

    else:
        print('! Index not found !')

elif ch3==2:## del in podcast
    print(df2)
    di=int(input('Enter INDEX to delete: '))
    df2=pd.read_csv('Podcast.csv')

    if di in df2.index:
        df2.drop(di,axis=0,inplace=True)
        df2.to_csv('Podcast.csv',index=False)
        print('Your Record has been removed')
        input('Press ENTER to see File...')
        print(df2)
```

```python
        else:
            print('! Index not found !')



    elif ch3==3:## del in country
        print(df3)
        di=int(input('Enter INDEX to delete: '))
        df3=pd.read_csv('Country.csv')

        if di in df3.index:
            df3.drop(di,axis=0,inplace=True)
            df3.to_csv('Country.csv',index=False)
            print('Your Record has been removed')
            input('Press ENTER to see File...')
            print(df3)

        else:
            print('! Index not found !')



    elif ch3==4:## del in playlist
        print(df4)
        di=int(input('Enter INDEX to delete: '))
        df4=pd.read_csv('Playlist.csv')

        if di in df4.index:
            df4.drop(di,axis=0,inplace=True)
            df4.to_csv('Playlist.csv',index=False)
            print('Your Record has been removed')
            input('Press ENTER to see File...')
            print(df4)

        else:
            print('! Index not found !')



    elif ch3==5:## del in song
```

```python
        print(df5)
        di=int(input('Enter INDEX to delete: '))
        df5=pd.read_csv('Song.csv')

        if di in df5.index:
            df5.drop(di,axis=0,inplace=True)
            df5.to_csv('Song.csv',index=False)
            print('Your Record has been removed')
            input('Press ENTER to see File...')
            print(df5)

        else:
            print('! Index not found !')


    elif ch3==6:## del in artist
        print(df6)
        di=int(input('Enter INDEX to delete: '))
        d6=pd.read_csv('Artist.csv')

        if di in df6.index:
            df6.drop(di,axis=0,inplace=True)
            df6.to_csv('Artist.csv',index=False)
            print('Your Record has been removed')
            input('Press ENTER to see File...')
            print(df6)
        else:
            print('! Index not found !')

else:
    print('! Invalid Selection !')
```

SELECTION 3

```python
        elif ch==3:
            print('''
```

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               In which File do you want to Modify a record ?         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                                  1. Users                            *
*                                  2. Podcast                          *
*                                  3. Country                          *
*                                  4. Playlist                         *
*                                  5. Songs                            *
*                                  6. Artist                           *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```python
            ''')
            ch4= int(input('Enter Your Choice from above Menu -----> '))

            if ch4==1:

                print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                What do you want to Modify in USERS ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                            1. User Name
                            2. User Email
                            3. Password
                            4. Subscription
                            5. Review and Rating
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
                ''')
                ch41=int(input('Enter Your Choice from above Menu ---
--> '))

                print(df1)
                mi= int(input('Enter Index to Modify: '))

                if ch41==1:
                    if mi in df1.index:
                        nun=input('Enter New User Name: ')
                        df1.loc[mi,'User_Name']=nun
                        df1.to_csv('User.csv',index=False)
```

```python
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df1.loc[[mi],['User_Name']])

            else:
                print('! Index not Found !')

        elif ch41==2:
            if mi in df1.index:
                nue=input('Enter New User Email: ')
                df1.loc[mi,'User_Email']=nue
                df1.to_csv('User.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df1.loc[[mi],['User_Email']])

            else:
                print('! Index not Found !')

        elif ch41==3:
            if mi in df1.index:
                nps=input('Enter New Password: ')
                df1.loc[mi,'Password']=nps
                df1.to_csv('User.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df1.loc[[mi],['Password']])

            else:
                print('! Index not Found !')

        elif ch41==4:
            if mi in df1.index:
                nsb=input('Enter Subscription: ')
                df1.loc[mi,'Subscription']=nsb
                df1.to_csv('User.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df1.loc[[mi],['Subscription']])
```

```python
            else:
                print('! Index not Found !')

        elif ch41==5:
            if mi in df1.index:
                nrv=input('Enter New Review: ')
                nrt=int(input('Enter New Rating(Out of 5): '))
                df1.loc[mi,'Review']=nrv
                df1.loc[mi,'Rating']=nrt
                df1.to_csv('User.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df1.loc[[mi],['Review','Rating']])

            else:
                print('! Index not Found !')

        else:
            print('! Invalid Selection !')

    elif ch4==2:

        print('''


+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                What do you want to Modify in PODCAST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. Podcast Name
                        2. Episodes
                        3. Rating
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

        ''')
        ch42=int(input('Enter Your Choice from above Menu ---
--> '))

        print(df2)
        mi= int(input('Enter Index to Modify: '))

        if ch42==1:
            if mi in df2.index:
                npn=input('Enter New Podcast Name: ')
```

```python
                df2.loc[mi,'Podcast_Name']=npn
                df2.to_csv('Podcast.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df2.loc[[mi],['Podcast_Name']])

            else:
                print('! Index not Found !')

        elif ch42==2:
            if mi in df2.index:
                nep=input('Enter Updated Episodes ')
                df2.loc[mi,'Episodes']=nep
                df2.to_csv('Podcast.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df2.loc[[mi],['Episodes']])

            else:
                print('! Index not Found !')

        elif ch42==3:
            if mi in df2.index:
                nrt=input('Enter New Rating(Out of 5): ')
                df2.loc[mi,'Rating']=nrt
                df2.to_csv('Podcast.csv',index=False)
                print('Changes UPDATED')
                input('Press ENTER to see Changes...')
                print(df2.loc[[mi],['Rating']])

            else:
                print('! Index not Found !')

        else:
            print('! Invalid Selection !')

    elif ch4==3:
        print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                 What do you want to Modify in COUNTRY ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. No. Of Users
                        2. Popular Genre
                        3. Avg User Time
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
''')

ch43=int(input('Enter Your Choice from above Menu ---
--> '))
print(df3)
mi= int(input('Enter Index to Modify: '))

if ch43==1:
    if mi in df3.index:
        nnu=input('Enter Updated Users(in M): ')
        df3.loc[mi,'Users(in M)']=nnu
        df3.to_csv('Country.csv',index=False)
        print('Changes UPDATED')
        input('Press ENTER to see Changes...')
        print(df3.loc[[mi],['Users(in M)']])

    else:
        print('! Index not Found !')
elif ch43==2:
    if mi in df3.index:
        npg=input('Enter New Genre: ')
        df3.loc[mi,'Popular_Genre']=npg
        df3.to_csv('Country.csv',index=False)
        print('Changes UPDATED')
        input('Press ENTER to see Changes...')
        print(df3.loc[[mi],['Popular_Genre']])

    else:
        print('! Index not Found !')

elif ch43==3:
```

```python
                if mi in df3.index:
                        nat=input('Enter  Updated  Avg  User  Time(in
hrs): ')

                        df3.loc[mi,'AvgUserTime(in hrs)']=nat
                        df3.to_csv('Country.csv',index=False)
                        print('Changes UPDATED')
                        input('Press ENTER to see Changes...')
                        print(df3.loc[[mi],['AvgUserTime(in hrs)']])

                else:
                        print('! Index not Found !')

        else:
                print('! Invalid Selection !')

        elif ch4==4:

                print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    What do you want to Modify in PLAYLIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. Song ID's
                        2. Views
                        3. Duration
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                ch44=int(input('Enter Your Choice from above Menu ---
--> '))
                print(df4)
                mi= int(input('Enter Index to Modify: '))

                if ch44==1:
                        if mi in df4.index:
                                nsi=input("Enter Updated Song ID's: ")
                                df4.loc[mi,'Song_ID']=nsi
                                df4.to_csv('Playlist.csv',index=False)
                                print('Changes UPDATED')
                                input('Press ENTER to see Changes...')
                                print(df4.loc[[mi],['Song_ID']])
```

```python
        else:
            print('! Index not Found !')

    elif ch44==2:
        if mi in df4.index:

            nvw=input('Enter Updated Views(in M): ')
            df4.loc[mi,'Views (in M)']=nvw
            df4.to_csv('Playlist.csv',index=False)
            print('Changes UPDATED')
            input('Press ENTER to see Changes...')
            print(df4.loc[[mi],['Views (in M)']])

        else:
            print('! Index not Found !')
    elif ch44==3:
        if mi in df4.index:
            ndr=input('Enter New Duration(in hrs): ')
            df4.loc[mi,'Duration (in hrs)']=ndr
            df4.to_csv('Playlist.csv',index=False)
            print('Changes UPDATED')
            input('Press ENTER to see Changes...')
            print(df4.loc[[mi],['Duration (in Hr)']])

        else:
            print('! Index not Found !')
    else:
        print('! Invalid Selection !')


elif ch4==5:

    print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    What do you want to Modify in SONG ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                            1. In Spotify Playlist
                            2. Streams
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            ''')
            ch45=int(input('Enter Your Choice from above Menu ---
--> '))

            print(df5)
            mi= int(input('Enter Index to Modify: '))

            if ch45==1:
                if mi in df5.index:
                    nsp=input('Enter Updated In Spotify Playlist:
')
                    df5.loc[mi,'in_spotify_playlists ']=nsp
                    df5.to_csv('Song.csv',index=False)
                    print('Changes UPDATED')
                    input('Press ENTER to see Changes...')
                    print(df5.loc[[mi],['in_spotify_playlists ']])

                else:
                    print('! Index not Found !')

            elif ch45==2:
                if mi in df5.index:
                    nst=input('Enter Updated Streams(in M): ')
                    df5.loc[mi,'streams(in M)']=nst
                    df5.to_csv('Song.csv',index=False)
                    print('Changes UPDATED')
                    input('Press ENTER to see Changes...')
                    print(df5.loc[[mi],['streams(in M)']])

                else:
                    print('! Index not Found !')

            else:
                print('! Invalid Selection !')
```

```python
        elif ch4==6:

            print('''
```

```python
            ''')
            ch46=int(input('Enter Your Choice from above Menu ---
--> '))

            print(df6)
            mi= int(input('Enter Index to Modify: '))

            if ch46==1:
                if mi in df6.index:
                    nrk=input('Enter New Ranking: ')
                    df6.loc[mi,'Ranking']=nrk
                    df6.to_csv('Artist.csv',index=False)
                    print('Changes UPDATED')
                    input('Press ENTER to see Changes...')
                    print(df6.loc[[mi],['Ranking']])

                else:
                    print('! Index not Found !')
            elif ch46==2:

                if mi in df6.index:

                    nfl=input('Enter Updated Followers(in M): ')
                    df6.loc[mi,'Followers (in M)']=nfl
                    df6.to_csv('Artist.csv',index=False)
                    print('Changes UPDATED')
                    input('Press ENTER to see Changes...')
                    print(df6.loc[[mi],['Followers (in M)']])

                else:
                    print('! Index not Found !')
```

```python
            elif ch46==3:

                    if mi in df6.index:

                            nml=input('Enter Monthly Listeners: ')
                            df6.loc[mi,'Monthly_Listener(in M)']=nml
                            df6.to_csv('Artist.csv',index=False)
                            print('Changes UPDATED')
                            input('Press ENTER to see Changes...')
                            print(df6.loc[[mi],['Monthly_Listener(in M)']])

                    else:
                            print('! Index not Found !')

            else:
                    print('! Invalid Selection !')



    else:
            print('! Invalid Selection !')


    ### SELECTION 4
    elif ch==4:

            print('''
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               Which File do you want to export to CSV ?                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                               1. Users                                      *
*                               2. Podcast                                    *
*                               3. Country                                    *
*                               4. Playlist                                   *
*                               5. Songs                                      *
*                               6. Artist                                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
            ''')
            ch5=int(input('Enter your Choice from above Menu -----> '))
```

```python
if ch5==1:
    fn=input('Enter File Name: ')
    df1.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
    print('Congrats! Your file is saved successfully')

elif ch5==2:
    fn=input('Enter File Name: ')
    df2.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
    print('Congrats! Your file is saved successfully')

elif ch5==3:
    fn=input('Enter File Name: ')
    df3.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
    print('Congrats! Your file is saved successfully')

elif ch5==4:
    fn=input('Enter File Name: ')
    df4.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
    print('Congrats! Your file is saved successfully')

elif ch5==5:
    fn=input('Enter File Name: ')
    df5.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
    print('Congrats! Your file is saved successfully')

elif ch5==6:
    fn=input('Enter File Name: ')
    df6.to_csv(fn+'.csv')
    print('Exporting...')
    time.sleep(2)
```

```python
            print('Congrats! Your file is saved successfully')



### SELECTION 5
elif ch==5:
        print('')
        print('''
                Thank You for choosing Melody Hub :)
        To know more about us, visit our website " melodyhub.co.in "
        ''')


        break



  else:
        print('! Invalid Selection !')
```

USER CONSOLE

```
##### USER
elif ch0==2:

    while True:
        #### MAIN MENU

        input('Press ENTER to see main menu...')
        print('''


~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
           M ♥ E ♥ L ♥ O ♥ D ♥ Y ♥   ♥ H ♥ U ♥ B
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
 |      ___                   ___                                          |
 |     | \/|      ()         | \/|                                         |
 |     | \/|      __         | \/|                                         |
 |     |  |/|   /'__`\       |  |/|   /'__`\                               |
 |     |  |  |  (  )         |  |  |  |  )                                  |
 |     |_| |_|\_,_|  |_| |_| |_| |_| |_|\_,_| |_|                          |
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
''')
        print('''
                      1. Read Files
                      2. Search Records
                      3. Sort Records
                      4. Create a Report
                      5. Data Visualisation
                      6. EXIT


~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
''')
        chm=int(input('Enter your Choice from Main Menu -----> '))

        if chm==1:
```

```python
            print('''
*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*                        Which File do you want to Read ?                          *
*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*                                1. Analysis on User                              *
*                                2. Analysis on Podcast                           *
*                                3. Analysis on Country                           *
*                                4. Analysis on Playlist                          *
*                                5. Analysis on Songs                             *
*                                6. Analysis on Artist                            *
*  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *

''')
            chm1=int(input('Enter Your Choice from above Menu ----->
'))

            if chm1==1:
                print(df1)
            elif chm1==2:
                print(df2)
            elif chm1==3:
                print(df3)
            elif chm1==4:
                print(df4)
            elif chm1==5:
                print(df5)
            elif chm1==6:
                print(df6)
            else:
                print('! Invalid Selection !')


        elif chm==2:
            print('''
```

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               In which File do you want to Search a record ?          *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                             1. Users                                  *
*                             2. Podcast                                *
*                             3. Country                                *
*                             4. Playlist                               *
*                             5. Songs                                  *
*                             6. Artist                                 *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
            ''')

            chm1=int(input('Enter Your Choice from above Menu ----->
'))

            if chm1==1:

                print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search in USER ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                             1. by Registration Date
                             2. by Gender
                             3. by Subscription
                             4. by Ratings
                             5. User Name
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm11=int(input('Enter Your Choice from above Menu -
----> '))

                if chm11==1:
                    rd=input('Enter Registration Date(DD-MM-YYYY)
to search: ')
                    cond=df1['Registration_Date']==rd
                    dfsearch=df1[cond]
                    if dfsearch.empty:
                            print('Not Found')
                    else:
                            print(df1[cond])

                elif chm11==2:
```

```python
                    gn=input('Enter Gender to search: ')
                    cond=df1['Gender']==gn
                    dfsearch=df1[cond]
                    if dfsearch.empty:
                            print('Not Found')
                    else:
                            print(df1[cond])

            elif chm11==3:
                    sb=input('Enter Subscription to search: ')
                    cond=df1['Subscription']==sb
                    dfsearch=df1[cond]
                    if dfsearch.empty:
                            print('Not Found')
                    else:
                            print(df1[cond])

            elif chm11==4:
                    print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            How do you want to Search Rating ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Rating Above
                    2. by Rating Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

''')
                    chm114=int(input('Enter Your Choice from above
Menu -----> '))

                    if chm114==1:
                        rt=int(input('Enter Rating(above) to search: '))
                        cond=df1['Rating']>rt
                        dfsearch=df1[cond]
                        if dfsearch.empty:
                            print('Not Found')
                        else:
                            print(df1[cond])
                    elif chm114==2:
                        rt=int(input('Enter Rating(below) to search: '))
```

```python
                        cond=df1['Rating']<rt
                        dfsearch=df1[cond]
                        if dfsearch.empty:
                                print('Not Found')
                        else:
                                print(df1[cond])
                    else:
                        print('! Invalid Selection !')

            elif chm11==5:
                un=input('Enter User Name to search: ')
                cond=df1['User_Name']==un
                dfsearch=df1[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df1[cond])

            else:
                print('! Invalid Selection !')


        elif chm1==2:

            print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search in PODCAST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. by Podcast Name
                        2. by Creator
                        3. by Genre
                        4. by Language
                        5. by Episodes
                        6. by Ratings
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            ''')
            chm12=int(input('Enter Your Choice from above Menu -
----> '))

            if chm12==1:
                pn=input('Enter Podcast Name to search: ')
```

```python
            cond=df2['Podcast_Name']==pn
            dfsearch=df2[cond]
            if dfsearch.empty:
                    print('Not Found')
            else:
                    print(df2[cond])

    elif chm12==2:
            cr=input('Enter Creator to search: ')
            cond=df2['Creator']==cr
            dfsearch=df2[cond]
            if dfsearch.empty:
                    print('Not Found')
            else:
                    print(df2[cond])

    elif chm12==3:
            gr=input('Enter Genre to search: ')
            cond=df2['Genre']==gr
            dfsearch=df2[cond]
            if dfsearch.empty:
                    print('Not Found')
            else:
                    print(df2[cond])

    elif chm12==4:
            lg=input('Enter Language to search: ')
            cond=df2['Language']==lg
            dfsearch=df2[cond]
            if dfsearch.empty:
                    print('Not Found')
            else:
                    print(df2[cond])

    elif chm12==5:
            print('''
```

```python
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  How do you want to Search Episodes ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. by Episodes Above
                        2. by Episodes Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
            chm125=int(input('Enter Your Choice from above Menu -----> '))

            if chm125==1:
                ep=int(input('Enter Episodes(above) to search: '))

                cond=df2['Episodes']>ep
                dfsearch=df2[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df2[cond])
            elif chm125==2:
                ep=int(input('Enter Episodes(below) to search: '))

                cond=df2['Episodes']<ep
                dfsearch=df2[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df2[cond])
            else:
                print('! Invalid Selection !')

        elif chm12==6:
            print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  How do you want to Search Rating ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. by Rating Above
                        2. by Rating Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
```

```python
                    chm126=int(input('Enter Your Choice from above
Menu -----> '))
                if chm126==1:
                    rt=float(input('Enter Ratings(above) to search:
'))
                    cond=df2['Rating']>rt
                    dfsearch=df2[cond]
                    if dfsearch.empty:
                        print('Not Found')
                    else:
                        print(df2[cond])
                elif chm126==2:
                    rt=float(input('Enter Ratings(below) to search:
'))
                    cond=df2['Rating']<rt
                    dfsearch=df2[cond]
                    if dfsearch.empty:
                        print('Not Found')
                    else:
                        print(df2[cond])
                else:
                    print('! Invalid Selection !')

            else:
                print('! Invalid Selection !')

        elif chm1==3:

            print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            How do you want to Search in COUNTRY ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Country Name
                    2. by Continent
                    3. by No. Of Users
                    4. by Popular Genre
                    5. by Avg User Time
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            ''')
```

```python
                chm13=int(input('Enter Your Choice from above Menu -
---> '))

            if chm13==1:
                cn=input('Enter Country Name to search: ')
                cond=df3['Name']==cn
                dfsearch=df3[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df3[cond])

            elif chm13==2:
                ct=input('Enter Continent name to search: ')
                cond=df3['Continent']==ct
                dfsearch=df3[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df3[cond])

            elif chm13==3:
                print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search No of Users ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. by No Of Users Above
                        2. by No Of Users Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm133=int(input('Enter Your Choice from above
Menu ----> '))

                if chm133==1:
                    us=float(input('Enter No. Of Users(in M
above) to search:  '))

                    cond=df3['Users(in M)']>ct
                    dfsearch=df3[cond]
                    if dfsearch.empty:
                        print('Not Found')
```

```python
                else:
                        print(df3[cond])
            elif chm133==2:
                us=float(input('Enter   No.   Of   Users(in   M
below) to search: '))

                cond=df3['Users(in M)']<ct
                dfsearch=df3[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df3[cond])
            else:
                print('! Invalid Selection !')

        elif chm13==4:
            pg= input('Enter Popular Genre to search: ')
            cond=df3['Popular_Genre']==pg
            dfsearch=df3[cond]
            if dfsearch.empty:
                    print('Not Found')
            else:
                    print(df3[cond])

        elif chm13==5:
            print('''


+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search Avg Time ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Avg Time Above
                    2. by Avg Time Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            ''')
            chm135=int(input('Enter Your Choice from above
Menu -----> '))

            if chm135==1:
                at= float(input('Enter Average User Time(in
hrs above) to search: '))

                cond=df3['AvgUserTime(in hrs)']>at
                dfsearch=df3[cond]
                if dfsearch.empty:
```

```python
                                        print('Not Found')
                              else:
                                        print(df3[cond])
                    elif chm135==2:
                              at= float(input('Enter  Average  User  Time(in
hrs below) to search: '))
                              cond=df3['AvgUserTime(in hrs)']<at
                              dfsearch=df3[cond]
                              if dfsearch.empty:
                                        print('Not Found')
                              else:
                                        print(df3[cond])
                    else:
                              print('! Invalid Selection !')


          else:
                    print('! Invalid Selection !')




     elif chm1==4:

          print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search in PLAYLIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                          1. by Playlist ID
                          2. by Playlist Name
                          3. by Creator
                          4. by Song ID's
                          5. by Views
                          6. by Duration
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
          ''')
                    chm14=int(input('Enter Your Choice from above Menu -
----> '))


                    if chm14==1:
                              pi=input('Enter Playlist ID to search: ')
                              cond=df4['Playlist_ID']==pi
                              dfsearch=df4[cond]
```

```python
        if dfsearch.empty:
                print('Not Found')
        else:
                print(df4[cond])

elif chm14==2:
        pl=input('Enter Playlist Name to search: ')
        cond=df4['Playlist_Name']==pl
        dfsearch=df4[cond]
        if dfsearch.empty:
                print('Not Found')
        else:
                print(df4[cond])

elif chm14==3:
        cr=input('Enter Creator to search: ')
        cond=df4['Creator']==cr
        dfsearch=df4[cond]
        if dfsearch.empty:
                print('Not Found')
        else:
                print(df4[cond])

elif chm14==4:
        si=input("Enter Song ID's(in List) to search: ")
        cond=df4['Song_ID']==si
        dfsearch=df4[cond]
        if dfsearch.empty:
                print('Not Found')
        else:
                print(df4[cond])

elif chm14==5:
        print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    How do you want to Search Views ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         1. by Views Above
                         2. by Views Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +


''')
chm145=int(input('Enter Your Choice from above Menu -----> '))

if chm145==1:
    vw=float(input('Enter Views(in M above) to search: '))

        cond=df4['Viwes (in M)']>vw
        dfsearch=df4[cond]
        if dfsearch.empty:
            print('Not Found')
        else:
            print(df4[cond])
    elif chm145==2:
        vw=float(input('Enter Views(in M below) to search: '))

        cond=df4['Viwes (in M)']<vw
        dfsearch=df4[cond]
        if dfsearch.empty:
            print('Not Found')
        else:
            print(df4[cond])
    else:
        print('! Invalid Selection !')

elif chm14==6:
    print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    How do you want to Search Duration ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         1. by Duration Above
                         2. by Duration Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
    ''')
```

```python
                    chm146=int(input('Enter Your Choice from above
Menu -----> '))
                if chm146==1:
                    dr=float(input('Enter Duration(in hrs above) to
search: '))

                    cond=df4['Duration (in hrs)']>dr
                    dfsearch=df4[cond]
                    if dfsearch.empty:
                        print('Not Found')
                    else:
                        print(df4[cond])
                elif chm146==2:
                    dr=float(input('Enter Duration(in hrs below) to
search: '))

                    cond=df4['Duration (in hrs)']<dr
                    dfsearch=df4[cond]
                    if dfsearch.empty:
                        print('Not Found')
                    else:
                        print(df4[cond])
                else:
                    print('! Invalid Selection !')

            else:
                print('! Invalid Selection !')

        elif chm1==5:

            print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search in SONG ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Track Name
                    2. by Artist(s)
                    3. by Released Year
                    4. by Streams
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            ''')
            chm15=int(input('Enter Your Choice from above Menu -
----> '))
```

```python
if chm15==1:
    tn=input('Enter Track Name to search: ')
    cond=df5['track_name']==tn
    dfsearch=df5[cond]
    if dfsearch.empty:
        print('Not Found')
    else:
        print(df5[cond])

elif chm15==2:
    an=input('Enter Artist(s) to search: ')
    cond=df5['artist(s)_name']==an
    dfsearch=df5[cond]
    if dfsearch.empty:
        print('Not Found')
    else:
        print(df5[cond])

elif chm15==3:
    ry=input('Enter Released Year to search: ')
    cond=df5['released_year']==ry
    dfsearch=df5[cond]
    if dfsearch.empty:
        print('Not Found')
    else:
        print(df5[cond])

elif chm15==4:
    print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search Streams ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Streams Above
                    2. by Streams Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
    chm154=int(input('Enter Your Choice from above
Menu -----> '))
```

```python
            if chm154==1:
                st=int(input('Enter  Streams(in  M  above)  to
search: '))

                cond=df5['streams (in M)']>st
                dfsearch=df5[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df5[cond])
            elif chm154==2:
                st=int(input('Enter  Streams(in  M  below)  to
search: '))

                cond=df5['streams (in M)']<st
                dfsearch=df5[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df5[cond])
            else:
                print('! Invalid Selection !')

        else:
            print('! Invalid Selection !')

    elif chm1==6:

        print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search in ARTIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Artist ID
                    2. by Artist Name
                    3. by Nationality
                    4. by Ranking
                    5. by Followers
                    6. by Monthly Listeners
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
        ''')
        chm16=int(input('Enter Your Choice from above Menu -
----> '))
```

```python
            if chm16==1:
                ai=input('Enter Artist ID to search: ')
                cond=df6['Artist_ID']==ai
                dfsearch=df6[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df6[cond])

            elif chm16==2:
                an=input('Enter Artist Name to search: ')
                cond=df6['Artist_Name']==an
                dfsearch=df6[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df6[cond])

            elif chm16==3:
                nt=input('Enter Nationality to search: ')
                cond=df6['Nationality']==nt
                dfsearch=df6[cond]
                if dfsearch.empty:
                        print('Not Found')
                else:
                        print(df6[cond])

            elif chm16==4:
                print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search Ranking ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Ranking Above
                    2. by Ranking Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm164=int(input('Enter Your Choice from above
Menu -----> '))

                if chm164==1:
```

```python
                rk=int(input('Enter Ranking(above) to search:
'))

                cond=df6['Ranking']>rk
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df6[cond])
            elif chm164==2:
                rk=int(input('Enter Ranking(below) to search:
'))

                cond=df6['Ranking']<rk
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df6[cond])
            else:
                print('! Invalid Selection !')

        elif chm16==5:
            print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Search Followers ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Followers Above
                    2. by Followers Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
            chm165=int(input('Enter Your Choice from above
Menu -----> '))
            if chm165==1:
                fl=float(input('Enter Followers(in M above) to
search: '))

                cond=df6['Followers(in M)']>fl
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df6[cond])
```

```python
            elif chm165==2:
                fl=float(input('Enter Followers(in M below) to
search: '))

                cond=df6['Followers(in M)']<fl
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df6[cond])
            else:
                print('! Invalid Selection !')

        elif chm16==6:
            print('''
```

```python
            ''')
            chm166=int(input('Enter Your Choice from above
Menu -----> '))
            if chm166==1:
                ml=float(input('Enter Monthly Listeners(in M
above) to search: '))

                cond=df6['Monthly_Listener(in M)']>ml
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
                    print(df6[cond])
            elif chm166==2:
                ml=float(input('Enter Monthly Listeners(in M
below) to search: '))

                cond=df6['Monthly_Listener(in M)']<ml
                dfsearch=df6[cond]
                if dfsearch.empty:
                    print('Not Found')
                else:
```

```python
                        print(df6[cond])
                else:
                    print('! Invalid Selection !')


            else:
                print('! Invalid Selection !')


        else:
            print('! Invalid Selection !')



    elif chm==3:
        print('''
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               In which File do you want to Sort Records ?       *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                           1. Users                              *
*                           2. Podcast                            *
*                           3. Country                            *
*                           4. Playlist                           *
*                           5. Songs                              *
*                           6. Artist                             *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
        ''')
        chm2=int(input('Enter Your Choice from above Menu ----->
'))

        if chm2==1:
            print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Sort in USER ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Registration Date
                    2. by Rating
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

            ''')
```

```python
chm21=int(input('Enter Your Choice from above Menu -
----> '))

if chm21==1:
    print('''
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      How do you want to sort by Registration Date ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                  1. In Ascending Order
                  2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```python
    ''')
    chm210=int(input('Enter Your Choice from above
Menu -----> '))

    if chm210==1:

        print(df1.sort_values(['Registration_Date'],a
        scending=True))
    elif chm210==2:

        print(df1.sort_values(['Registration_Date'],a
        scending=False))
    else:
        print('! Invalid Selection !')

elif chm21==2:
    print('''
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          How do you want to sort by Rating ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                  1. In Ascending Order
                  2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```python
    ''')
    chm210=int(input('Enter Your Choice from above
Menu -----> '))

    if chm210==1:

        print(df1.sort_values(['Rating'],ascending=T
        rue))
```

```python
            elif chm210==2:

                print(df1.sort_values(['Rating'],ascending=F
                alse))
            else:
                print('! Invalid Selection !')

        else:
            print('! Invalid Selection !')


    elif chm2==2:

        print('''
```

```python
        ''')
        chm22=int(input('Enter Your Choice from above Menu -
----> '))

        if chm22==1:
            print('''
```

```python
             ''')
            chm220=int(input('Enter Your Choice from above
Menu -----> '))

            if chm220==1:

                print(df2.sort_values(['Episodes'],ascending
                =True))
            elif chm220==2:
```

```python
                    print(df2.sort_values(['Episodes'],ascending
                    =False))
            else:
                    print('! Invalid Selection !')

        elif chm22==2:
            print('''
```

```python
            ''')
            chm220=int(input('Enter Your Choice from above
Menu -----> '))
            if chm220==1:

                    print(df2.sort_values(['Rating'],ascending=T
                    rue))
            elif chm220==2:

                    print(df2.sort_values(['Rating'],ascending=F
                    alse))
            else:
                    print('! Invalid Selection !')

    else:
            print('! Invalid Selection !')

    elif chm2==3:

        print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  How do you want to Sort in COUNTRY ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                      1. by Continent
                      2. by No Of Users
                      3. by Avg User Time
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
                chm23=int(input('Enter Your Choice from above Menu -
----> '))

                if chm23==1:
                    print('''

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
            How do you want to sort by Continent ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                  1. In Ascending Order
                  2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    ''')
                    chm230=int(input('Enter Your Choice from above
Menu -----> '))
                    if chm230==1:

                            print(df3.sort_values(['Continent'],ascending
                            =True))
                    elif chm230==2:

                            print(df3.sort_values(['Continent'],ascending
                            =False))
                    else:
                            print('! Invalid Selection !')

                elif chm23==2:
                    print('''

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
            How do you want to sort by No of Users ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    1. In Ascending Order
                    2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```python
                            ''')
            chm230=int(input('Enter Your Choice from above
Menu -----> '))

            if chm230==1:
                    print(df3.sort_values(['Users(in
                    M)'],ascending=True))
            elif chm230==2:
                    print(df3.sort_values(['Users(in
                    M)'],ascending=False))
            else:
                    print('! Invalid Selection !')


        elif chm23==3:
            print('''
```

```python
                            ''')
            chm230=int(input('Enter Your Choice from above
Menu -----> '))

            if chm230==1:
                    print(df3.sort_values(['AvgUserTime(in
                    hrs)'],ascending=True))
            elif chm230==2:
                    print(df3.sort_values(['AvgUserTime(in
                    hrs)'],ascending=False))
            else:
                    print('! Invalid Selection !')

        else:
            print('! Invalid Selection !')


    elif chm2==4:
        print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    How do you want to Sort in PLAYLIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                       1. by No Of Songs
                       2. by Views
                       3. by Duration
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
                ''')
                chm24=int(input('Enter Your Choice from above Menu -
----> '))
                if chm24==1:
                    print('''
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
            How do you want to sort by No Of Songs ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    1. In Ascending Order
                    2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```python
                    ''')
                    chm240=int(input('Enter Your Choice from above
Menu -----> '))
                    if chm240==1:

                            print(df4.sort_values(['No_of_Songs'],ascen
                            ding=True))
                    elif chm240==2:

                            print(df4.sort_values(['No_of_Songs'],ascen
                            ding=False))
                    else:
                            print('! Invalid Selection !')

                elif chm24==2:
                    print('''
```

```
        - - - - - - - - - - - - - - - - - - - - - - - - - -
                How do you want to sort by Views ?
        - - - - - - - - - - - - - - - - - - - - - - - - - -
                        1. In Ascending Order
                        2. In Descending Order
        - - - - - - - - - - - - - - - - - - - - - - - - - -
                        ''')
                chm240=int(input('Enter Your Choice from above
Menu -----> '))
                if chm240==1:
                        print(df4.sort_values(['Views(in
                        M)'],ascending=True))
                elif chm240==2:
                        print(df4.sort_values(['Views(in
                        M)'],ascending=False))
                else:
                        print('! Invalid Selection !')

        elif chm24==3:
                print('''

        - - - - - - - - - - - - - - - - - - - - - - - - - -
                How do you want to sort by Duration ?
        - - - - - - - - - - - - - - - - - - - - - - - - - -
                        1. In Ascending Order
                        2. In Descending Order
        - - - - - - - - - - - - - - - - - - - - - - - - - -
                        ''')
                chm240=int(input('Enter Your Choice from above
Menu -----> '))
                if chm240==1:
                        print(df4.sort_values(['Duration(in
                        hrs)'],ascending=True))
                elif chm240==2:
                        print(df4.sort_values(['Duration(in
                        hrs)'],ascending=False))
                else:
                        print('! Invalid Selection !')

        else:
                print('! Invalid Selection !')
```

```python
            elif chm2==5:

                print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Sort in SONG ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. by Released Year
                    2. by In Spotify Playlists
                    3. by Streams
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm25=int(input('Enter Your Choice from above Menu -
----> '))

                if chm25==1:
                    print('''

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        How do you want to sort by Released Year ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                1. In Ascending Order
                2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    ''')
                    chm250=int(input('Enter Your Choice from above
Menu -----> '))
                    if chm250==1:

                        print(df5.sort_values(['released_year'],ascen
                            ding=True))
                    elif chm250==2:

                        print(df5.sort_values(['released_year'],ascen
                            ding=False))
                    else:
                        print('! Invalid Selection !')

                elif chm25==2:
                    print('''
```

```
                - - - - - - - - - - - - - - - - - - - - - - - - -
          How do you want to sort by In Spotify Playlist ?
          - - - - - - - - - - - - - - - - - - - - - - - - - -
                    1. In Ascending Order
                    2. In Descending Order
          - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    ''')
                chm250=int(input('Enter Your Choice from above
Menu -----> '))

                if chm250==1:
                        print(df5.sort_values(['in_spotify_playlists
                        '],ascending=True))
                elif chm250==2:
                        print(df5.sort_values(['in_spotify_playlists
                        '],ascending=False))
                else:
                        print('! Invalid Selection !')

        elif chm25==3:
                print('''

          - - - - - - - - - - - - - - - - - - - - - - - - -
          How do you want to sort by Streams ?
          - - - - - - - - - - - - - - - - - - - - - - - - - -
                    1. In Ascending Order
                    2. In Descending Order
          - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    ''')
                chm250=int(input('Enter Your Choice from above
Menu -----> '))

                if chm250==1:
                        print(df5.sort_values(['streams(in
                        M))'],ascending=True))
                elif chm250==2:
                         print(df5.sort_values(['streams(in
                        M)'],ascending=False))
                else:
                        print('! Invalid Selection !')

        else:
                print('! Invalid Selection !')
```

```python
            elif chm2==6:
                print('''


+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Sort in ARTIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. by Ranking
                        2. by Followers
                        3. by Monthly Listeners
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm26=int(input('Enter Your Choice from above Menu -
----> '))

                if chm26==1:
                    print('''


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                How do you want to sort by Ranking ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                        1. In Ascending Order
                        2. In Descending Order
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    ''')
                    chm260=int(input('Enter Your Choice from above
Menu -----> '))

                    if chm260==1:

                            print(df6.sort_values(['Ranking'],asce
                            nding=True))
                    elif chm260==2:

                            print(df6.sort_values(['Ranking'],asce
                            nding=False))
                    else:

                            print('! Invalid Selection !')

                elif chm26==2:
                    print('''
```

```
                - - - - - - - - - - - - - - - - - - - - - - - -
                How do you want to sort by Followers ?
                - - - - - - - - - - - - - - - - - - - - - - - - -
                        1. In Ascending Order
                        2. In Descending Order
                - - - - - - - - - - - - - - - - - - - - - - - - -
                        ''')
                chm260=int(input('Enter Your Choice from above
Menu -----> '))

                if chm260==1:
                        print(df6.sort_values(['Followers(in
                        M)'],ascending=True))
                elif chm260==2:
                        print(df6.sort_values(['Followers(in
                        M)'],ascending=False))
                else:
                        print('! Invalid Selection !')

        elif chm26==3:
                print('''

                - - - - - - - - - - - - - - - - - - - - - - - -
                How do you want to sort by Monthly Listeners ?
                - - - - - - - - - - - - - - - - - - - - - - - - -
                        1. In Ascending Order
                        2. In Descending Order
                - - - - - - - - - - - - - - - - - - - - - - - - -

                        ''')
                chm260=int(input('Enter Your Choice from above
Menu -----> '))

                if chm260==1:
                        print(df6.sort_values(['Monthly_Listener(in
                        M)'],ascending=True))
                elif chm260==2:
                        print(df6.sort_values(['Monthly_Listener(in
                        M)'],ascending=False))
                else:
                        print('! Invalid Selection !')

        else:
```

```python
                    print('! Invalid Selection !')


            else:
                print('! Invalid Selection !')


        elif chm==4:

            print('''
```

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               In which File do you want to Create Report ?           *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                               1. Users                               *
*                               2. Podcast                             *
*                               3. Country                             *
*                               4. Playlist                            *
*                               5. Songs                               *
*                               6. Artist                              *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```python
            ''')
            chm4=int(input('Enter Your Choice from above Menu ----->
'))

            if chm4==1:
                print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
            How do you want to Create Report in USER ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                1. Users With Subscription
                2. Users with Rating above
                3. Users of Gender
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
                ''')
                chm41=int(input('Enter Your Choice from above Menu -
----> '))

                if chm41==1:
                    sb=input('Enter Subscription to search: ')
                    cond=df1['Subscription']==sb
```

```python
                dfsearch=df1[cond]
                if dfsearch.empty:
                        print('Not Found')

                else:
                        print(df1[cond])
                        yn=input('Do    you    want    to    save    this
report(Y/N): ')

                        if yn in 'yY':
                                fi=input('Enter File Name to save: ')
                                dfsearch.to_csv(fi+'.csv')
                                print('Saving your report...')
                                time.sleep(2)
                                print('Congrats! Your file ',fi,' is saved
successfully')

                        elif yn in 'nN':
                                print('Report not saved')

                        else:
                                print('! Invalid Selection !')
        elif chm41==2:
                rt=int(input('Enter Rating to search: '))
                cond=df1['Rating']>rt
                dfsearch=df1[cond]
                if dfsearch.empty:
                        print('Not Found')

                else:
                        print(df1[cond])
                        yn=input('Do    you    want    to    save    this
report(Y/N): ')

                        if yn in 'yY':
                                fi=input('Enter File Name to save: ')
                                dfsearch.to_csv(fi+'.csv')
                                print('Saving your report...')
                                time.sleep(2)
```

```
                                        print('Congrats! Your file ',fi,' is saved
successfully')

                              elif yn in 'nN':
                                    print('Report not saved')

                               else:
                                    print('! Invalid Selection !')

                  elif chm41==3:
                        gn=input('Enter Gender to search: ')
                        cond=df1['Gender']==gn
                        dfsearch=df1[cond]
                        if dfsearch.empty:
                                print('Not Found')

                        else:
                                print(df1[cond])
                                yn=input('Do    you    want    to    save    this
report(Y/N): ')

                                if yn in 'yY':
                                        fi=input('Enter File Name to save: ')
                                        dfsearch.to_csv(fi+'.csv')
                                        print('Saving your report...')
                                        time.sleep(2)
                                        print('Congrats! Your file ',fi,' is saved
successfully')

                              elif yn in 'nN':
                                    print('Report not saved')

                               else:
                                    print('! Invalid Selection !')

                  else:
                        print('! Invalid Selection !')
```

```python
            elif chm4==2:
                print('''


+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Create Report in PODCAST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                    1. Podcast of Genre
                    2. Podcast of Language
                    3. Podcast with Episodes above
                    4. Podcast with Ratings above
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                ''')
                chm42=int(input('Enter Your Choice from above Menu -
----> '))

                if chm42==1:
                    gr=input('Enter Genre to search: ')
                    cond=df2['Genre']==gr
                    dfsearch=df2[cond]
                    if dfsearch.empty:
                        print('Not Found')

                    else:
                        print(df2[cond])
                        yn=input('Do   you   want   to   save   this
report(Y/N): ')

                        if yn in 'yY':
                            fi=input('Enter File Name to save: ')
                            dfsearch.to_csv(fi+'.csv')
                            print('Saving your report...')
                            time.sleep(2)
                            print('Congrats! Your file ',fi,' is saved
successfully')

                        elif yn in 'nN':
                            print('Report not saved')

                        else:
                            print('! Invalid Selection !')
```

```python
            elif chm42==1:
                lg=input('Enter Language to search: ')
                cond=df2['Language']==lg
                dfsearch=df2[cond]
                if dfsearch.empty:
                    print('Not Found')

                else:
                    print(df2[cond])
                    yn=input('Do you want to save this report(Y/N): ')

                    if yn in 'yY':
                        fi=input('Enter File Name to save: ')
                        dfsearch.to_csv(fi+'.csv')
                        print('Saving your report...')
                        time.sleep(2)
                        print('Congrats! Your file ',fi,' is saved successfully')

                    elif yn in 'nN':
                        print('Report not saved')

                    else:
                        print('! Invalid Selection !')
            elif chm42==1:
                ep=int(input('Enter Episodes(above) to search: '))
                cond=df2['Episodes']>ep
                dfsearch=df2[cond]
                if dfsearch.empty:
                    print('Not Found')

                else:
                    print(df2[cond])
                    yn=input('Do you want to save this report(Y/N): ')

                    if yn in 'yY':
                        fi=input('Enter File Name to save: ')
```

```
                        dfsearch.to_csv(fi+'.csv')
                        print('Saving your report...')
                        time.sleep(2)
                        print('Congrats! Your file ',fi,' is saved
successfully')

                elif yn in 'nN':
                        print('Report not saved')

                else:
                        print('! Invalid Selection !')

        elif chm42==1:
                rt=int(input('Enter Genre to search: '))
                cond=df2['Genre']>rt
                dfsearch=df2[cond]
                if dfsearch.empty:
                        print('Not Found')

                else:
                        print(df2[cond])
                        yn=input('Do    you    want    to    save    this
report(Y/N): ')

                        if yn in 'yY':
                                fi=input('Enter File Name to save: ')
                                dfsearch.to_csv(fi+'.csv')
                                print('Saving your report...')
                                time.sleep(2)
                                print('Congrats! Your file ',fi,' is saved
successfully')

                        elif yn in 'nN':
                                print('Report not saved')

                        else:
                                print('! Invalid Selection !')

        else:
                print('! Invalid Selection !')
```

```python
            elif chm4==3:
                print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Create Report in COUNTRY ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. Country of Continent
                        2. Countries with Users above
                        3. Countries with AvgUserTime above
                        4. Countries with Popular Genre
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
                ''')
                chm43=int(input('Enter Your Choice from above Menu -
----> '))
                if chm43==1:
                    ct=input('Enter Continent to search: ')
                    cond=df3['Continent']==ct
                    dfsearch=df3[cond]
                    if dfsearch.empty:
                        print('Not Found')

                    else:
                        print(df3[cond])
                        yn=input('Do    you    want    to    save    this
report(Y/N): ')

                        if yn in 'yY':
                            fi=input('Enter File Name to save: ')
                            dfsearch.to_csv(fi+'.csv')
                            print('Saving your report...')
                            time.sleep(2)
                            print('Congrats! Your file ',fi,' is saved
successfully')

                        elif yn in 'nN':
                            print('Report not saved')

                        else:
                            print('! Invalid Selection !')
```

```python
            elif chm43==2:
                    ns=float(input('Enter Users(in M above) to search:
'))

                    cond=df3['Users(in M)']>ns
                    dfsearch=df3[cond]
                    if dfsearch.empty:
                            print('Not Found')

                    else:
                            print(df3[cond])
                            yn=input('Do you want to save this
report(Y/N): ')

                            if yn in 'yY':
                                    fi=input('Enter File Name to save: ')
                                    dfsearch.to_csv(fi+'.csv')
                                    print('Saving your report...')
                                    time.sleep(2)
                                    print('Congrats! Your file ',fi,' is saved
successfully')

                            elif yn in 'nN':
                                    print('Report not saved')

                            else:
                                    print('! Invalid Selection !')

            elif chm43==3:
                    at=float(input('Enter AvgUserTime(in M above) to
search: '))

                    cond=df3['AvgUserTime(in hrs)']>at
                    dfsearch=df3[cond]
                    if dfsearch.empty:
                            print('Not Found')

                    else:
                            print(df3[cond])
                            yn=input('Do you want to save this
report(Y/N): ')
```

```python
                    if yn in 'yY':
                        fi=input('Enter File Name to save: ')
                        dfsearch.to_csv(fi+'.csv')
                        print('Saving your report...')
                        time.sleep(2)
                        print('Congrats! Your file ',fi,' is saved
successfully')

                    elif yn in 'nN':
                        print('Report not saved')

                    else:
                        print('! Invalid Selection !')

            elif chm43==4:
                pg=input('Enter Popular Genre to search: ')
                cond=df3['Popular_Genre']==pg
                dfsearch=df3[cond]
                if dfsearch.empty:
                    print('Not Found')

                else:
                    print(df3[cond])
                    yn=input('Do    you    want    to    save    this
report(Y/N): ')

                    if yn in 'yY':
                        fi=input('Enter File Name to save: ')
                        dfsearch.to_csv(fi+'.csv')
                        print('Saving your report...')
                        time.sleep(2)
                        print('Congrats! Your file ',fi,' is saved
successfully')

                    elif yn in 'nN':
                        print('Report not saved')

                    else:
                        print('! Invalid Selection !')
```

```python
                        else:
                                print('! Invalid Selection !')



                elif chm4==4:
                        print('''


+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Create Report in PLAYLIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. Playlist with No Of Songs above
                        2. Playlist with Views above
                        3. Playlist with Duration above
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +


                ''')
                        chm44=int(input('Enter Your Choice from above Menu -
----> '))

                        if chm44==1:
                                ns=int(input('Enter No Of Songs(above) to search:
'))

                                cond=df4['No_of_Songs']>ns
                                dfsearch=df4[cond]
                                if dfsearch.empty:
                                        print('Not Found')

                                else:
                                        print(df4[cond])
                                        yn=input('Do you want to save this
report(Y/N): ')

                                        if yn in 'yY':
                                                fi=input('Enter File Name to save: ')
                                                dfsearch.to_csv(fi+'.csv')
                                                print('Saving your report...')
                                                time.sleep(2)
                                                print('Congrats! Your file ',fi,' is saved
successfully')
```

```python
                        elif yn in 'nN':
                                print('Report not saved')

                        else:
                                print('! Invalid Selection !')

            elif chm44==2:
                    vw=float(input('Enter Views(in M above) to search: '))
                    cond=df4['Views (in M)']>vw
                    dfsearch=df4[cond]
                    if dfsearch.empty:
                            print('Not Found')

                    else:
                            print(df4[cond])
                            yn=input('Do you want to save this report(Y/N): ')

                            if yn in 'yY':
                                    fi=input('Enter File Name to save: ')
                                    dfsearch.to_csv(fi+'.csv')
                                    print('Saving your report...')
                                    time.sleep(2)
                                    print('Congrats! Your file ',fi,' is saved successfully')

                            elif yn in 'nN':
                                    print('Report not saved')

                            else:
                                    print('! Invalid Selection !')

            elif chm44==1:
                    dr=float(input('Enter Duration(in hrs above) to search: '))
                    cond=df4['Duration (in hrs)']>dr
                    dfsearch=df4[cond]
                    if dfsearch.empty:
```

```python
                            print('Not Found')
                    else:
                            print(df4[cond])
                            yn=input('Do  you  want  to  save  this
report(Y/N): ')

                            if yn in 'yY':
                                    fi=input('Enter File Name to save: ')
                                    dfsearch.to_csv(fi+'.csv')
                                    print('Saving your report...')
                                    time.sleep(2)
                                    print('Congrats! Your file ',fi,' is saved
successfully')

                            elif yn in 'nN':
                                    print('Report not saved')

                            else:
                                    print('! Invalid Selection !')
                else:
                        print('! Invalid Selection !')

        elif chm4==5:
                print('''
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                How do you want to Create Report in SONG ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        1. Songs with Realeased Year
                        2. Songs with In Spotify Playlist above
                        3. Songs with Streams above
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

''')
                chm45=int(input('Enter Your Choice from above Menu -
----> '))

                if chm45==1:
                        ry=int(input('Enter Released Year to search: '))
                        cond=df5['released_year']==ry
```

```python
                        dfsearch=df5[cond]
                        if dfsearch.empty:
                                print('Not Found')

                        else:
                                print(df5[cond])
                                yn=input('Do    you    want    to    save    this
report(Y/N): ')

                                if yn in 'yY':
                                        fi=input('Enter File Name to save: ')
                                        dfsearch.to_csv(fi+'.csv')
                                        print('Saving your report...')
                                        time.sleep(2)
                                        print('Congrats! Your file ',fi,' is saved
successfully')

                                elif yn in 'nN':
                                        print('Report not saved')

                                else:
                                        print('! Invalid Selection !')
                elif chm45==2:
                        sp=int(input('Enter  In  Spotify  Playlist(above)  to
search: '))
                        cond=df5['in_spotify_playlists ']>sp
                        dfsearch=df5[cond]
                        if dfsearch.empty:
                                print('Not Found')

                        else:
                                print(df5[cond])
                                yn=input('Do    you    want    to    save    this
report(Y/N): ')

                                if yn in 'yY':
                                        fi=input('Enter File Name to save: ')
                                        dfsearch.to_csv(fi+'.csv')
                                        print('Saving your report...')
```

```python
                                time.sleep(2)
                                print('Congrats! Your file ',fi,' is saved
successfully')

                        elif yn in 'nN':
                                print('Report not saved')

                        else:
                                print('! Invalid Selection !')


                elif chm45==3:

                        st=float(input('Enter   Streams(in   M   above)   to
search: '))
                        cond=df5['streams (in M)']>st
                        dfsearch=df5[cond]
                        if dfsearch.empty:
                                print('Not Found')

                        else:
                                print(df5[cond])
                                yn=input('Do   you   want   to   save   this
report(Y/N): ')

                                if yn in 'yY':
                                        fi=input('Enter File Name to save: ')
                                        dfsearch.to_csv(fi+'.csv')
                                        print('Saving your report...')
                                        time.sleep(2)
                                        print('Congrats! Your file ',fi,' is saved
successfully')

                                elif yn in 'nN':
                                        print('Report not saved')

                                else:
                                        print('! Invalid Selection !')

                elif chm4==6:
```

```
print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
          How do you want to Create Report in ARTIST ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  1. Artist with Nationality
                  2. Artist with Ranking Above
                  3. Artist with Followers above
                  4. Artist with Monthly Listeners above
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
''')
chm46=int(input('Enter Your Choice from above Menu -
----> '))

if chm46==1:
    nt=input('Enter Nationality to search: ')
    cond=df6['Nationality']==nt
    dfsearch=df6[cond]
    if dfsearch.empty:
        print('Not Found')

    else:
        print(df6[cond])
        yn=input('Do you want to save this
report(Y/N): ')


        if yn in 'yY':
            fi=input('Enter File Name to save: ')
            dfsearch.to_csv(fi+'.csv')
            print('Saving your report...')
            time.sleep(2)
            print('Congrats! Your file ',fi,' is saved
successfully')

        elif yn in 'nN':
            print('Report not saved')

        else:
            print('! Invalid Selection !')

elif chm46==2:
```

```python
        rk=int(input('Enter Ranking(above) to search: '))
        cond=df6['Ranking']>rk
        dfsearch=df6[cond]
        if dfsearch.empty:
            print('Not Found')

        else:
            print(df6[cond])
            yn=input('Do you want to save this report(Y/N): ')

            if yn in 'yY':
                fi=input('Enter File Name to save: ')
                dfsearch.to_csv(fi+'.csv')
                print('Saving your report...')
                time.sleep(2)
                print('Congrats! Your file ',fi,' is saved successfully')

            elif yn in 'nN':
                print('Report not saved')

            else:
                print('! Invalid Selection !')


    elif chm46==3:
        fl=float(input('Enter Followers(in M above) to search: '))
        cond=df6['Followers (in M)']>fl
        dfsearch=df6[cond]
        if dfsearch.empty:
            print('Not Found')

        else:
            print(df6[cond])
            yn=input('Do you want to save this report(Y/N): ')

            if yn in 'yY':
```

```python
                                    fi=input('Enter File Name to save: ')
                                    dfsearch.to_csv(fi+'.csv')
                                    print('Saving your report...')
                                    time.sleep(2)
                                    print('Congrats! Your file ',fi,' is saved
successfully')

                            elif yn in 'nN':
                                    print('Report not saved')

                             else:
                                    print('! Invalid Selection !')

                    elif chm46==3:
                            ml=float(input('Enter    Monthly    Listener(in    M
above) to search: '))
                            cond=df6['Monthly_Listener(in M)']>ml
                            dfsearch=df6[cond]
                            if dfsearch.empty:
                                    print('Not Found')

                            else:
                                    print(df6[cond])
                                    yn=input('Do    you    want    to    save    this
report(Y/N): ')

                                    if yn in 'yY':
                                            fi=input('Enter File Name to save: ')
                                            dfsearch.to_csv(fi+'.csv')
                                            print('Saving your report...')
                                            time.sleep(2)
                                            print('Congrats! Your file ',fi,' is saved
successfully')

                                    elif yn in 'nN':
                                            print('Report not saved')

                                     else:
                                            print('! Invalid Selection !')
                    else:
```

```python
                print('! Invalid Selection !')

        else:
            print('! Invalid Selection !')


    elif chm==5:

        print('''

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                    DATA VISUALISATION (GRAPHS)                  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                        1. Line Chart                           *
*                        2. Bar Graph                            *
*                        3. Histogram                            *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

        ''')
        chm5=int(input('Enter Your Choice from above Menu ----->
'))

        if chm5==1:
            print('''

+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  Which Line Chart do you want ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                  1. Podcast Genre v/s Episodes
                  2. Country v/s No Of Users
                  3. Country v/s Avg User Time
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

            ''')
            chm51=int(input('Enter Your Choice from above Menu -
----> '))

            if chm51==1:
                x=df2['Genre']
                y=df2['Episodes']
                plt.plot(x,y)
                plt.xlabel('Genre')
                plt.ylabel('Episodes')
```

```python
                        sf=input('Do you want to save the figure ?(Y/N): ')

                        if sf in 'yY':
                            fm=input('Enter Graph Name to save: ')
                            plt.savefig(fm+'.png')
                            print('Saving your graph...')
                            time.sleep(2)
                            plt.show()
                            print('Congrats!   Your   Graph   is   saved
successfully')

                        elif sf in 'nN':
                            plt.show()

                        else:
                            print('! Invalid Selection !')
                    elif chm51==2:
                        x=df3['Name']
                        y=df3['Users(in M)']
                        plt.plot(x,y,label='Users(in M)')
                        plt.xlabel('Countries')
                        plt.ylabel('No Of Users(in M)')
                        plt.legend()
                        sf=input('Do you want to save the figure ?(Y/N): ')

                        if sf in 'yY':
                            fm=input('Enter Graph Name to save: ')
                            plt.savefig(fm+'.png')
                            print('Saving your graph...')
                            time.sleep(2)
                            plt.show()
                            print('Congrats!   Your   Graph   is   saved
successfully')

                        elif sf in 'nN':
                            plt.show()

                        else:
                            print('! Invalid Selection !')
```

```python
            elif chm51==3:
                x=df3['Name']
                y=df3['AvgUserTime(in hrs)']
                plt.plot(x,y,label='Avg User Time(in hrs)')
                plt.xlabel('Countries')
                plt.ylabel('Avg User Time(in hrs)')
                plt.legend()
                sf=input('Do you want to save the figure ?(Y/N): ')

                if sf in 'yY':
                    fm=input('Enter Graph Name to save: ')
                    plt.savefig(fm+'.png')
                    print('Saving your graph...')
                    time.sleep(2)
                    plt.show()
                    print('Congrats!   Your   Graph   is   saved
successfully')

                elif sf in 'nN':
                    plt.show()

                else:
                    print('! Invalid Selection !')

            else:
                print('! Invalid Selection !')


        elif chm5==2:
            print('''
```

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                Which Bar Graph do you want ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                1. Podcast Language v/s Episodes
                2. Podcast Genre v/s Rating
                3. Continent v/s No Of Users
                4. Songs Released Year v/s Streams
                5. Continent v/s No Of Countries
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
```

```python
                        ''')
                        chm52=int(input('Enter Your Choice from above Menu -
----> '))
                    if chm52==1:
                        x=df2['Language']
                        y=df2['Episodes']
                        plt.bar(x,y,label='Episodes')
                        plt.xlabel('Language')
                        plt.ylabel('No Of Episodes')
                        plt.legend()
                        sf=input('Do you want to save the figure ?(Y/N): ')

                        if sf in 'yY':
                            fm=input('Enter Graph Name to save: ')
                            plt.savefig(fm+'.png')
                            print('Saving your graph...')
                            time.sleep(2)
                            plt.show()
                            print('Congrats!    Your    Graph    is    saved
successfully')

                        elif sf in 'nN':
                            plt.show()

                        else:
                            print('! Invalid Selection !')
                    elif chm52==2:
                        x=df2['Genre']
                        y=df2['Rating']
                        plt.bar(x,y,label='Rating')
                        plt.xlabel('Genre')
                        plt.ylabel('Ratings')
                        plt.legend()
                        sf=input('Do you want to save the figure ?(Y/N): ')

                        if sf in 'yY':
                            fm=input('Enter Graph Name to save: ')
                            plt.savefig(fm+'.png')
                            print('Saving your graph...')
```

```python
                time.sleep(2)
                plt.show()
                print('Congrats!    Your    Graph    is    saved
successfully')

            elif sf in 'nN':
                plt.show()

            else:
                print('! Invalid Selection !')

        elif chm52==3:
            x=df3['Continent']
            y=df3['Users(in M)']
            plt.bar(x,y,label='Users(in M)')
            plt.xlabel('Continents')
            plt.ylabel('No Of Users')
            plt.legend()
            sf=input('Do you want to save the figure ?(Y/N): ')

            if sf in 'yY':
                fm=input('Enter Graph Name to save: ')
                plt.savefig(fm+'.png')
                print('Saving your graph...')
                time.sleep(2)
                plt.show()
                print('Congrats!    Your    Graph    is    saved
successfully')

            elif sf in 'nN':
                plt.show()

            else:
                print('! Invalid Selection !')

        elif chm52==4:
            x=df5['released_year']
            y=df5['streams (in M)']
            plt.bar(x,y,label='Streams(in M)')
            plt.xlabel('Released Year')
```

```python
            plt.ylabel('No Of Views')
            plt.legend()
            sf=input('Do you want to save the figure ?(Y/N): ')


        if sf in 'yY':
            fm=input('Enter Graph Name to save: ')
            plt.savefig(fm+'.png')
            print('Saving your graph...')
            time.sleep(2)
            plt.show()
            print('Congrats!   Your    Graph    is    saved
successfully')

        elif sf in 'nN':
            plt.show()

        else:
            print('! Invalid Selection !')

    elif chm52==5:
        gdf3=df3.groupby('Continent')
        gdf31=gdf3.count()
        gdf31.plot(kind='bar',y='Name',label='No          Of
Countries')
        plt.legend()
        sf=input('Do you want to save the figure ?(Y/N): ')

        if sf in 'yY':
            fm=input('Enter Graph Name to save: ')
            plt.savefig(fm+'.png')
            print('Saving your graph...')
            time.sleep(2)
            plt.show()
            print('Congrats!   Your    Graph    is    saved
successfully')

        elif sf in 'nN':
            plt.show()
```

```python
            else:
                print('! Invalid Selection !')


        else:
            print('! Invalid Selection !')


    elif chm5==3:
        print('''
```

```python
        ''')
        chm53=int(input('Enter Your Choice from above Menu -
----> '))
        if chm53==1:
            x=df1['Rating']
            plt.hist(x)
            plt.xlabel('Ratings')
            plt.ylabel('No Of Users')
            sf=input('Do you want to save the figure ?(Y/N): ')

            if sf in 'yY':
                fm=input('Enter Graph Name to save: ')
                plt.savefig(fm+'.png')
                print('Saving your graph...')
                time.sleep(2)
                plt.show()
                print('Congrats!    Your    Graph    is    saved
successfully')

            elif sf in 'nN':
                plt.show()
```

```python
            else:
                print('! Invalid Selection !')

        elif chm53==2:
            x=df2['Language']
            plt.hist(x)
            plt.xlabel('Language')
            plt.ylabel('No Of Podcasts')
            sf=input('Do you want to save the figure ?(Y/N): ')

            if sf in 'yY':
                fm=input('Enter Graph Name to save: ')
                plt.savefig(fm+'.png')
                print('Saving your graph...')
                time.sleep(2)
                plt.show()
                print('Congrats!   Your   Graph   is   saved
successfully')

            elif sf in 'nN':
                plt.show()

            else:
                print('! Invalid Selection !')

        elif chm53==3:
            x=df2['Rating']
            plt.hist(x,bins=7)
            plt.xlabel('Ratings')
            plt.ylabel('No Of Podcasts')
            sf=input('Do you want to save the figure ?(Y/N): ')

            if sf in 'yY':
                fm=input('Enter Graph Name to save: ')
                plt.savefig(fm+'.png')
                print('Saving your graph...')
                time.sleep(2)
                plt.show()
                print('Congrats!   Your   Graph   is   saved
successfully')
```

```python
                    elif sf in 'nN':
                        plt.show()

                    else:
                        print('! Invalid Selection !')

            elif chm53==4:
                x=df5['released_year']
                plt.hist(x)
                plt.xlabel('Released Year')
                plt.ylabel('Ratings')
                sf=input('Do you want to save the figure ?(Y/N): ')

                if sf in 'yY':
                    fm=input('Enter Graph Name to save: ')
                    plt.savefig(fm+'.png')
                    print('Saving your graph...')
                    time.sleep(2)
                    plt.show()
                    print('Congrats!  Your   Graph   is   saved
successfully')

                elif sf in 'nN':
                    plt.show()

                else:
                    print('! Invalid Selection !')

            else:
                print('! Invalid Selection !')


        else:
            print('! Invalid Selection !')



    elif chm==6:
        print('')
```

```python
            print('''
                 Thank You for choosing 𝓜𝓮𝓵𝓸𝓭𝔂 𝓗𝓾𝓫 :)
         To know more about us, visit our website " melodyhub.co.in "
            ''')

            break

        else:
            print('! Invalid Selection !')

else:
    print('! Invalid Selection !')
```

OUTPUT SCREENS
ADMIN CONSOLE

```
~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~
~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~  ~~ * ~~
```

```
####################################
#  W h o  A r e  Y o u  ?  #
#        1. A D M I N          #
#        2. U S E R            #
####################################
```

```
Enter Your Choice >>> 1
Press ENTER to see main menu...
```

```
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    M ♥ E ♥ L ♥ O ♥ D ♥ Y ♥   ♥ H ♥ U ♥ B
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
```

```
1. Add a new Record
2. Delete a Record
3. Modify a Record
4. Export Dataframe to CSV
5. Exit
```

1. Adding a new record:

(a) User

```
Enter Your Choice from above Menu -----> 1
Enter User ID: U21
Enter User Name: Rudraksh Tank
Enter Email: tankrudraksh@gmail.com
Enter Password: 1832
Enter Registration Date(DD-MM-YYYY): 10-09-2022
Enter Gender(Male/Female): Male
Enter User Subscription(Free/Premium): Premium
Enter Review(in 10 Words or less): Nice but many bugs
Enter Rating (out of 5): 3
Congrats! Your record has been added
Press ENTER to see Record...
    User_ID      User_Name   ...      User_review Rating
20     U21   Rudraksh Tank   ...   Nice but many bugs       3

[1 rows x 9 columns]
```

(b) Podcast

```
Enter Your Choice from above Menu -----> 2
Enter Podcast name: Malgudi Days
Enter Creator: RK Narayan
Enter Podcast Genre: Drama
Enter Podcast Language: Hindi
Enter No. of Episodes: 35
Enter Rating(Out of 5): 4
Congrats! Your record has been added
Press ENTER to see Record...
     Podcast_Name Podcast_Artist  Genre Language  Episodes  Rating
20  Malgudi Days     RK Narayan  Drama    Hindi        35     4.0
```

(c) Country

```
Enter Your Choice from above Menu -----> 3
Enter Country Name: France
Enter Continent Name: Europe
Enter No of Users(in M): 3.4
Enter Popular Genre: Jazz
Enter Avg User Time(in hrs): 1.2
Congrats! Your record has been added
Press Enter to see Record...
      Name Continent  Users(in M) Popular_Genre  AvgUserTime(in hrs)
20  France    Europe          3.4          Jazz                  1.2
```

(d) Playlist

```
Enter Your Choice from above Menu -----> 4
Enter Playlist ID: PL21
Enter Playlist Name: Vibes
Enter Creator: Rajasi
Enter Song ID's: S11,S21,S23,S26
Enter Views(in M): 3.1
Enter Duration(in hrs): 1.1
Congrats! Your record has been added
Press Enter to see Record...
   Playlist_ID Playlist Creator     No._of_Songs  Views(inM)  Duration(inHrs)
20        PL21    Vibes  Rajasi  S11,S21,S23,S26        3.1              1.1
```

(e) Song

```
Enter Your Choice from above Menu -----> 5
Enter Song ID: S27
Enter Track Name: Believer
Enter Artist Names: Imagine Dragons
Enter Released Year: 2018
Enter in Spotify Playlist: 890
Enter no of Streams(in M): 16.7
Congrats! Your record has been added
Press ENTER to see Record...
   Song_ID track_name  ...  in_spotify_playlists    streams (in M)
25     S27    Believer  ...                   890             16.7

[1 rows x 6 columns]
```

(f) Playlist

```
Enter Your Choice from above Menu -----> 6
Enter Artist ID: A21
Enter Artist Name: Lady Gaga
Enter Artist Nationality: American
Enter Artist Ranking: 89
Enter Artist Followers(in M): 21.3
Enter Monthly Listeners(in M): 18.9
Congrats! Your record has been added
Press ENTER to see Record...
   Artist_ID     Artist  ... Followers(in M)  Monthly_Listener(inM)
20       A21  Lady Gaga  ...            21.3                   18.9

[1 rows x 6 columns]
```

2. Deleting a record:

(a) User

```
Enter INDEX to delete: 5
Your Record has been removed
Press ENTER to see File...
    User_ID  ... Rating
0       U01  ...      5
1       U02  ...      5
2       U03  ...      4
3       U04  ...      1
4       U05  ...      1
6       U07  ...      5
7       U08  ...      3
8       U09  ...      5
9       U10  ...      1
10      U11  ...      2
11      U12  ...      1
12      U13  ...      1
13      U14  ...      1
14      U15  ...      5
15      U16  ...      5
16      U17  ...      2
17      U18  ...      3
18      U19  ...      1
19      U20  ...      1
20      U21  ...      3

[20 rows x 9 columns]
```

(b) Podcast

```
Enter INDEX to delete: 17
Your Record has been removed
Press ENTER to see File...
            Podcast_Name           Podcast_Artist  ... Episodes Rating
0           Bhagvad Gita          Swami Adgadanand  ...       18    5.0
1         Nightmare Tales            Kat Wolfgang  ...       14    4.6
2         Shivaji Maharaj           Aditya Davane  ...       34    4.9
3   Indian Silicon Valley     Jivraj Singh Sachar  ...      133    4.7
4            Far From Fat            Keshav Naidu  ...      259    4.3
5         Climate Emerger             Suno India  ...       61    4.7
6            Mahabharatam          Titanis Studios  ...       15    4.8
7          Bhoot Bhulaiya                 Kommune  ...        7    4.7
8             Getting Meta            IVM Podcasts  ...        7    4.8
9        Heirs of Pandavas              WYN Studio  ...       10    4.6
10          Zindgi Diaries            IVM Podcasts  ...       20    5.0
11           Ek Aur Kahani         Spotify Studios  ...       12    4.6
12      The Internet said so          Varun Thakur  ...      175    4.9
13            Rotten Mango    StephanieSoo&Ramble  ...      272    4.9
14      Founders Unfiltered            A Junior VC  ...       81    4.9
15      Srimad Bhagvad Gita               Shemaroo  ...       18    4.8
16           Chol Rajvansh  Channel 176Productions  ...       10    4.9
18   Abhijit Chavda Podcas          Abhijit Chavda  ...       35    5.0
19        All About Movies         Spotify Studios  ...      250    4.2
20            Malgudi Days             RK Narayan  ...       35    4.0
```

(c) Country

```
Enter INDEX to delete: 14
Your Record has been removed
Press ENTER to see File...
          Name        Continent    Users(in M)  Popular_Genre   AvgUserTime(in hrs)
0        Bharat           Asia         55.36        Hip-Hop                    4.30
1          USA  North America         88.79           Rock                    3.80
2        Spain         Europe         47.51            Pop                    1.50
3       France         Europe         64.62            Pop                    2.00
4           UK         Europe          3.72          Lo-fi                    3.00
5       Norway         Europe          1.13       Symphonic                    0.50
6  South Korea           Asia          4.37          K-Pop                    1.50
7        Japan           Asia          5.46       Acoustic                    0.27
8       Canada  North America         11.82        Hip-Hop                    3.20
9    Argentina  South America          6.28          Tango                    2.50
10   Australia         Oceana          9.78           Rock                    1.30
11     Germany         Europe         21.27        Hip-Hop                    2.00
12    Pakistan           Asia         23.50         Ghazal                    4.00
13       Italy         Europe          7.88           Jazz                    3.00
15      Mexico  North America          2.50          K-Pop                    1.00
16    Portugal         Europe          1.20          Tango                    0.50
17    Mongolia           Asia          2.50        Hip-Hop                    2.20
18        Peru  South America          3.60       Acoustic                    3.30
19   Singapore           Asia          1.30           Rock                    1.00
20      France         Europe          3.40           Jazz                    1.20
```

(d) Playlist

```
Enter INDEX to delete: 19
Your Record has been removed
Press ENTER to see File...
    Playlist_ID            Playlist  ...  Views(inM)  Duration(inHrs)
0          PL01          Motivation  ...        13.4             3.40
1          PL02        Alan Wallker  ...         8.7             1.35
2          PL03    The Four Seasons  ...        12.3             7.35
3          PL04          Lofi-beats  ...         5.0             6.35
4          PL05      Homework Vibes  ...        11.3             7.90
5          PL06         Punjabi Rap  ...        30.0             2.40
6          PL07       Electro Dance  ...        14.8             3.90
7          PL08              Ghosts  ...        18.4             3.15
8          PL09             Miracle  ...        12.0             5.11
9          PL10       Relax and Jazz ...        21.4             5.30
10         PL11   Sitar Instrumental ...         9.4             2.00
11         PL12            Storytime ...         6.0             1.20
12         PL13         Latin Beats  ...        20.7             6.36
13         PL14          Lofi chill  ...        17.4            20.40
14         PL15            Maneskin  ...        24.7             1.40
15         PL16             G.O.A.T  ...         5.2            27.50
16         PL17          Plentitude  ...         6.3             3.50
17         PL18              Pagode  ...        13.1             2.50
18         PL19             Driving  ...        11.7             6.90
20         PL21               Vibes  ...         3.1             1.10

[20 rows x 6 columns]
```

(e) Song

```
Enter INDEX to delete: 18
Your Record has been removed
Press ENTER to see File...
    Song_ID            track_name  ...  in_spotify_playlists     streams (in M)
0       S01     Seven (feat. Latto)  ...                   553               12.1
1       S02                    LALA  ...                  1474               11.6
2       S03                 vampire  ...                  1397               10.1
3       S04            Cruel Summer  ...                  7858               21.1
4       S05           WHERE SHE GOES  ...                 3133               22.0
5       S06                Sprinter  ...                 2186               15.6
6       S07         Ella Baila Sola  ...                 3090               14.8
7       S08                Columbia  ...                   714               18.7
8       S09                fukumean  ...                  1096               17.2
9       S10           La Bebe - Remix  ...                2953               10.0
10      S11                un x100to  ...                2876               19.3
11      S12               Super Shy  ...                   422               27.3
12      S13                 Flowers  ...                 12211               21.1
13      S14                Daylight  ...                  3528               20.9
14      S15               As It Was  ...                 23575               25.1
15      S16               Kill Bill  ...                  8109               11.6
16      S17        Cupid - Twin Ver.  ...                2942               10.9
17      S18     What Was I Made For?  ...                   873               30.5
19      S20              Like Crazy  ...                   596               36.3
20      S21          Chore NCR Aale  ...                   202               18.0
21      S22                      ON  ...                   246               99.0
22      S23   It's Only A Paper Moon  ...                   160               64.0
23      S24                     Red  ...                   223               29.6
24      S25                Believer  ...                   890               17.5
25      S27                Believer  ...                   890               16.7

[25 rows x 6 columns]
```

(f) Artist

```
Enter INDEX to delete: 20
Your Record has been removed
Press ENTER to see File...
    Artist_ID              Artist  ...  Followers(in M)  Monthly_Listener(inM)
0         A01         Ed Sheeran  ...            11.29                  83.86
1         A02         Arjit Singh  ...           81.46                  37.07
2         A03       Billie Eilish  ...           82.11                  54.99
3         A04            Dua Lipa  ...           41.27                  70.70
4         A05        Taylor Swift  ...           77.56                  91.76
5         A06                 BTS  ...           66.40                  40.14
6         A07          The Weeknd  ...           70.35                 106.90
7         A08                Zayn  ...           22.67                  20.70
8         A09              Pritam  ...           19.36                  30.43
9         A10           Blackpink  ...           44.75                  23.50
10        A11       Justin Bieber  ...           73.88                  70.20
11        A12             Shakira  ...           31.05                  60.61
12        A13             Rihanna  ...           57.41                  70.50
13        A14         Charlie Puth  ...           21.14                  40.10
14        A15         Alan Walker  ...           39.16                  30.20
15        A16      Himesh Reshamiya  ...          11.50                   1.50
16        A17          Katy Perry  ...            5.60                   5.30
17        A18       Vishal Shekhar  ...            1.50                   2.40
18        A19            PJ Harvey  ...            5.60                   7.13
19        A20   Rahat Fateh Ali Khan  ...          2.00                   1.30

[20 rows x 6 columns]
```

3. Modifying a record:
(a) User (Modify Password)

```
Enter Index to Modify: 7
Enter New Password: 1029
Changes UPDATED
Press ENTER to see Changes...
   Password
7      1029
```

(b) Podcast (Modify Rating)

```
Enter Index to Modify: 18
Enter New Rating(Out of 5): 4.7
Changes UPDATED
Press ENTER to see Changes...
    Rating
18     4.7
```

(c) Country (Modify Avg User Time)

```
Enter Index to Modify: 0
Enter Updated Avg User Time(in hrs): 3.70
Changes UPDATED
Press ENTER to see Changes...
   AvgUserTime(in hrs)
0                  3.70
```

(d) Playlist (Modify Views)

```
Enter Index to Modify: 17
Enter Updated Views(in M): 15.6
Changes UPDATED
Press ENTER to see Changes...
    Views (in M)
17            15.6
```

(e) Song (Modify Streams/Views)

```
Enter Index to Modify: 21
Enter Updated Streams(in M): 67.2
Changes UPDATED
Press ENTER to see Changes...
    streams(in M)
21            67.2
```

(f) Artist (Modify Followers)

```
Enter Index to Modify: 19
Enter Updated Followers(in M): 2.18
Changes UPDATED
Press ENTER to see Changes...
    Followers (in M)
19              2.18
```

4. Exporting dataframe to csv

(a) User

```
Enter File Name: User_1
Exporting...
Congrats! Your file is saved successfully
```

(b) Podcast

```
Enter File Name: Podcast_1
Exporting...
Congrats! Your file is saved successfully
```

(c) Country

```
Enter File Name: Country_1
Exporting...
Congrats! Your file is saved successfully
```

(d) Playlist

```
Enter File Name: Playlist_1
Exporting...
Congrats! Your file is saved successfully
```

(e) Song

```
Enter File Name: Song_1
Exporting...
Congrats! Your file is saved successfully
```

(f) Artist
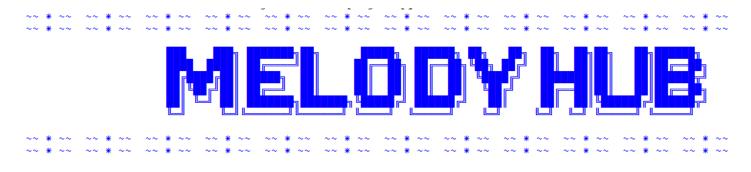
```
Enter File Name: Artist_1
Exporting...
Congrats! Your file is saved successfully
```

5. Exit

Thank You for choosing *Melody Hub* :)
To know more about us, visit our website " melodyhub.co.in "

USER CONSOLE

```
~~ * ~~   ~~ * ~~   ~~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~
~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~
```

MELODY HUB

```
~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~
~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~   ~~ * ~~
```

```
#################################
# ▒W▒h▒o▒▒A▒r▒e▒▒Y▒o▒u▒▒?▒ #
#       1. ▒A▒D▒M▒I▒N▒          #
#       2. ▒U▒S▒E▒R▒            #
#################################
```

```
Enter Your Choice >>> 2
Press ENTER to see main menu...
```

```
~ ~ ~ ~ ~   M ♥ E ♥ L ♥ O ♥ D ♥ Y ♥   ♥ H ♥ U ♥ B  ~ ~ ~ ~ ~ ~
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
```

```
    1. Read Files
    2. Search Records
    3. Sort Records
    4. Create a Report
    5. Data Visualisation
    6. EXIT
```

1. Read Files:

(a) User

```
    User_ID    ... Rating
0       U01    ...      5
1       U02    ...      5
2       U03    ...      4
3       U04    ...      1
4       U05    ...      1
5       U07    ...      5
6       U08    ...      3
7       U09    ...      5
8       U10    ...      1
9       U11    ...      2
10      U12    ...      1
11      U13    ...      1
12      U14    ...      1
13      U15    ...      5
14      U16    ...      5
15      U17    ...      2
16      U18    ...      3
17      U19    ...      1
18      U20    ...      1
19      U21    ...      3

[20 rows x 9 columns]
```

(b) Podcast

```
              Podcast_Name          Podcast_Artist  ... Episodes Rating
0             Bhagvad Gita          Swami Adgadanand ...       18    5.0
1           Nightmare Tales           Kat Wolfgang   ...       14    4.6
2          Shivaji Maharaj          Aditya Davane   ...       34    4.9
3      Indian Silicon Valley    Jivraj Singh Sachar  ...      133    4.7
4              Far From Fat           Keshav Naidu   ...      259    4.3
5           Climate Emerger             Suno India   ...       61    4.7
6             Mahabharatam          Titanis Studios  ...       15    4.8
7            Bhoot Bhulaiya               Kommune    ...        7    4.7
8              Getting Meta            IVM Podcasts  ...        7    4.8
9         Heirs of Pandavas             WYN Studio   ...       10    4.6
10           Zindgi Diaries            IVM Podcasts  ...       20    5.0
11            Ek Aur Kahani          Spotify Studios ...       12    4.6
12      The Internet said so         Varun Thakur   ...      175    4.9
13             Rotten Mango    StephanieSoo&Ramble   ...      272    4.9
14      Founders Unfiltered           A Junior VC    ...       81    4.9
15       Srimad Bhagvad Gita              Shemaroo   ...       18    4.8
16            Chol Rajvansh   Channel 176Productions ...       10    4.9
17     Abhijit Chavda Podcas         Abhijit Chavda  ...       35    5.0
18          All About Movies         Spotify Studios ...      250    4.7
19             Malgudi Days            RK Narayan    ...       35    4.0

[20 rows x 6 columns]
```

(c) Country

	Name	Continent	Users(in M)	Popular_Genre	AvgUserTime(in hrs)
0	Bharat	Asia	55.36	Hip-Hop	3.70
1	USA	North America	88.79	Rock	3.80
2	Spain	Europe	47.51	Pop	1.50
3	France	Europe	64.62	Pop	2.00
4	UK	Europe	3.72	Lo-fi	3.00
5	Norway	Europe	1.13	Symphonic	0.50
6	South Korea	Asia	4.37	K-Pop	1.50
7	Japan	Asia	5.46	Acoustic	0.27
8	Canada	North America	11.82	Hip-Hop	3.20
9	Argentina	South America	6.28	Tango	2.50
10	Australia	Oceana	9.78	Rock	1.30
11	Germany	Europe	21.27	Hip-Hop	2.00
12	Pakistan	Asia	23.50	Ghazal	4.00
13	Italy	Europe	7.88	Jazz	3.00
14	Mexico	North America	2.50	K-Pop	1.00
15	Portugal	Europe	1.20	Tango	0.50
16	Mongolia	Asia	2.50	Hip-Hop	2.20
17	Peru	South America	3.60	Acoustic	3.30
18	Singapore	Asia	1.30	Rock	1.00
19	France	Europe	3.40	Jazz	1.20

(d) Playlist

	Playlist_ID	Playlist	...	Views(inM)	Duration(inHrs)
0	PL01	Motivation	...	13.4	3.40
1	PL02	Alan Wallker	...	8.7	1.35
2	PL03	The Four Seasons	...	12.3	7.35
3	PL04	Lofi-beats	...	5.0	6.35
4	PL05	Homework Vibes	...	11.3	7.90
5	PL06	Punjabi Rap	...	30.0	2.40
6	PL07	Electro Dance	...	14.8	3.90
7	PL08	Ghosts	...	18.4	3.15
8	PL09	Miracle	...	12.0	5.11
9	PL10	Relax and Jazz	...	21.4	5.30
10	PL11	Sitar Instrumental	...	9.4	2.00
11	PL12	Storytime	...	6.0	1.20
12	PL13	Latin Beats	...	20.7	6.36
13	PL14	Lofi chill	...	17.4	20.40
14	PL15	Maneskin	...	24.7	1.40
15	PL16	G.O.A.T	...	5.2	27.50
16	PL17	Plentitude	...	6.3	3.50
17	PL18	Pagode	...	13.1	2.50
18	PL19	Driving	...	11.7	6.90
19	PL21	Vibes	...	3.1	1.10

[20 rows x 6 columns]

(e) Song

```
    Song_ID                    track_name  ...  in_spotify_playlists   streams (in M)
0       S01        Seven (feat. Latto)     ...                  553            12.1
1       S02                       LALA     ...                 1474            11.6
2       S03                    vampire     ...                 1397            10.1
3       S04               Cruel Summer     ...                 7858            21.1
4       S05             WHERE SHE GOES     ...                 3133            22.0
5       S06                   Sprinter     ...                 2186            15.6
6       S07            Ella Baila Sola     ...                 3090            14.8
7       S08                   Columbia     ...                  714            18.7
8       S09                   fukumean     ...                 1096            17.2
9       S10            La Bebe - Remix     ...                 2953            10.0
10      S11                   un x100to     ...                2876            19.3
11      S12                  Super Shy     ...                  422            27.3
12      S13                    Flowers     ...                12211            21.1
13      S14                   Daylight     ...                 3528            20.9
14      S15                  As It Was     ...                23575            25.1
15      S16                  Kill Bill     ...                 8109            11.6
16      S17          Cupid - Twin Ver.     ...                 2942            10.9
17      S18        What Was I Made For?     ...                  873            30.5
18      S20                 Like Crazy     ...                  596            36.3
19      S21             Chore NCR Aale     ...                  202            18.0
20      S22                         ON     ...                  246            99.0
21      S23      It's Only A Paper Moon     ...                  160            64.0
22      S24                        Red     ...                  223            29.6
23      S25                  Believer     ...                  890            17.5
24      S27                  Believer     ...                  890            16.7

[25 rows x 6 columns]
```

(f) Artist

```
    Artist_ID                 Artist  ... Followers(in M)   Monthly_Listener(inM)
0        A01            Ed Sheeran    ...           11.29                  83.86
1        A02           Arjit Singh   ...           81.46                  37.07
2        A03         Billie Eilish   ...           82.11                  54.99
3        A04              Dua Lipa   ...           41.27                  70.70
4        A05          Taylor Swift   ...           77.56                  91.76
5        A06                   BTS   ...           66.40                  40.14
6        A07            The Weeknd   ...           70.35                 106.90
7        A08                  Zayn   ...           22.67                  20.70
8        A09                Pritam   ...           19.36                  30.43
9        A10              Blackpink  ...           44.75                  23.50
10       A11         Justin Bieber  ...           73.88                  70.20
11       A12               Shakira  ...           31.05                  60.61
12       A13               Rihanna  ...           57.41                  70.50
13       A14           Charlie Puth  ...           21.14                  40.10
14       A15           Alan Walker   ...           39.16                  30.20
15       A16       Himesh Reshamiya  ...           11.50                   1.50
16       A17            Katy Perry   ...            5.60                   5.30
17       A18         Vishal Shekhar  ...            1.50                   2.40
18       A19             PJ Harvey   ...            5.60                   7.13
19       A20   Rahat Fateh Ali Khan  ...            2.00                   1.30

[20 rows x 6 columns]
```

2. Searching records in:
(a) User (By Ratings above)

```
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                              How do you want to Search Rating ?
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                         1. by Rating Above
                                         2. by Rating Below
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 1
Enter Rating(above) to search: 3
    User_ID  ... Rating
0       U01  ...      5
1       U02  ...      5
2       U03  ...      4
5       U07  ...      5
7       U09  ...      5
13      U15  ...      5
14      U16  ...      5

[7 rows x 9 columns]
```

(b) Podcast (By Language)

```
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                              How do you want to Search in PODCAST ?
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                         1. by Podcast Name
                                         2. by Creator
                                         3. by Genre
                                         4. by Language
                                         5. by Episodes
                                         6. by Ratings
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 4
Enter Language to search: Hindi
            Podcast_Name           Podcast_Artist  ... Episodes Rating
0           Bhagvad Gita       Swami Adgadanand  ...       18    5.0
2        Shivaji Maharaj        Aditya Davane  ...       34    4.9
7         Bhoot Bhulaiya              Kommune  ...        7    4.7
10        Zindgi Diaries         IVM Podcasts  ...       20    5.0
11         Ek Aur Kahani       Spotify Studios  ...       12    4.6
15    Srimad Bhagvad Gita            Shemaroo  ...       18    4.8
16         Chol Rajvansh  Channel 176Productions  ...     10    4.9
17  Abhijit Chavda Podcas       Abhijit Chavda  ...       35    5.0
18       All About Movies      Spotify Studios  ...      250    4.7
19         Malgudi Days          RK Narayan  ...       35    4.0

[10 rows x 6 columns]
```

(c) Country (By Continent)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                      How do you want to Search in COUNTRY ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                           1. by Country Name
                           2. by Continent
                           3. by No. Of Users
                           4. by Popular Genre
                           5. by Avg User Time
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

Enter Your Choice from above Menu -----> 2
Enter Continent name to search: Asia
         Name Continent   Users(in M) Popular_Genre   AvgUserTime(in hrs)
0        Bharat      Asia        55.36       Hip-Hop                  3.70
6   South Korea      Asia         4.37         K-Pop                  1.50
7         Japan      Asia         5.46      Acoustic                  0.27
12     Pakistan      Asia        23.50        Ghazal                  4.00
16     Mongolia      Asia         2.50       Hip-Hop                  2.20
18    Singapore      Asia         1.30          Rock                  1.00
```

(d) Playlist (By Views below)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                      How do you want to Search Views ?
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                           1. by Views Above
                           2. by Views Below
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

Enter Your Choice from above Menu -----> 2
Enter Views(in M below) to search: 10.5
   Playlist_ID            Playlist  ... Views (in M) Duration(inHrs)
1        PL02        Alan Wallker   ...          8.7            1.35
3        PL04          Lofi-beats   ...          5.0            6.35
10       PL11  Sitar Instrumental   ...          9.4            2.00
11       PL12           Storytime   ...          6.0            1.20
15       PL16             G.O.A.T   ...          5.2           27.50
16       PL17           Plentitude  ...          6.3            3.50
19       PL21               Vibes   ...          3.1            1.10

[7 rows x 6 columns]
```

(e) Song (By Released Year)

```
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        How do you want to Search in SONG ?
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                1. by Track Name
                                2. by Artist(s)
                                3. by Released Year
                                4. by Streams
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 3
Enter Released Year to search: 2022
    Song_ID        track_name  ... in_spotify_playlists   streams (in M)
2      S03            vampire  ...                 1397             10.1
9      S10  La Bebe - Remix    ...                 2953             10.0
15     S16          Kill Bill  ...                 8109             11.6
20     S22                 ON  ...                  246             99.0

[4 rows x 6 columns]
```

(f) Artist (By Nationality)

```
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                        How do you want to Search in ARTIST ?
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                1. by Artist ID
                                2. by Artist Name
                                3. by Nationality
                                4. by Ranking
                                5. by Followers
                                6. by Monthly Listeners
            + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 3
Enter Nationality to search: American
  Artist_ID         Artist  ... Followers(in M)  Monthly_Listener(inM)
2       A03   Billie Eilish  ...           82.11                  54.99
4       A05    Taylor Swift  ...           77.56                  91.76

[2 rows x 6 columns]
```

3. Sorting records in:

(a) User (By Rating in ascending order)

```
                       - - - - - - - - - - - - - - - - - - - - - - - -
                               How do you want to sort by Rating ?
                       - - - - - - - - - - - - - - - - - - - - - - - -
                               1. In Ascending Order
                               2. In Descending Order
                       - - - - - - - - - - - - - - - - - - - - - - - -

Enter Your Choice from above Menu -----> 1
    User_ID  ... Rating
17      U19  ...      1
3       U04  ...      1
4       U05  ...      1
12      U14  ...      1
11      U13  ...      1
8       U10  ...      1
18      U20  ...      1
10      U12  ...      1
9       U11  ...      2
15      U17  ...      2
16      U18  ...      3
19      U21  ...      3
6       U08  ...      3
2       U03  ...      4
13      U15  ...      5
14      U16  ...      5
5       U07  ...      5
1       U02  ...      5
7       U09  ...      5
0       U01  ...      5

[20 rows x 9 columns]
```

(b) Podcast (By Episodes in descending order)

(c) Country (By No. of Users in descending order)

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    How do you want to sort by No of Users ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                            1. In Ascending Order
                            2. In Descending Order
                    - - - - - - - - - - - - - - - - - - - - - - - - - -

Enter Your Choice from above Menu -----> 2
            Name        Continent   Users(in M)  Popular_Genre  AvgUserTime(in hrs)
1            USA    North America        88.79           Rock                 3.80
3         France           Europe        64.62            Pop                 2.00
0         Bharat             Asia        55.36        Hip-Hop                 3.70
2          Spain           Europe        47.51            Pop                 1.50
12       Pakistan            Asia        23.50         Ghazal                 4.00
11       Germany           Europe        21.27        Hip-Hop                 2.00
8         Canada    North America        11.82        Hip-Hop                 3.20
10     Australia           Oceana         9.78           Rock                 1.30
13         Italy           Europe         7.88           Jazz                 3.00
9       Argentina   South America         6.28          Tango                 2.50
7          Japan             Asia         5.46       Acoustic                 0.27
6     South Korea            Asia         4.37          K-Pop                 1.50
4             UK           Europe         3.72          Lo-fi                 3.00
17          Peru    South America         3.60       Acoustic                 3.30
19        France           Europe         3.40           Jazz                 1.20
14        Mexico    North America         2.50          K-Pop                 1.00
16      Mongolia             Asia         2.50        Hip-Hop                 2.20
18     Singapore             Asia         1.30           Rock                 1.00
15      Portugal           Europe         1.20          Tango                 0.50
5         Norway           Europe         1.13       Symphonic                0.50
```

(d) Playlist (By Duration in descending order)

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    How do you want to sort by Duration ?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                            1. In Ascending Order
                            2. In Descending Order
                    - - - - - - - - - - - - - - - - - - - - - - - - - -

Enter Your Choice from above Menu -----> 2
     Playlist_ID            Playlist  ... Views (in M)  Duration (in hrs)
15         PL16              G.O.A.T  ...          5.2              27.50
13         PL14           Lofi chill  ...         17.4              20.40
4          PL05       Homework Vibes  ...         11.3               7.90
2          PL03     The Four Seasons  ...         12.3               7.35
18         PL19              Driving  ...         11.7               6.90
12         PL13          Latin Beats  ...         20.7               6.36
3          PL04           Lofi-beats  ...          5.0               6.35
9          PL10        Relax and Jazz ...         21.4               5.30
8          PL09              Miracle  ...         12.0               5.11
6          PL07        Electro Dance  ...         14.8               3.90
16         PL17           Plentitude  ...          6.3               3.50
0          PL01           Motivation  ...         13.4               3.40
7          PL08               Ghosts  ...         18.4               3.15
17         PL18               Pagode  ...         13.1               2.50
5          PL06          Punjabi Rap  ...         30.0               2.40
10         PL11    Sitar Instrumental ...          9.4               2.00
14         PL15             Maneskin  ...         24.7               1.40
1          PL02         Alan Wallker  ...          8.7               1.35
11         PL12            Storytime  ...          6.0               1.20
19         PL21                Vibes  ...          3.1               1.10

[20 rows x 6 columns]
```

(e) Song (By Released Year in ascending order)

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    How do you want to sort by Released Year ?
                  - - - - - - - - - - - - - - - - - - - - - - - - - - -
                          1. In Ascending Order
                          2. In Descending Order
                  - - - - - - - - - - - - - - - - - - - - - - - - - - -

Enter Your Choice from above Menu ----->  1
    Song_ID              track_name  ...  in_spotify_playlists    streams (in M)
17     S18   What Was I Made For?    ...                   873              30.5
5      S06               Sprinter    ...                  2186              15.6
24     S27               Believer    ...                   890              16.7
16     S17     Cupid - Twin Ver.     ...                  2942              10.9
23     S25               Believer    ...                   890              17.5
4      S05         WHERE SHE GOES    ...                  3133              22.0
10     S11               un x100to    ...                  2876              19.3
0      S01    Seven (feat. Latto)    ...                   553              12.1
6      S07         Ella Baila Sola   ...                  3090              14.8
11     S12               Super Shy    ...                   422              27.3
1      S02                    LALA   ...                  1474              11.6
19     S21         Chore NCR Aale    ...                   202              18.0
3      S04           Cruel Summer    ...                  7858              21.1
22     S24                     Red   ...                   223              29.6
14     S15               As It Was   ...                 23575              25.1
7      S08                Columbia   ...                   714              18.7
18     S20               Like Crazy  ...                   596              36.3
2      S03                 vampire   ...                  1397              10.1
9      S10        La Bebe - Remix    ...                  2953              10.0
15     S16               Kill Bill   ...                  8109              11.6
20     S22                      ON   ...                   246              99.0
8      S09                fukumean   ...                  1096              17.2
13     S14                Daylight   ...                  3528              20.9
21     S23   It's Only A Paper Moon  ...                   160              64.0
12     S13                 Flowers   ...                 12211              21.1

[25 rows x 6 columns]
```

(f) Artist (By Monthly Listeners in ascending order)

```
                  - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                    How do you want to sort by Monthly Listeners ?
                  - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                          1. In Ascending Order
                          2. In Descending Order
                  - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Enter Your Choice from above Menu ----->  1
    Artist_ID                Artist  ...  Followers(in M)   Monthly_Listener(in M)
19        A20   Rahat Fateh Ali Khan  ...             2.00                     1.30
15        A16       Himesh Reshamiya  ...            11.50                     1.50
17        A18        Vishal Shekhar   ...             1.50                     2.40
16        A17            Katy Perry   ...             5.60                     5.30
18        A19             PJ Harvey   ...             5.60                     7.13
7         A08                  Zayn   ...            22.67                    20.70
9         A10             Blackpink   ...            44.75                    23.50
14        A15          Alan Walker    ...            39.16                    30.20
8         A09                Pritam   ...            19.36                    30.43
1         A02           Arjit Singh   ...            81.46                    37.07
13        A14          Charlie Puth   ...            21.14                    40.10
5         A06                   BTS   ...            66.40                    40.14
2         A03         Billie Eilish   ...            82.11                    54.99
11        A12               Shakira   ...            31.05                    60.61
10        A11         Justin Bieber   ...            73.88                    70.20
12        A13               Rihanna   ...            57.41                    70.50
3         A04              Dua Lipa   ...            41.27                    70.70
0         A01            Ed Sheeran   ...            11.29                    83.86
4         A05           Taylor Swift  ...            77.56                    91.76
6         A07            The Weeknd   ...            70.35                   106.90

[20 rows x 6 columns]
```

4. Creating reports in:
(a) User (Users with Subscription)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                     How do you want to Create Report in USER ?
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                              1. Users With Subscription
                              2. Users with Rating above
                              3. Users of Gender
              + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 1
Enter Subscription to search: Premium
    User_ID  ... Rating
0      U01   ...      5
6      U08   ...      3
8      U10   ...      1
11     U13   ...      1
17     U19   ...      1
19     U21   ...      3

[6 rows x 9 columns]
Do you want to save this report(Y/N): n
Report not saved
```

(b) Podcast (Podcasts of Language)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
              How do you want to Create Report in PODCAST ?
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                              1. Podcast of Genre
                              2. Podcast of Language
                              3. Podcast with Episodes above
                              4. Podcast with Ratings above
              + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 2
Enter Language to search: English
           Podcast_Name         Podcast_Artist  ... Episodes Rating
1         Nightmare Tales          Kat Wolfgang  ...       14    4.6
3   Indian Silicon Valley  Jivraj Singh Sachar  ...      133    4.7
4            Far From Fat          Keshav Naidu  ...      259    4.3
5         Climate Emerger            Suno India  ...       61    4.7
8            Getting Meta          IVM Podcasts  ...        7    4.8
9       Heirs of Pandavas            WYN Studio  ...       10    4.6
12    The Internet said so          Varun Thakur  ...      175    4.9
13           Rotten Mango  StephanieSoo&Ramble  ...      272    4.9
14     Founders Unfiltered          A Junior VC  ...       81    4.9

[9 rows x 6 columns]
```

(c) Country (Countries with Genre)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                 How do you want to Create Report in COUNTRY ?
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                          1. Country of Continent
                          2. Countries with Users above
                          3. Countries with AvgUserTime above
                          4. Countries with Popular Genre
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 4
Enter Popular Genre to search: Jazz
     Name Continent  Users(in M) Popular_Genre  AvgUserTime(in hrs)
13   Italy    Europe         7.88          Jazz                 3.0
19   France   Europe         3.40          Jazz                 1.2
Do you want to save this report(Y/N): y
Enter File Name to save: Country_Report
Saving your report...
Congrats! Your file  Country_Report  is saved successfully
```

(d) Playlist (Playlist with Views above)

```
+ + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                 How do you want to Create Report in PLAYLIST ?
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                          1. Playlist with No Of Songs above
                          2. Playlist with Views above
                          3. Playlist with Duration above
        + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
Enter Your Choice from above Menu -----> 2
Enter Views(in M above) to search: 15.5
   Playlist_ID        Playlist  ... Views (in M) Duration (in hrs)
5         PL06    Punjabi Rap   ...         30.0              2.40
7         PL08         Ghosts   ...         18.4              3.15
9         PL10  Relax and Jazz  ...         21.4              5.30
12        PL13     Latin Beats  ...         20.7              6.36
13        PL14     Lofi chill   ...         17.4             20.40
14        PL15       Maneskin   ...         24.7              1.40

[6 rows x 6 columns]
Do you want to save this report(Y/N): n
Report not saved
```

(e) Song (Song with Streams above)
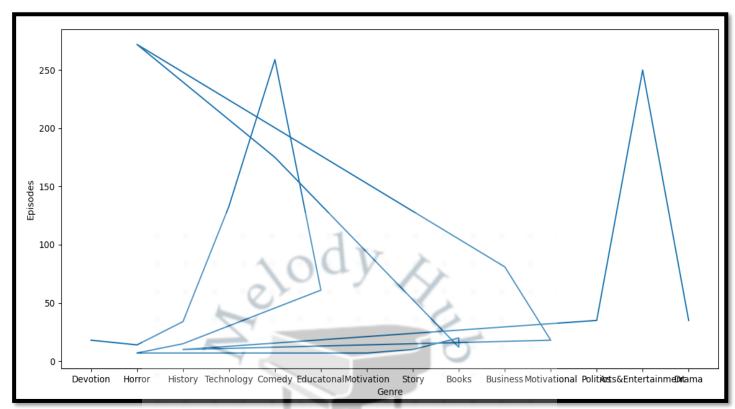
```
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         How do you want to Create Report in SONG ?
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                1. Songs with Realeased Year
                                2. Songs with In Spotify Playlist above
                                3. Songs with Streams above
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

Enter Your Choice from above Menu -----> 3
Enter Streams(in M above) to search: 20.5
    Song_ID              track_name  ... in_spotify_playlists    streams (in M)
3      S04            Cruel Summer  ...                 7858              21.1
4      S05          WHERE SHE GOES  ...                 3133              22.0
11     S12               Super Shy  ...                  422              27.3
12     S13                 Flowers  ...                12211              21.1
13     S14                Daylight  ...                 3528              20.9
14     S15               As It Was  ...                23575              25.1
17     S18     What Was I Made For?  ...                  873              30.5
18     S20             Like Crazy  ...                  596              36.3
20     S22                     ON  ...                  246              99.0
21     S23  It's Only A Paper Moon  ...                  160              64.0
22     S24                    Red  ...                  223              29.6

[11 rows x 6 columns]
Do you want to save this report(Y/N): y
Enter File Name to save: Song_Report
Saving your report...
Congrats! Your file  Song_Report  is saved successfully
```
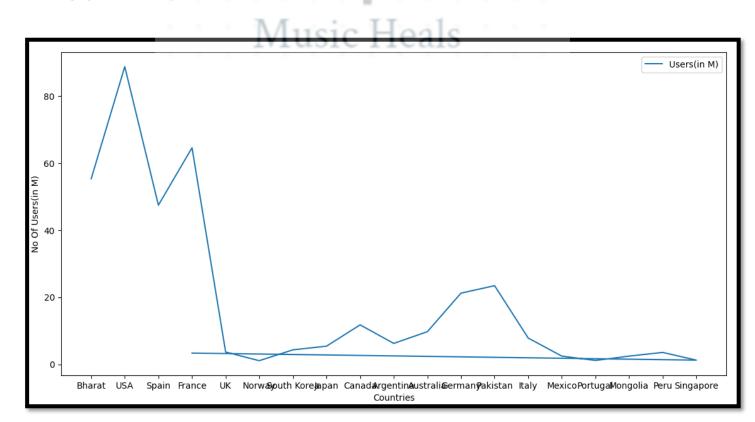
(f) Artist

```
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                         How do you want to Create Report in ARTIST ?
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +
                                1. Artist with Nationality
                                2. Artist with Ranking Above
                                3. Artist with Followers above
                                4. Artist with Monthly Listeners above
                    + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + + +

Enter Your Choice from above Menu -----> 2
Enter Ranking(above) to search: 10
    Artist_ID            Artist  ... Followers(in M)  Monthly_Listener(in M)
1        A02        Arjit Singh  ...           81.46                   37.07
2        A03      Billie Eilish  ...           82.11                   54.99
5        A06                BTS  ...           66.40                   40.14
7        A08               Zayn  ...           22.67                   20.70
8        A09             Pritam  ...           19.36                   30.43
9        A10          Blackpink  ...           44.75                   23.50
10       A11      Justin Bieber  ...           73.88                   70.20
11       A12            Shakira  ...           31.05                   60.61
13       A14        Charlie Puth  ...           21.14                   40.10
14       A15        Alan Walker  ...           39.16                   30.20
15       A16     Himesh Reshamiya  ...           11.50                    1.50
16       A17         Katy Perry  ...            5.60                    5.30
17       A18      Vishal Shekhar  ...            1.50                    2.40
18       A19           PJ Harvey  ...            5.60                    7.13
19       A20  Rahat Fateh Ali Khan  ...            2.00                    1.30

[15 rows x 6 columns]
Do you want to save this report(Y/N): n
Report not saved
```
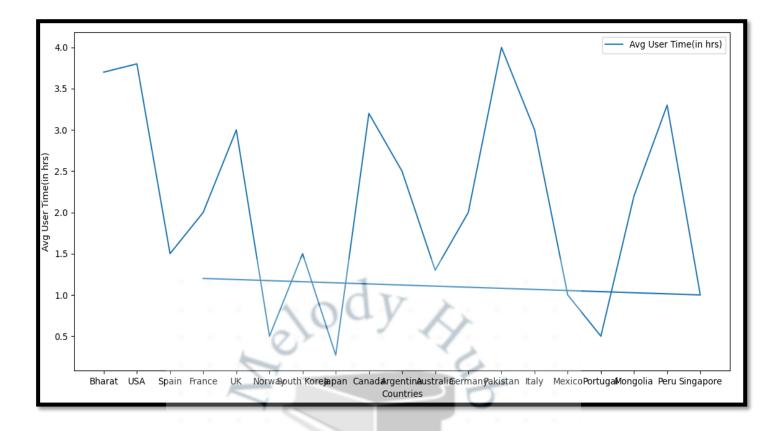
5. Data Visualisation:

(a) Line Chart:

(i) Podcast Genre v/s Episodes
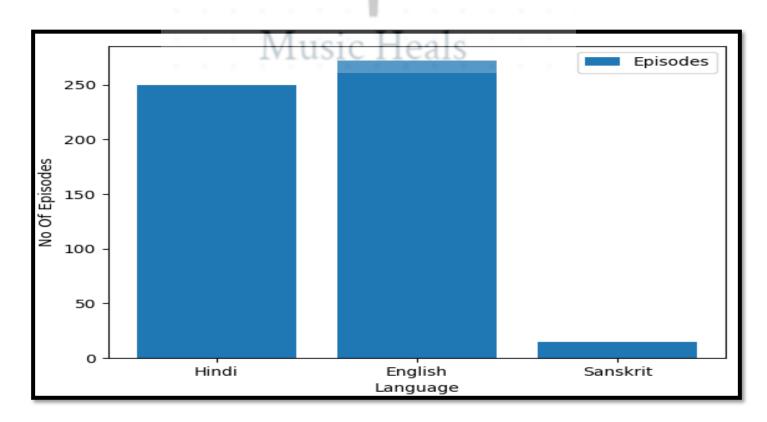

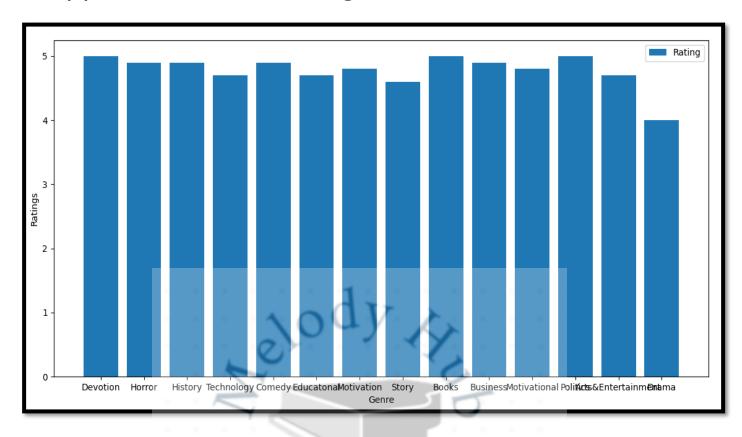### (ii) Country v/s No Of Users

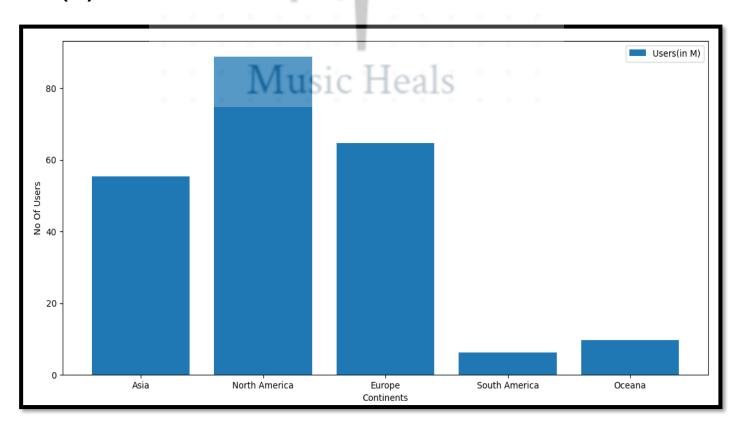**(iii) Country v/s Avg User Time**

(b) Bar Graph:
(i) Podcast Language v/s Episodes

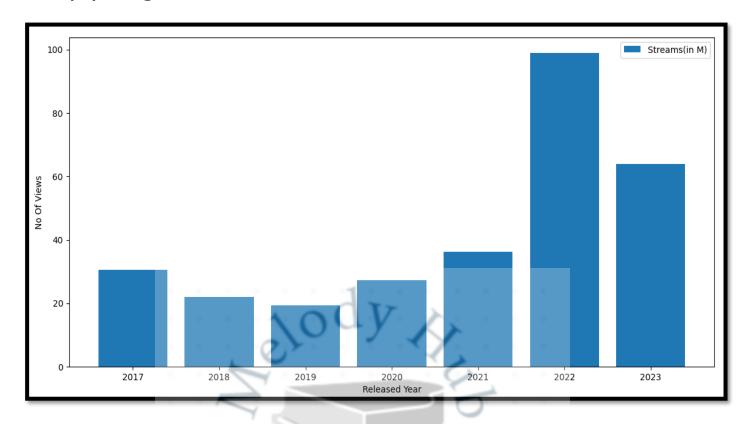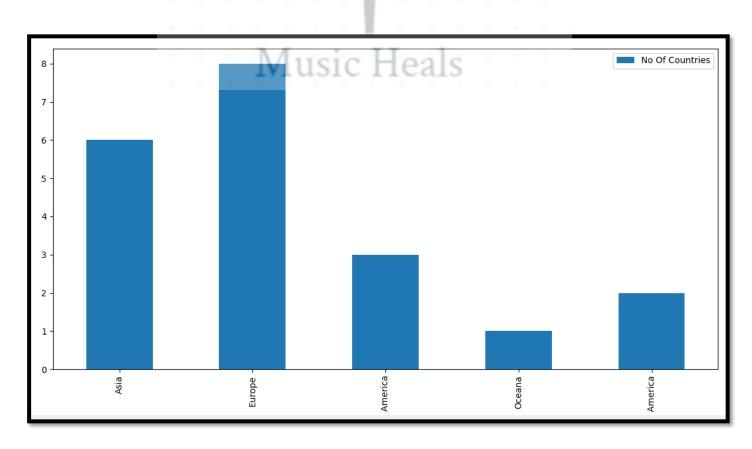## (ii) Podcast Genre v/s Rating

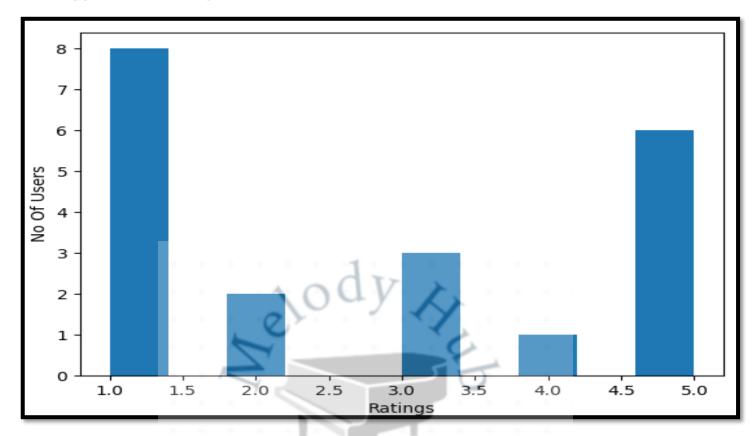## (iii) Continent v/s No Of Users

(iv) Songs Released Year v/s Streams
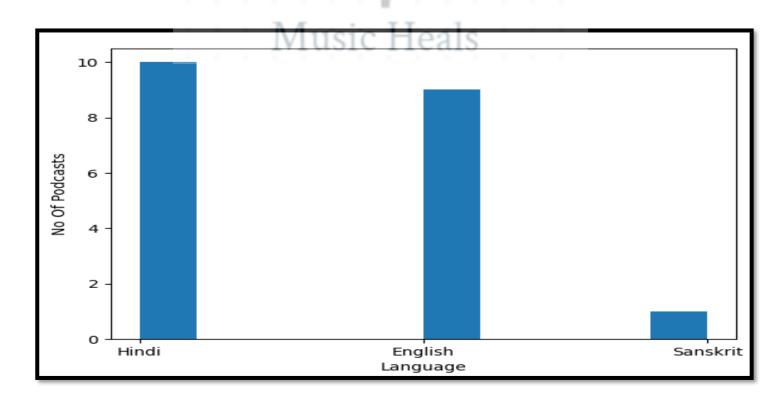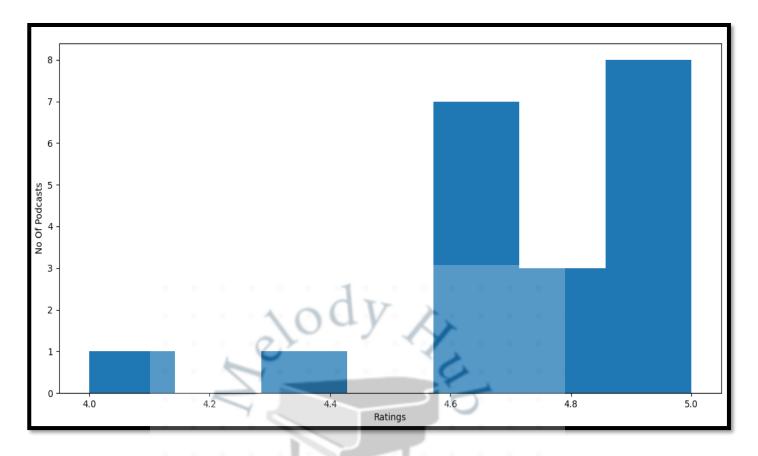

(v) Continent v/s No Of Countries

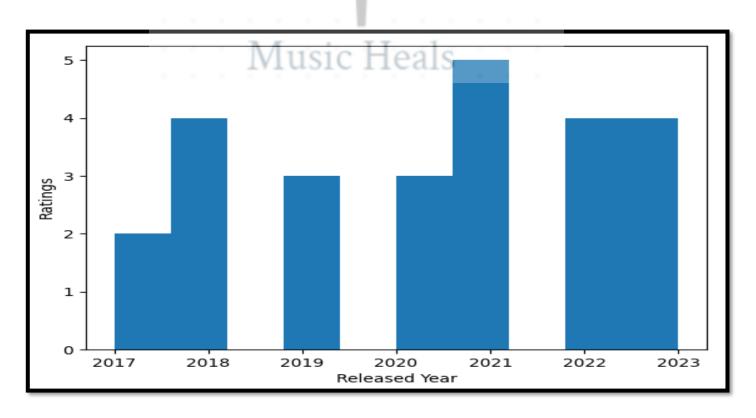## (c) Histogram:
(i) User Rating

(ii) Podcast Language

(iii) Podcast Rating

(iv) Songs Released Year

6. Exit

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