

```
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.');
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    def insert_after(self, after_title, title, artist):

        current = self.head

        while current:

            if current.title == after_title:
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        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

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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

```

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    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: ")

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    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__":
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```
    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: sara sara

Enter artist name: harini

Song "sara sara" 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: adiyae

Enter artist name: kanni

Song "adiyae" 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: neeyum nanum

Enter new song title: sowmiya

Enter artist name: meenu

Song "neeyum nanum" not found. Cannot insert "sowmiya".

--- 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 "sara sara" 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 "adiyae" removed from back (only song).

--- 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: sowmiya

Song "sowmiya" not found in 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): 7

Playlist is empty.

--- 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

--- 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!