class SongNode:

def \_\_init\_\_(self, title, artist):

self.title = title

self.artist = artist

self.next = None

class Playlist:

def \_\_init\_\_(self):

self.head = None

def insert\_front(self, title, artist):

new\_song = SongNode(title, artist)

new\_song.next = self.head

self.head = new\_song

print(f'Song "{title}" inserted at the front.')

def insert\_back(self, title, artist):

new\_song = SongNode(title, artist)

if not self.head:

self.head = new\_song

else:

current = self.head

while current.next:

current = current.next

current.next = new\_song

print(f'Song "{title}" inserted at the back.')

def insert\_after(self, after\_title, title, artist):

current = self.head

while current:

if current.title == after\_title:

new\_song = SongNode(title, artist)

new\_song.next = current.next

current.next = new\_song

print(f'Song "{title}" inserted after "{after\_title}".')

return

current = current.next

print(f'Song "{after\_title}" not found. Cannot insert "{title}".')

def delete\_front(self):

if not self.head:

print("Playlist is empty. Nothing to delete at front.")

return

removed = self.head

self.head = self.head.next

print(f'Song "{removed.title}" removed from front.')

def delete\_back(self):

if not self.head:

print("Playlist is empty. Nothing to delete at back.")

return

if not self.head.next:

removed = self.head

self.head = None

print(f'Song "{removed.title}" removed from back (only song).')

return

current = self.head

while current.next.next:

current = current.next

removed = current.next

current.next = None

print(f'Song "{removed.title}" removed from back.')

def delete\_middle(self, title):

current = self.head

prev = None

while current:

if current.title == title:

if prev:

prev.next = current.next

else:

self.head = current.next

print(f'Song "{title}" removed from playlist.')

return

prev = current

current = current.next

print(f'Song "{title}" not found in playlist.')

def display\_playlist(self):

if not self.head:

print("Playlist is empty.")

return

current = self.head

idx = 1

print("\nPlaylist:")

while current:

print(f"{idx}. {current.title} - {current.artist}")

current = current.next

idx += 1

print()

def search\_song(self, title):

current = self.head

while current:

if current.title == title:

print(f'Found "{title}" by {current.artist} in the playlist.')

return

current = current.next

print(f'Song "{title}" not found in playlist.')

def main():

playlist = Playlist()

while True:

print("\n--- Playlist Menu ---")

print("1. Insert song at front")

print("2. Insert song at back")

print("3. Insert song after a song")

print("4. Delete song from front")

print("5. Delete song from back")

print("6. Delete a specific song by title")

print("7. Display playlist")

print("8. Search song by title")

print("9. Exit")

choice = input("Enter your choice (1-9): ")

if choice == '1':

title = input("Enter song title: ")

artist = input("Enter artist name: ")

playlist.insert\_front(title, artist)

elif choice == '2':

title = input("Enter song title: ")

artist = input("Enter artist name: ")

playlist.insert\_back(title, artist)

elif choice == '3':

after\_title = input("Enter the title of the song to insert after: ")

title = input("Enter new song title: ")

artist = input("Enter artist name: ")

playlist.insert\_after(after\_title, title, artist)

elif choice == '4':

playlist.delete\_front()

elif choice == '5':

playlist.delete\_back()

elif choice == '6':

title = input("Enter the title of the song to delete: ")

playlist.delete\_middle(title)

elif choice == '7':

playlist.display\_playlist()

elif choice == '8':

title = input("Enter the title of the song to search: ")

playlist.search\_song(title)

elif choice == '9':

print("Exiting... Goodbye!")

break

else:

print("Invalid choice! Please enter a number between 1 and 9.")

if \_\_name\_\_ == "\_\_main\_\_":

main()

OUTPUT:

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 1

Enter song title: wanna be yours

Enter artist name: arctic monkeys

Song "wanna be yours" inserted at the front.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 2

Enter song title: until i found you

Enter artist name: stephen sanchez

Song "until i found you" inserted at the back.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 3

Enter the title of the song to insert after: wanna be yours

Enter new song title: cinnamon girl

Enter artist name: lana del rey

Song "cinnamon girl" inserted after "wanna be yours".

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 7

Playlist:

1. wanna be yours - arctic monkeys

2. cinnamon girl - lana del rey

3. until i found you - stephen sanchez

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 8

Enter the title of the song to search: cinnamon girl

Found "cinnamon girl" by lana del rey in the playlist.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 4

Song "wanna be yours" removed from front.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 5

Song "until i found you" removed from back.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 6

Enter the title of the song to delete: cinnamon girl

Song "cinnamon girl" removed from playlist.

--- Playlist Menu ---

1. Insert song at front

2. Insert song at back

3. Insert song after a song

4. Delete song from front

5. Delete song from back

6. Delete a specific song by title

7. Display playlist

8. Search song by title

9. Exit

Enter your choice (1-9): 9

Exiting... Goodbye!