Main :

```
public class Class_main {
public static void main(String[] args) {
SelectMode mode = new SelectMode() ;
mode.select() ;
}//end main
}//end class
```

Dnode :

```
public class DNode {
information info ;
DNode Llink,Rlink ;
}
```

Information :

```
public class information {
String name ;
String artist ;
String album ;
String length ;
public information( String name_music, String artist_name,
String album_name, String length_song ) {
name = name_music ;
artist = artist_name ;
album = album_name ;
length = length_song ;
}
}
```

Doubly linkedlist :

```
public class DLL {
DNode head, tail, chack;
int count = 0;
void add(information item) {
DNode newnode = new DNode();
newnode.info = item;
if (count == 0) {
head = newnode;
tail = newnode;
count++;
} else {
tail.Rlink = newnode;
newnode.Llink = tail;
tail = newnode;
count++;
} // end if
System.out.println( "Add succeed");
}// end add
void front_ins(information item, String ref) {
DNode pos = SearchData(ref);
DNode newnode = new DNode();
newnode.info = item;
```

```
if (pos != null) {
if (ref.equals(head.info.name)) {
newnode.Rlink = head;
head.Llink = newnode;
head = newnode;
count++;
} else {
newnode.Rlink = pos;
newnode.Llink = pos.Llink;
pos.Llink = newnode;
newnode.Llink.Rlink = newnode;
count++;
} // end if
System.out.println("insert succeed");
} else {
System.out.println("insert Failed") ;
return ;
} // end if
}// end mathod
void behind_ins(information item, String ref) {
DNode pos = SearchData(ref);
DNode newnode = new DNode();
newnode.info = item;
if (pos != null) {
if (ref.equals(tail.info.name)) {
```

```
/* behind head */
tail.Rlink = newnode;
newnode.Llink = tail;
tail = newnode;
count++;
} else {
newnode.Rlink = pos.Rlink;
newnode.Llink = pos;
pos.Rlink.Llink = newnode;
pos.Rlink = newnode;
count++;
} // end if
System.out.println("insert succeed");
} // end if
}// end mathod
void remove(String pos) {
// ลบหัว
DNode ref = SearchData(pos);
if (ref == null) {
System.out.println("Don't have data ! ");
return;
}
if (pos.equals(head.info.name)) {
// ลบหัว
if (count > 1) {
```

```
head = ref.Rlink;
head.Llink = null;
count--;
} else if (count == 1) {
head = null;
tail = null;
count--;
} // end if
} else if (pos.equals(tail.info.name)) {
// ลบท้าย
tail = ref.Llink;
tail.Rlink = null;
count--;
} else {
ref.Llink.Rlink = ref.Rlink;
ref.Rlink.Llink = ref.Llink;
ref.Rlink = null;
ref.Llink = null;
count--;
} // end if
System.out.println("Remove succeed");
}// end mathod
void show() {
chack = head;
int number = 0;
```

```
if (chack == null) {
System.out.println("Node don't have data");
return;
} // end if
System.out.println();
while (chack != null) {
number++;
System.out.println(number + ". Music name : " +
chack.info.name);
chack = chack.Rlink;
} // end loop
System.out.println();
}// end mathod
void showAll() {
chack = head;
int number = 0;
if (chack == null) {
System.out.println("Node don't have data");
return;
} // end if
System.out.println();
while (chack != null) {
number++;
System.out.println(
number + ". " +
"Name: " + chack.info.name + " | " +
"Artist: " + chack.info.artist + " | " +
"Album: " + chack.info.album + " | " +
"Length: " + chack.info.length
) ;
chack = chack.Rlink;
} // end loop
System.out.println();
}// end mathod
DNode SearchData(String ref) {
DNode node;
node = head;
if (node == null) {
return null;
} // end if
for (int i = 0; i < count; i++) {
if (ref.equals(node.info.name)) {
return node;
}
node = node.Rlink;
} // end for
return null;
} // end mathod

}// end class
```

SelectMode :

```
import java.util.Scanner;
public class SelectMode {
void select() {
DLL D = new DLL() ;
Scanner data = new Scanner(System.in) ;
String name = "" ;
String artist = "" ;
String album = "" ;
String length = "" ;
boolean end_pg = true ;
String mode ;
System.out.println();
while(end_pg){
System.out.println(
"\n1 : Add Music to Playlist\n" +
"2 : Insert Music Before Selected Song\n" +
"3 : Insert Music After Selected Song\n" +
"4 : Remove Music\n" +
"5 : Show Playlist\n" +
"6 : Exit Program\n"
);
System.out.println();
System.out.println("Select Mode: " ) ;
mode = data.nextLine().trim() ;
```

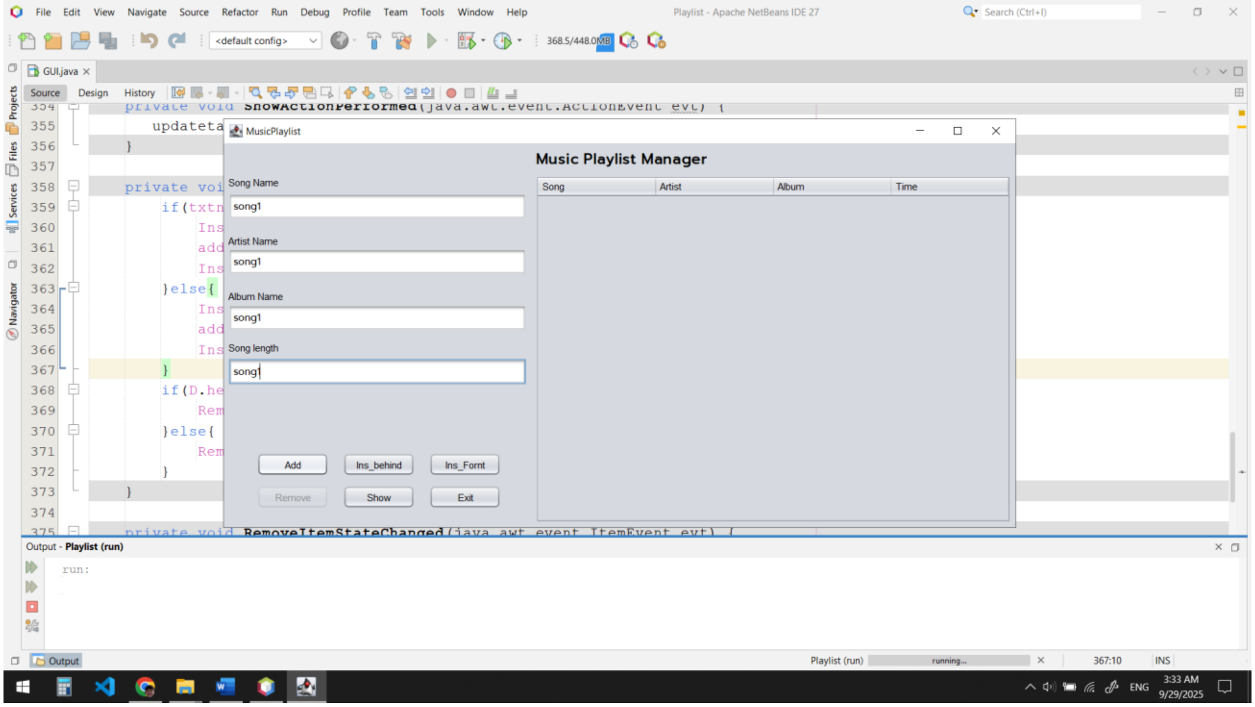
```
if( mode.equals( "1" ) ) {
System.out.print("What name song will u add ? : ") ;
name = data.nextLine().trim() ;
System.out.print("What artist name ? : ") ;
artist = data.nextLine().trim() ;
System.out.print("What album name ? : ") ;
album = data.nextLine().trim() ;
System.out.print("How long is this song ? : ") ;
length = data.nextLine().trim() ;
information info = new information(name, artist, album,
length ) ;
D.add(info) ;
} else if( mode.equals( "2" ) ){
System.out.print("What name song will u add ? : ") ;
name = data.nextLine().trim() ;
System.out.print("What artist name ? : ") ;
artist = data.nextLine().trim() ;
System.out.print("What album name ? : ") ;
album = data.nextLine().trim() ;
System.out.print("How long is this song ? : ") ;
length = data.nextLine().trim() ;
information info = new information(name, artist, album,
length ) ;
String pos ;
D.show() ;
System.out.print("Insert song where ? : ") ;
```

```
pos = data.nextLine().trim() ;
D.front_ins( info, pos ) ;
} else if( mode.equals( "3" ) ){
System.out.print("What name song will u add ? : ") ;
name = data.nextLine().trim() ;
System.out.print("What artist name ? : ") ;
artist = data.nextLine().trim() ;
System.out.print("What album name ? : ") ;
album = data.nextLine().trim() ;
System.out.print("How long is this song ? : ") ;
length = data.nextLine().trim() ;
information info = new information(name, artist, album,
length ) ;
String pos ;
D.show() ;
System.out.print("Insert song where ? : ") ;
pos = data.nextLine().trim() ;
D.behind_ins( info, pos ) ;
} else if( mode.equals( "4" ) ){
String pos ;
D.show( ) ;
System.out.print( "What music would you like to remove ? :
") ;
pos = data.nextLine( ).trim() ;
D.remove(pos) ;
D.show( ) ;
```

```
} else if( mode.equals("5") ){
D.showAll() ;
} else if( mode.equals("6") ) {
end_pg = false ;
data.close() ;
} //end if
}//end while
}
}
```

Testcase :

Add :



```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song Name: song1

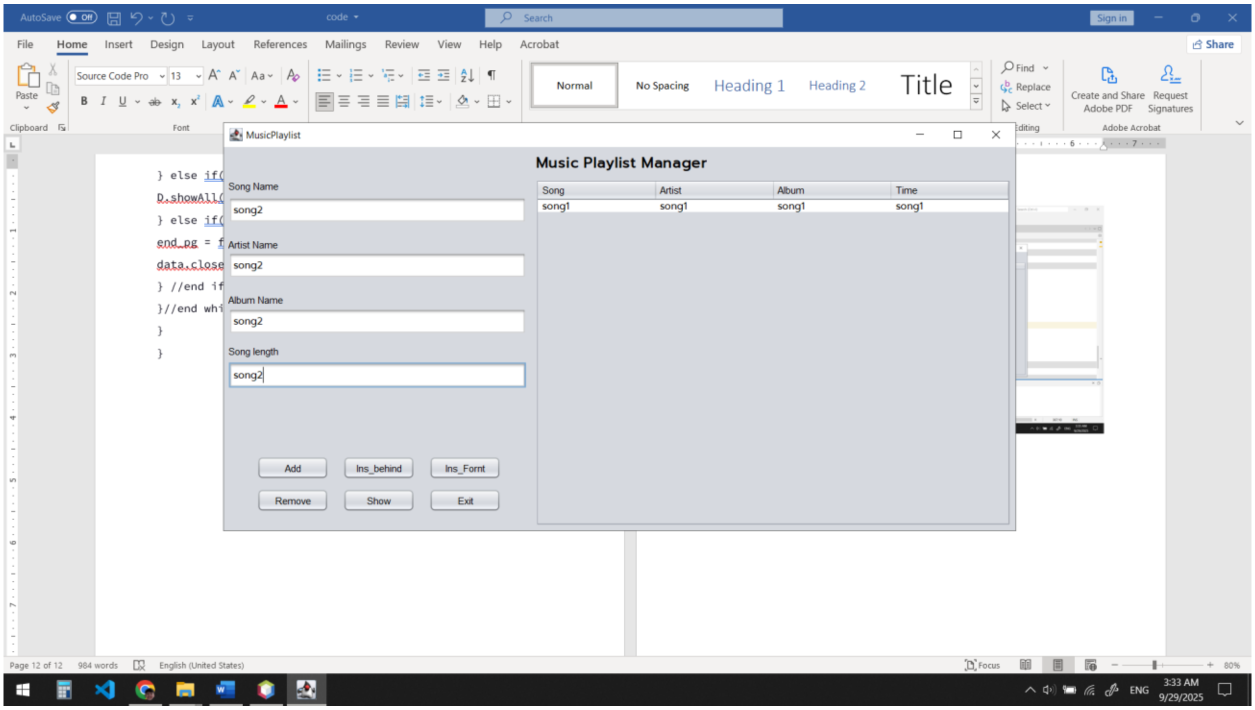
Artist Name: song1

Album Name: song1

Song length: song1

Song	Artist	Album	Time

```
run:
```



```
} else if(
D.showAll(
} else if(
end_pg = f
data.close
} //end if
}//end whi
}
}
```

Music Playlist Manager

Song Name: song2

Artist Name: song2

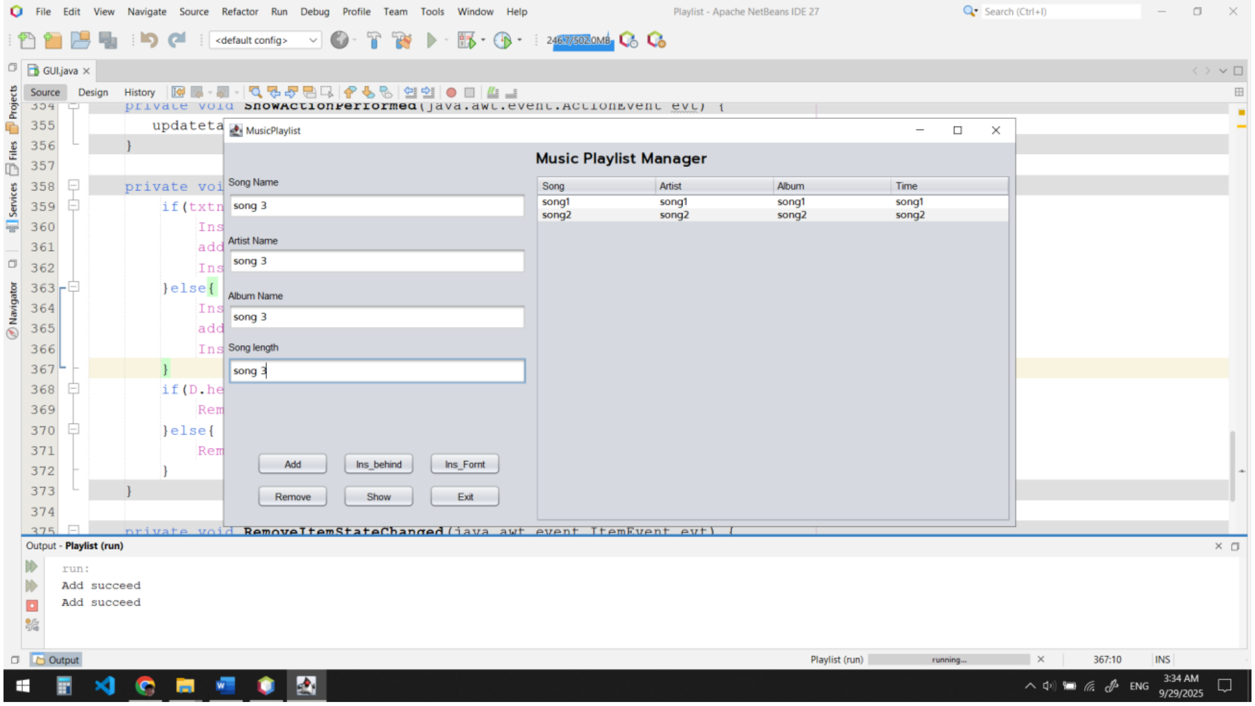
Album Name: song2

Song length: song2

Song	Artist	Album	Time
song1	song1	song1	song1

Insert front:

1: insert front tail



```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }
    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song Name: song 3

Artist Name: song 3

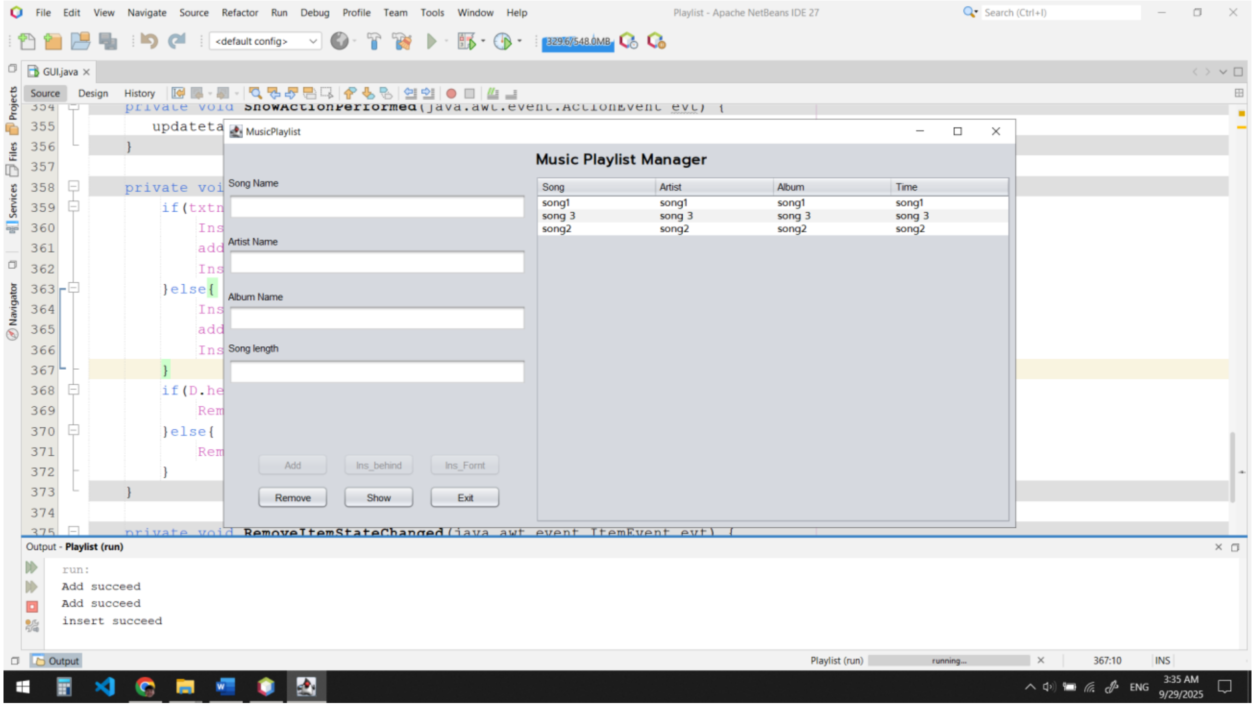
Album Name: song 3

Song length: song 3

Song	Artist	Album	Time
song1	song1	song1	song1
song2	song2	song2	song2

Output - Playlist (run)

```
run:
Add succeed
Add succeed
```



```
private void showActionPerformed(java.awt.event.ActionEvent evt) {
    updateta
}

private voi
    if(txtn
        Ins
        add
        Ins
    }else{
        Ins
        add
        Ins
    }
    if(D.he
        Rem
    }else{
        Rem
    }
}

private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song Name

Artist Name

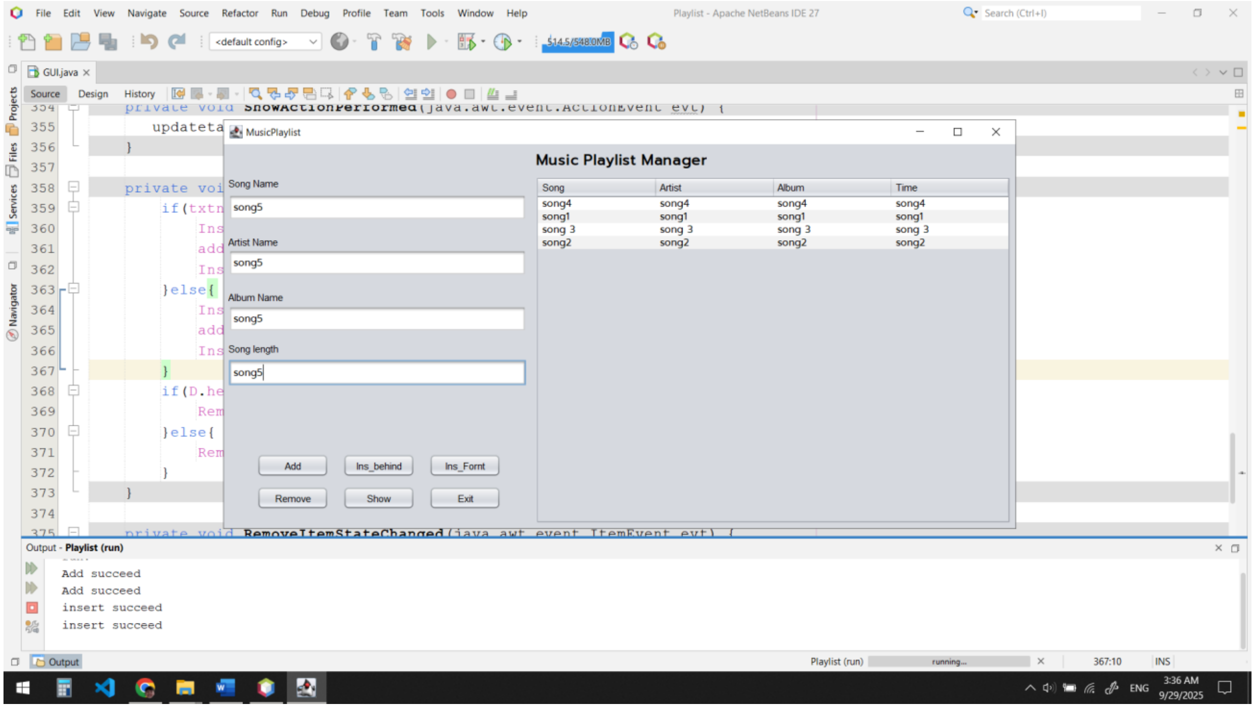
Album Name

Song length

Song	Artist	Album	Time
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
run:
Add succeed
Add succeed
insert succeed
```

2: insert front head



Music Playlist Manager

Song Name: song5

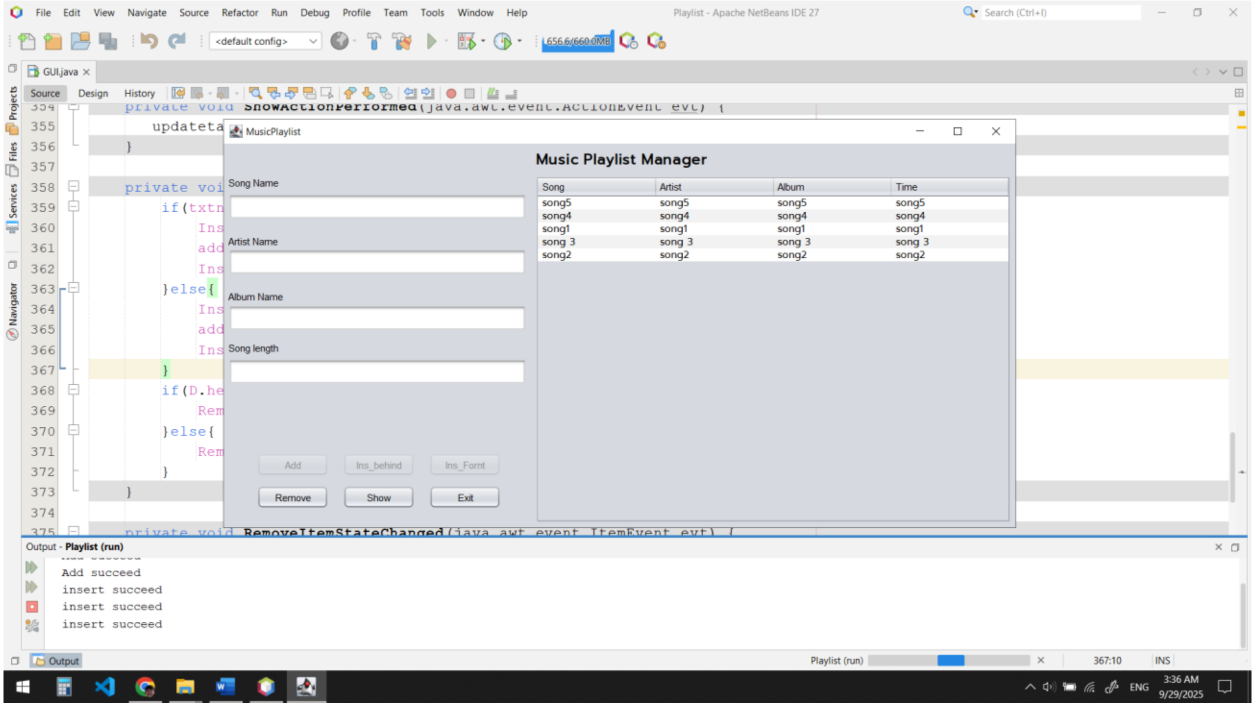
Artist Name: song5

Album Name: song5

Song length: song5

Song	Artist	Album	Time
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
Add succeed
Add succeed
insert succeed
insert succeed
```

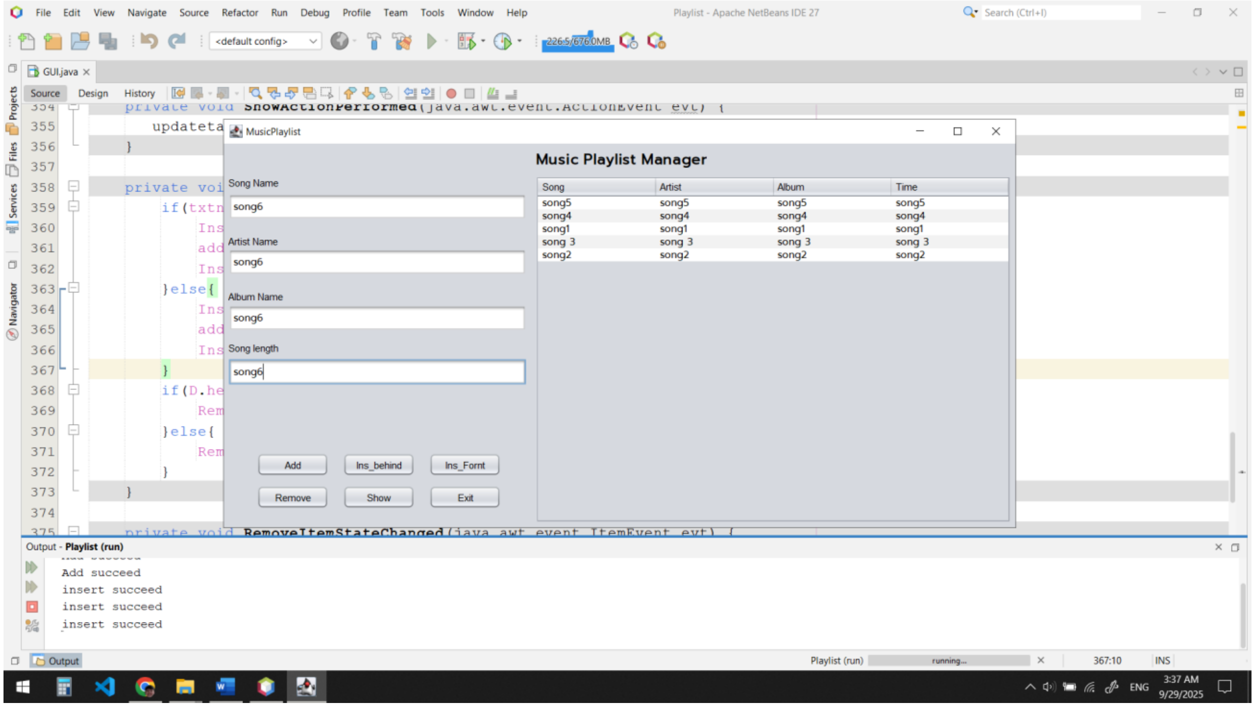


Song	Artist	Album	Time
song5	song5	song5	song5
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
Add succeed
insert succeed
insert succeed
insert succeed
```

Insert behind :

1: insert behind head



Song Name: song6

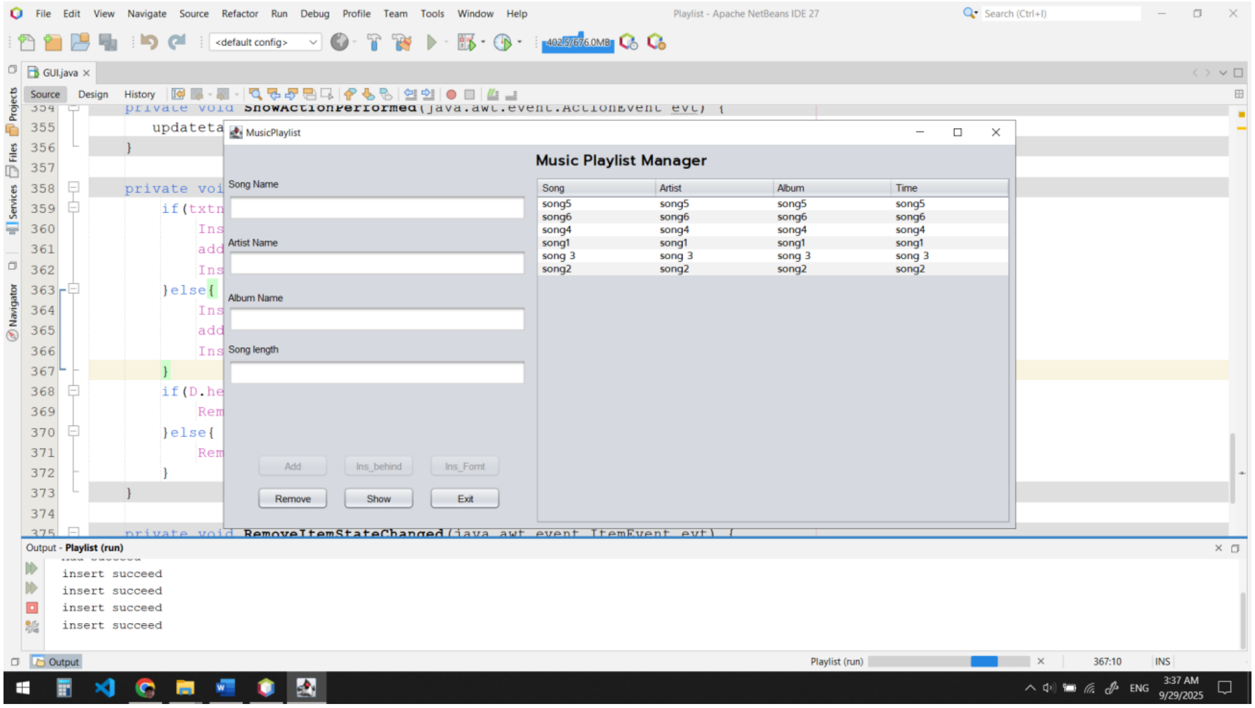
Artist Name: song6

Album Name: song6

Song length: song6

Song	Artist	Album	Time
song5	song5	song5	song5
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
Add succeed
insert succeed
insert succeed
insert succeed
```


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Playlist - Apache NetBeans IDE 27
Search (Ctrl+I)
<default config>
402.5/676.0MB
GUI.java
Source Design History
Projects Files Services Navigator
Output - Playlist (run)
Output
Playlist (run)
367:10
INS
ENG
3:37 AM
9/29/2025

```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

MusicPlaylist

Music Playlist Manager

Song Name

Artist Name

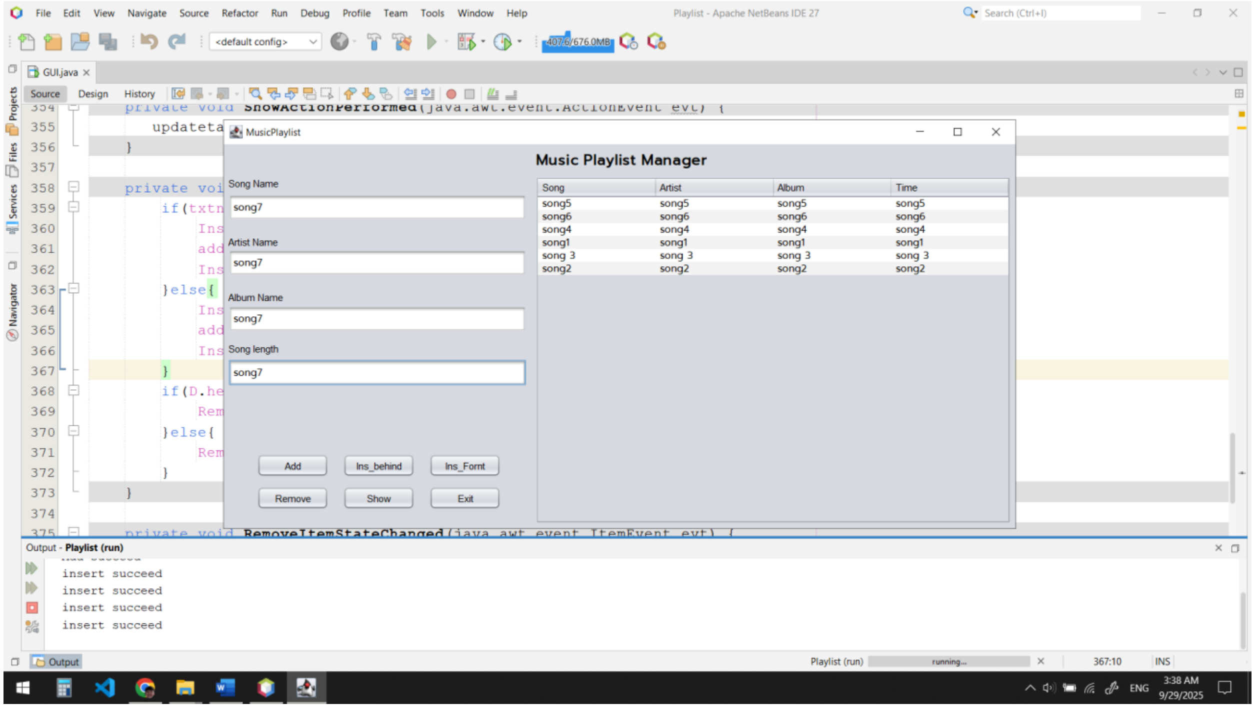
Album Name

Song length

Song	Artist	Album	Time
song5	song5	song5	song5
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
insert succeed
insert succeed
insert succeed
insert succeed
```

2: Add behind tai



```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

MusicPlaylist

Music Playlist Manager

Song Name: song7

Artist Name: song7

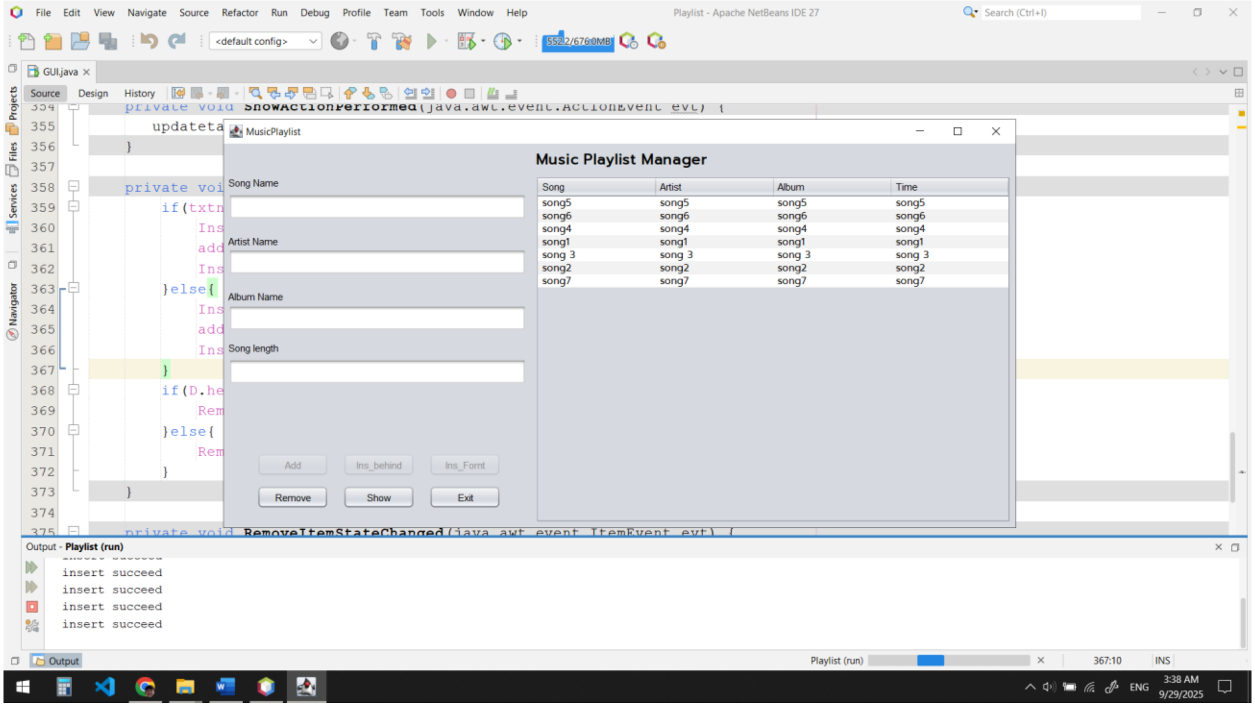
Album Name: song7

Song length: song7

Song	Artist	Album	Time
song5	song5	song5	song5
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2

```
insert succeed
insert succeed
insert succeed
insert succeed
```

l



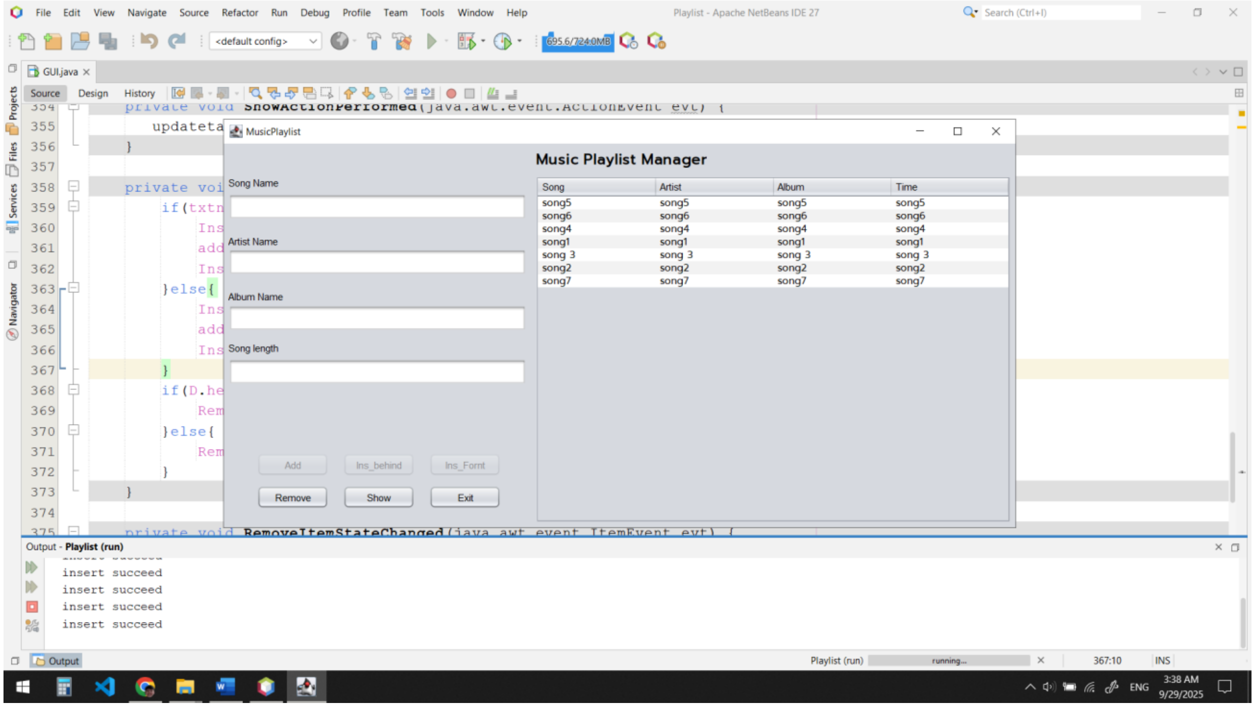
```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song	Artist	Album	Time
song5	song5	song5	song5
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2
song7	song7	song7	song7

```
insert succeed
insert succeed
insert succeed
insert succeed
```

Remove:

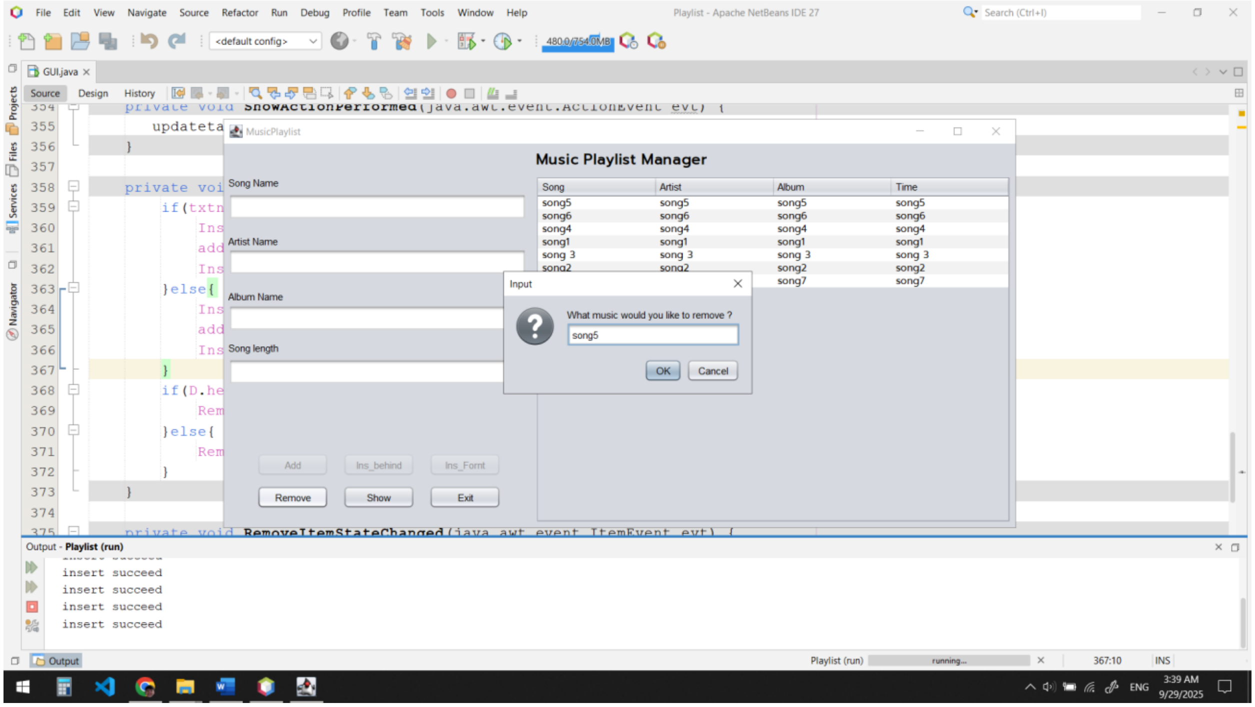


```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song	Artist	Album	Time
song5	song5	song5	song5
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2
song7	song7	song7	song7

```
insert succeed
insert succeed
insert succeed
insert succeed
```


Playlist - Apache NetBeans IDE 27
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
GUI.java
Source Design History
MusicPlaylist
Add
Ins_behind
Ins_Fornt
Remove
Show
Exit

```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Music Playlist Manager

Song Name

Artist Name

Album Name

Song length

Song	Artist	Album	Time
song5	song5	song5	song5
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2
		song7	song7

Input

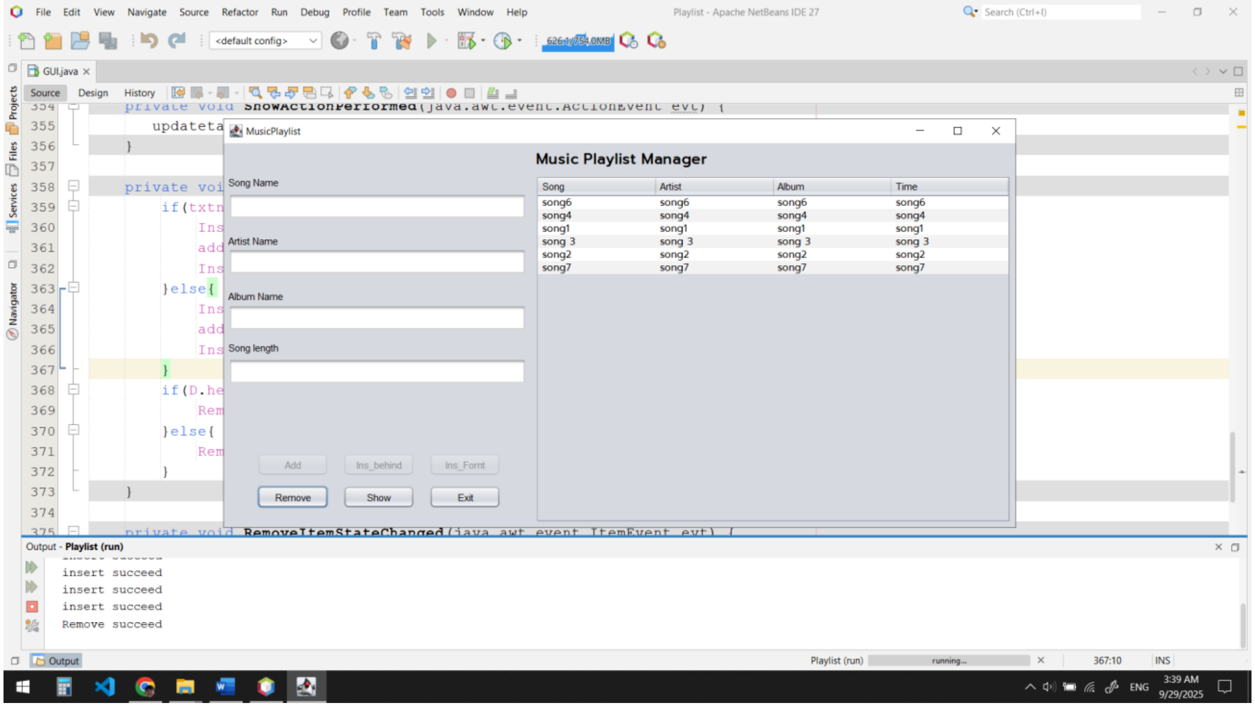
What music would you like to remove ?

song5

OK Cancel

Output - Playlist (run)

```
insert succeed
insert succeed
insert succeed
insert succeed
```


Playlist - Apache NetBeans IDE 27
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
GUI.java
Source Design History
MusicPlaylist
Add
Ins_behind
Ins_Fornt
Remove
Show
Exit

Music Playlist Manager

Song Name

Artist Name

Album Name

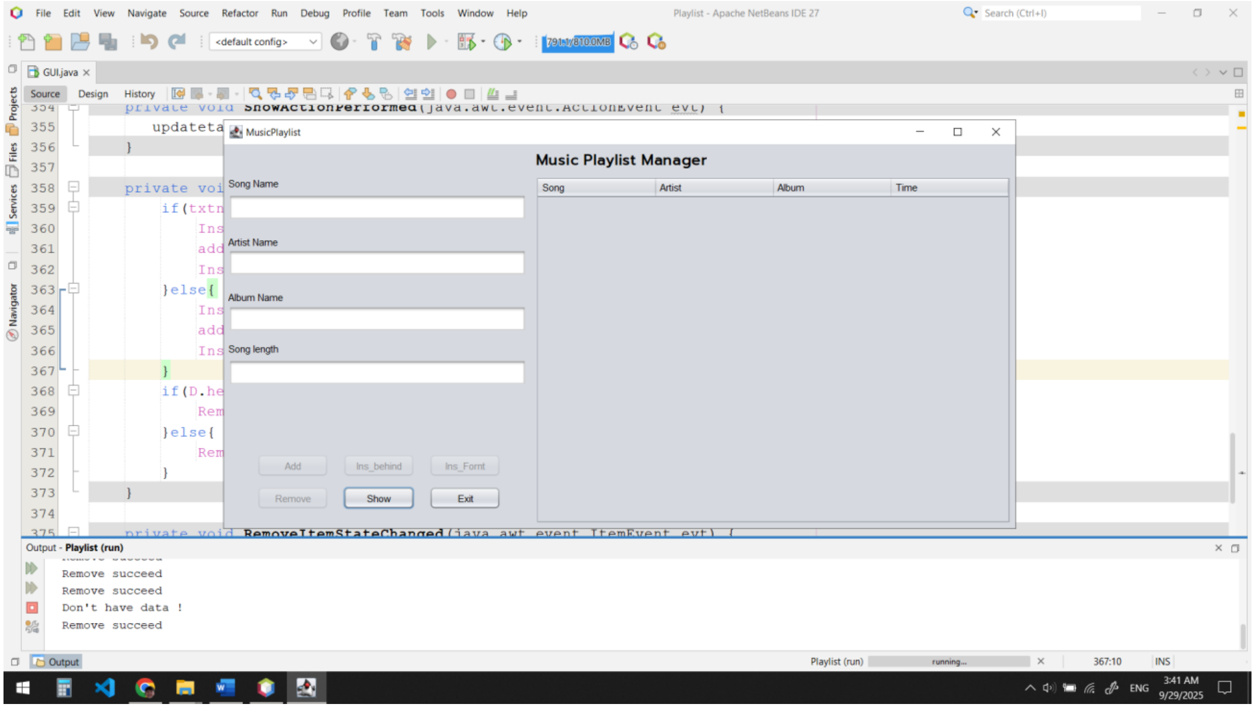
Song length

Song	Artist	Album	Time
song6	song6	song6	song6
song4	song4	song4	song4
song1	song1	song1	song1
song 3	song 3	song 3	song 3
song2	song2	song2	song2
song7	song7	song7	song7

Output - Playlist (run)

```
insert succeed
insert succeed
insert succeed
Remove succeed
```

Don’t have data to remave :

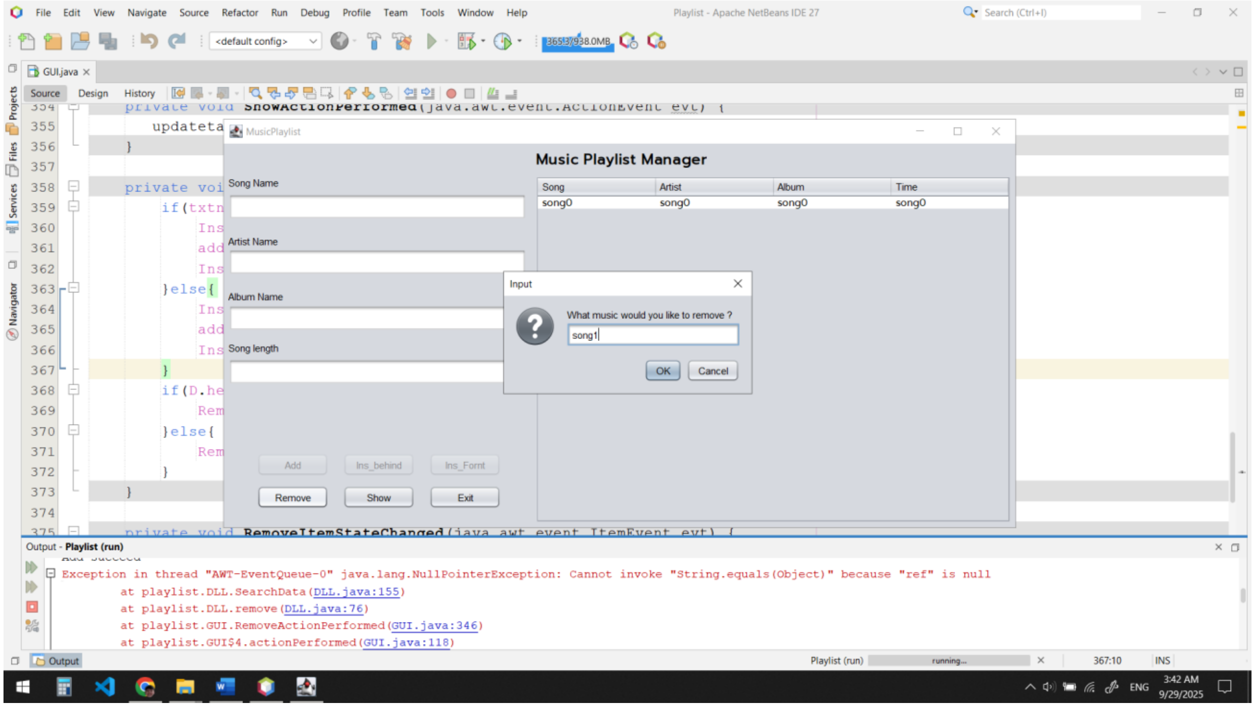


```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updateta
    }

    private voi
        if(txtn
            Ins
            add
            Ins
        }else{
            Ins
            add
            Ins
        }
        if(D.he
            Rem
        }else{
            Rem
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

```
Remove succeed
Remove succeed
Don't have data !
Remove succeed
```

*จะกดปุ่ม remove ไม่ได้ถ้าไม่มีข้องมูลใน list *

2: Can't find information

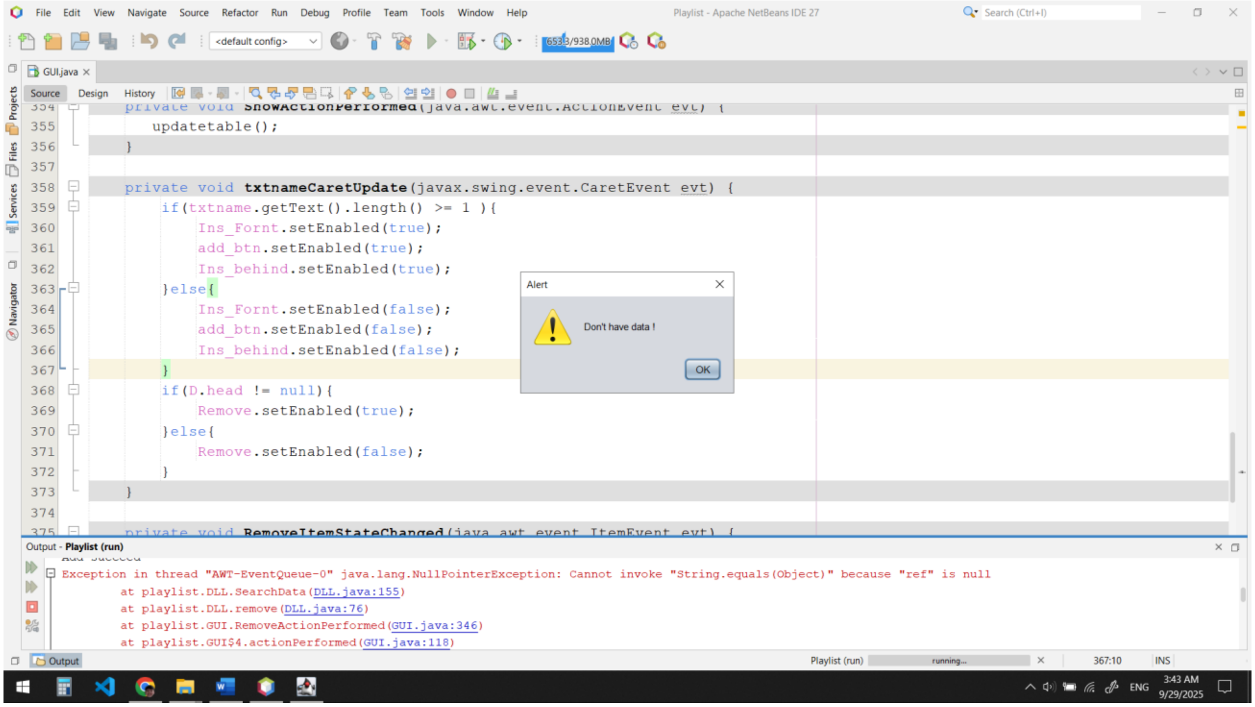


Song	Artist	Album	Time
song0	song0	song0	song0

What music would you like to remove ?

song1

```
Exception in thread "AWT-EventQueue-0" java.lang.NullPointerException: Cannot invoke "String.equals(Object)" because "ref" is null
        at playlist.DLL.SearchData(DLL.java:155)
        at playlist.DLL.remove(DLL.java:76)
        at playlist.GUI.RemoveActionPerformed(GUI.java:346)
        at playlist.GUI$4.actionPerformed(GUI.java:118)
```



```
    private void ShowActionPerformed(java.awt.event.ActionEvent evt) {
        updatetable();
    }

    private void txtnameCaretUpdate(javax.swing.event.CaretEvent evt) {
        if(txtname.getText().length() >= 1 ){
            Ins_Fornt.setEnabled(true);
            add_btn.setEnabled(true);
            Ins_behind.setEnabled(true);
        }else{
            Ins_Fornt.setEnabled(false);
            add_btn.setEnabled(false);
            Ins_behind.setEnabled(false);
        }
        if(D.head != null){
            Remove.setEnabled(true);
        }else{
            Remove.setEnabled(false);
        }
    }

    private void RemoveItemStateChanged(java.awt.event.ItemEvent evt) {
```

Don't have data !

```
Add Succeed
Exception in thread "AWT-EventQueue-0" java.lang.NullPointerException: Cannot invoke "String.equals(Object)" because "ref" is null
        at playlist.DLL.SearchData(DLL.java:155)
        at playlist.DLL.remove(DLL.java:76)
        at playlist.GUI.RemoveActionPerformed(GUI.java:346)
        at playlist.GUI$4.actionPerformed(GUI.java:118)
```