DSA GROUP ASSIGNMENT

STUDENT NAME	STUDENT NUMBER	GROUP NUMBER
Likius Ingo	221046364	Group1
Erastus PaangwaShimwe Shindinge	222044438	Group9
Hilya shatika	222089032	Group6
Christa William	221144919	Group9
Katrina Endjala	222037024	Group2
Albert Sinyepe	222104074	Group9
Nambinga Heelu Petrus	222106123	Group9
Maani Mutelo	222106786	Group9
Casey Damens	222127457	Group9
Nathan Sachika	2221206123	Group3

SECTION A

start the playlist

create a new tracklist

establish the repeat function.

launch the search engine

launching the add/remove function

play the music

play music from the playlist

Play tracks again if necessary

look for particular tracks

As necessary, add or remove tracks.

exit

end

NEXT ALGORITHM:

the create playlist function ()

songs: 100

create new linked list = linked list ()

if I = 0 then do tracks -1

(linked list, I add track)

stop for

bring back linked list

halt operation

function track number, linked list, and play track

Current track = Header of Linked List

track number-1 do if i:= 0

present:= present track.next

stop for

play audio(current track.data)

halt operation

(linked list, track number) adds a track.

create new track(track number) = new track

Whenever linked list.head is empty,

new track linked list.head:=

else

Current track = Header of Linked List

even though current track.next!

do = null

present:= present track.next

stop while

new track = current track.next

end if

halt operation

remove track function (linked list, track number)

Current track = Header of Linked List

prior track:= zero

track number-1 do if i:= 0

current track = previous track

present:= present track.next

stop for

when previous track equals null

current track.next linked list.head:=

Else

current track.next = previous track.next

end if

halt operation

search playlist function (linked list, track number)

Current track = Header of Linked List

current track while

do = null

If track number = current track.data, then

deliver true

end if

present:= present track.next

stop while

return untrue

halt operation

Definition of step 2
The music player, playlist, tracklist, repeat feature, search feature, and add/remove feature are all initialized by the code above. Then, songs from the playlist are played on the music player. Searches for specific tracks can be done, and the tracks are repeated as necessary. The final option is to add or remove tracks as needed.

SECTION B

```
public class musicplayer {
   public static void main(String[] args) {

   }
   public final class DoubleClass<Music> {

      private Music data;
```

```
    private DoubleClass<Music> next;
    private DoubleClass<Music> prev;
    public DoubleClass(final DoubleClass<Music> prev, final Music data, final
DoubleClass<Music> next) {
        this.data = data;
        this.next = next;
        this.prev = prev;
    }


    public DoubleClass(final Music data) {
        this(null, data, null);
    }

    public Music getData() {
        return data;
    }

    public DoubleClass<Music> getNext() {
        return next;
    }


    public void setTheNextTrack(final DoubleClass<Music> next) {
        this.next = next;
    }

    public void setThePreviousTrack(final DoubleClass<Music> prev) {
        this.prev = prev;
    }

    public DoubleClass<Music> getPrev() {
        return prev;
    }

    public void addTracks(final Music data) {
        this.data = data;
    }

  }

}
```