PROGRAM CODE:

class Node:

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

self.data = data

self.next = None

class Playlist:

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

self.head = None

def insert\_beginning(self, song):

new\_node = Node(song)

new\_node.next = self.head

self.head = new\_node

print(f"'{song}' inserted at beginning.")

def insert\_end(self, song):

new\_node = Node(song)

if self.head is None:

self.head = new\_node

print(f"'{song}' inserted as the first song.")

return

temp = self.head

while temp.next:

temp = temp.next

temp.next = new\_node

print(f"'{song}' inserted at end.")

def insert\_middle(self, song, position):

if position == 1:

self.insert\_beginning(song)

return

new\_node = Node(song)

temp = self.head

for \_ in range(position - 2):

if temp is None:

print("Position out of range.")

return

temp = temp.next

if temp is None:

print("Position out of range.")

return

new\_node.next = temp.next

temp.next = new\_node

print("'{song}' inserted at position {position}.")

def delete\_song(self, song):

curr = self.head

prev = None

while curr:

if curr.data == song:

if prev is None:

self.head = curr.next

else:

prev.next = curr.next

print(f"'{song}' deleted from playlist.")

return True

prev = curr

curr = curr.next

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

return False

def find\_song(self, song):

temp = self.head

while temp:

if temp.data == song:

print(f"'{song}' found in playlist.")

return True

temp = temp.next

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

return False

def display\_playlist(self):

temp = self.head

if not temp:

print("Playlist is empty.")

return

print("Playlist:")

while temp:

print(f">{temp.data}")

temp = temp.next

print()

playlist = Playlist()

while True:

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

print("1. Insert song at beginning")

print("2. Insert song at end")

print("3. Insert song at position")

print("4. Delete song")

print("5. Find song")

print("6. Display playlist")

print("7. Exit")

try:

choice = int(input("Enter your choice: "))

except ValueError:

print("Invalid input. Enter a number.")

continue

if choice == 1:

song = input("Enter song name to insert at beginning: ")

playlist.insert\_beginning(song)

elif choice == 2:

song = input("Enter song name to insert at end: ")

playlist.insert\_end(song)

elif choice == 3:

song = input("Enter song name to insert: ")

try:

position = int(input("Enter position to insert: "))

playlist.insert\_middle(song, position)

except ValueError:

print("Invalid position.")

elif choice == 4:

song = input("Enter song name to delete: ")

playlist.delete\_song(song)

elif choice == 5:

song = input("Enter song name to find: ")

playlist.find\_song(song)

elif choice == 6:

playlist.display\_playlist()

elif choice == 7:

print("Exiting program...")

break

else:

print("Invalid choice. Try again.")