```
menu_choice=""
current_cd=""
title_file="title.cdb"
tracks_file="tracks.cdb"
temp_file=/tmp/cdb.$$
trap 'rm -f $temp_file'EXIT
get_return() {
echo -e "Press return \c"
read x
return 0
CD Management Page 12
echo -e "Are you sure? \c"
while true
do
read x
case "$x" in
y | yes | Y | Yes | YES )
return 0;;
n | no | N | No | NO )
echo
echo "Cancelled"
return 1;;
*) echo "Please enter yes or no" ;;
esac
done
}
set_menu_choice() {
clear
echo "Options :-"
echo ***********
CD Management Page 13
echo " a) Add new CD "
echo " f) Find CD"
echo " c) Count the CDs and tracks in the catalog"
if [ "$cdcatnum" != "" ]; then
echo " l) List tracks on $cdtitle"
echo " r) Remove $cdtitle"
echo " u) Update track information for $cdtitle"
fi
echo " q) Quit"
echo
echo -e "Please enter choice then press return \c"
read menu_choice
return
}
insert_title() {
echo $* >> $title_file
return
}
insert_track()
CD Management Page 14
echo $* >> $tracks_file
```

```
return
}
add_record_tracks() {
echo "Enter track information for this CD"
echo "When no more tracks enter q"
cdtrack=1
cdttitle=""
while [ "$cdttitle" != "q" ]
do
echo -e "Track $cdtrack, track title? \c"
read tmp
cdttitle=${tmp%%,*}
if [ "$tmp" != "$cdttitle" ]; then
echo "Sorry, no commas allowed"
continue
fi
if [ -n "$cdttitle" ] ; then
if [ "$cdttitle" != "q" ]; then
CD Management Page 15
insert_track $cdcatnum,$cdtrack,$cdttitle
fi
else
cdtrack=$((cdtrack-1))
fi
cdtrack=$((cdtrack+1))
done
}
add_records() {
# Prompt for the initial information
echo -e "Enter catalog name \c"
read tmp
cdcatnum=${tmp%%,*}
echo -e "Enter title \c"
read tmp
cdtitle=${tmp%%,*}
echo -e "Enter type \c"
read tmp
cdtype=${tmp%%,*}
CD Management Page 16
echo -e "Enter artist/composer \c"
read tmp
cdac=${tmp%%,*}
echo About to add new entry
echo "$cdcatnum $cdtitle $cdtype $cdac"
# If confirmed then append it to the titles file
if get_confirm ; then
insert_title $cdcatnum,$cdtitle,$cdtype,$cdac
add_record_tracks
else
remove_records
fi
return
```

```
}
find_cd() {
if [ "$1" = "n" ]; then
asklist=n
else
asklist=y
CD Management Page 17
fi
cdcatnum=""
echo -e "Enter a string to search for in the CD titles \c"
read searchstr
if [ "$searchstr" = "" ]; then
return 0
fi
grep "$searchstr" $title_file > $temp_file
set $(wc -l $temp_file)
linesfound=$l
case "$linesfound" in
0) echo "Sorry, nothing found"
get_return
return 0
;;
1) ;;
2) echo "Sorry, not unique."
echo "Found the following"
cat $temp_file
CD Management Page 18
get_return
return 0
esac
IFS=","
read cdcatnum cdtitle cdtype cdac < $temp_file
IFS=""
if [ -z "$cdcatnum" ]; then
echo "Sorry, could not extract catalog field from $temp_file"
get_return
return 0
fi
echo
echo Catalog number: $cdcatnum
echo Title: $cdtitle
echo Type: $cdtype
echo Artist/Composer: $cdac
echo
get_return
if [ "$asklist" = "y" ]; then
CD Management Page 19
echo -e "View tracks for this CD? \c"
read x
if [ "$x" = "y" ]; then
echo
list_tracks
```

```
echo
fi
fi
return 1
}
update_cd() {
if [ -z "$cdcatnum" ]; then
echo "You must select a CD first"
find_cd n
fi
if [ -n "$cdcatnum" ]; then
echo "Current tracks are :-"
list_tracks
echo
CD Management Page 20
echo "This will re-enter the tracks for $cdtitle"
get_confirm && {
grep -v "^${cdcatnum}," $tracks_file > $temp_file
mv $temp_file $tracks_file
echo
add_record_tracks
}
fi
return
}
count_cds() {
set $(wc -l $title_file)
num_titles=$l
set $(wc -l $tracks_file)
num_tracks=$l
echo found $num_titles CDs, with a total of $num_tracks tracks
get_return
return
}
CD Management Page 21
list_tracks() {
if [ "$cdcatnum" = "" ]; then
echo no CD selected yet
return
else
grep "^${cdcatnum}," $tracks_file > $temp_file
num_tracks=$(wc -l $temp_file)
if [ "$num_tracks" = "0" ]; then
echo no tracks found for $cdtitle
else {
echo
echo "$cdtitle :-"
echo
cut -f 2- -d , $temp_file
echo
} | ${PAGER:-more}
fi
```

```
fi
get_return
```

CD Management Page 22

```
return
}
rm -f $temp_file
if [ ! -f $title_file ]; then
touch $title_file
fi
if [ ! -f $tracks_file ]; then
touch $tracks_file
fi
# Now the application proper
clear
echo
echo
echo "Mini CD manager"
sleep 1
quit=n
while [ "$quit" != "y" ];
do
set_menu_choice
```

CD Management Page 23

```
case "$menu_choice" in
a) add_records;;
r) remove_records;;
f) find_cd y;;
u) update_cd;;
c) count_cds;;
l) list_tracks;;
b)
echo
more $title_file
echo
get_return;;
q | Q ) quit=y;;
*) echo "Sorry, choice not recognized";;
esac
done
#Tidy up and leave
rm -f $temp_file
echo "Finished"
```

CD Management Page 24

```
exit 0
a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on ring ring
 r) Remove ring ring
 u) Update track information for ring ring
 q) Quit
Please enter choice then press return a
```

Enter catalog name CD234
Enter title tring tring
Enter type hiphop
Enter artist/composer sony
About to add new entry
CD234 tring tring hiphop sony
Are you sure? y
Enter track information for this CD
When no more tracks enter q
CD Management Page 25
Track 1, track title? y
Track 2, track title? y
Track 3, track title? sad
Track 4, track title? q
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
CD Management Page 26
Please enter choice then press return f
Enter a string to search for in the CD titles CD234
Catalog number: CD234
Title: tring tring
Type: hiphop
Artist/Composer: sony
Press return ^C
[17121a1228@linuxserver ~]$ sh hari.sh
Mini CD manager
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
CD Management Page 27
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c

 a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 q) Quit
Please enter choice then press return f
Enter a string to search for in the CD titles CD234
Catalog number: CD234
Title: tring tring
Type: hiphop
Artist/Composer: sony
Press return n
.View tracks for this CD? c.
CD Management Page 28
y
tring tring :-
1,y
2,y
3,sad
Press return n
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
CD Management Page 29
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
Please enter choice then press return c
found CDs, with a total of tracks
Press return n
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
CD Management Page 30

```
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
Please enter choice then press return l
tring tring :-
1,y
2,y
3,sad
Press return n
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
CD Management Page 31
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
Please enter choice then press return u
Current tracks are :-
tring tring :-
CD Management Page 32
1,y
2,y
3,sad
Press return n
This will re-enter the tracks for tring tring
Are you sure? y
Enter track information for this CD
When no more tracks enter q
Track 1, track title?
Track 1, track title? abc
Track 2, track title? def
Track 3, track title? sdf
Track 4, track title? q
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
CD Management Page 33
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
```

```
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
Please enter choice then press return l
tring tring :-
1,abc
CD Management Page 34
2,def
3,sdf
Press return n
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
 f) Find CD
 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
CD Management Page 35
Please enter choice then press return r
hari.sh: line 225: remove_records: command not found
Options :-
2.c alarm.c a.out cbs1.c cbs2.c cbs3.c cbs4.c ch6s4F1 chapter_4 e1.c
exvp1.c f1 f2 f3 f5 f6 file.out hari hari.sh p p1 pi pj project.sh s1.sh
s2.sh s3.sh s4.sh s5.sh signal.c student.txt title.cdb track.cdb
tracks.cdb uniq.c w1 w2 w3.c week week10a week10ab week10ab.c
week10b.c week11a week11a.c week11b week11b.c week12a.c
week12b.c week1.c week2.c week3.c week4.c week6a.c week6b.c
week7a.c week7b.c week7c.c week7d.c week8a.c week8b1.c
week8b2.c week8b3.c week8b4.c week9a.c week9b.c weekf.c weekj.c
weekl1a.c weel11a.c weel1a.c wekf.c zz.c
 a) Add new CD
 f) Find CD
```

 c) Count the CDs and tracks in the catalog
 l) List tracks on tring tring
 r) Remove tring tring
 u) Update track information for tring tring
 q) Quit
CD Management Page 36
Please enter choice then press return q
Finished