*// Music playlist application using doubly linked list*

*#include* <iostream>

*using* *namespace* std;

struct *Song*

{

int *id*;

*string* *name*;

*string* *artist*;

*Song* *\*next*;

*Song* *\*prev*;

};

*Song* *\*head* *=* *NULL*;

*Song* *\*tail* *=* *head*;

*Song* *\*playing* *=* *NULL*;

int *len* *=* *0*;

void *add*(*string*, *string*);

void *remove*(int);

void *next*();

void *previous*();

int *main*()

{

int *choice*, *id*;

*string* *name*, *artist*;

bool *running* *=* *true*;

*while* (*running*)

{

*if* (*playing* *!=* *NULL*)

{

*cout* *<<* "Current Song: " *<<* *playing*->*name* *<<* " by " *<<* *playing*->*artist* *<<* *endl*;

}

*cout* *<<* "0. Exit" *<<* *endl*

*<<* "1. Add Song" *<<* *endl*

*<<* "2. Remove Song" *<<* *endl*

*<<* "3. Next Song" *<<* *endl*

*<<* "4. Previous Song" *<<* *endl*

*<<* "Enter your choice: ";

*cin* *>>* *choice*;

*switch* (*choice*)

{

*case* *0*:

*running* *=* *false*;

*break*;

*case* *1*:

*cout* *<<* "Enter song name: ";

*cin* *>>* *name*;

*cout* *<<* "Enter artist name: ";

*cin* *>>* *artist*;

*add*(*name*, *artist*);

*break*;

*case* *2*:

*cout* *<<* "Enter song id to remove: ";

*cin* *>>* *id*;

*remove*(*id*);

*break*;

*case* *3*:

*next*();

*break*;

*case* *4*:

*previous*();

*break*;

*default*:

*break*;

}

}

}

void *add*(*string* *name*, *string* *artist*)

{

*Song* *\*newSong* *=* *new* *Song*;

*newSong*->*id* *=* *len*;

*newSong*->*name* *=* *name*;

*newSong*->*artist* *=* *artist*;

*newSong*->*next* *=* *NULL*;

*newSong*->*prev* *=* *NULL*;

*if* (*head* *==* *NULL*)

{

*head* *=* *newSong*;

*tail* *=* *newSong*;

*playing* *=* *newSong*;

}

*else*

{

*tail*->*next* *=* *newSong*;

*newSong*->*prev* *=* *tail*;

*tail* *=* *newSong*;

}

*cout* *<<* "Song added successfully with id " *<<* *len* *<<* "" *<<* *endl*;

*len++*;

}

void *remove*(int *id*)

{

*Song* *\*temp* *=* *head*;

*if* (*temp* *==* *NULL*)

{

*cout* *<<* "Playlist is empty" *<<* *endl*;

*return*;

}

*while* (*temp* *!=* *NULL*)

{

*if* (*temp*->*id* *==* *id*)

{

*break*;

}

*temp* *=* *temp*->*next*;

}

*if* (*temp*->*id* *==* *id*)

{

*if* (*temp*->*prev* *!=* *NULL*)

{

*temp*->*prev*->*next* *=* *temp*->*next*;

}

*else*

{

*head* *=* *temp*->*next*;

}

*if* (*temp*->*next* *!=* *NULL*)

{

*temp*->*next*->*prev* *=* *temp*->*prev*;

}

*else*

{

*tail* *=* *temp*->*prev*;

}

*if* (*temp* *==* *playing*)

{

*playing* *=* *temp*->*next*;

}

*cout* *<<* "Song removed successfully!" *<<* *endl*;

}

*else*

{

*cout* *<<* "Song not found!" *<<* *endl*;

}

}

void *next*()

{

*if* (*playing*->*next* *!=* *NULL*)

{

*playing* *=* *playing*->*next*;

*cout* *<<* "Playing next song..." *<<* *endl*;

}

*else*

{

*cout* *<<* "No next song available!" *<<* *endl*;

}

}

void *previous*()

{

*if* (*playing*->*prev* *!=* *NULL*)

{

*playing* *=* *playing*->*prev*;

*cout* *<<* "Playing previous song..." *<<* *endl*;

}

*else*

{

*cout* *<<* "No previous song available!" *<<* *endl*;

}

}

