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Database System(ITE2038-12838)

Project 4. DBMS 프로그램 개발

Microsoft Visual Studio Community 2017
버전 15.9.4
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비주얼 버전은 15.9.4입니다.

1. 코드 설명

(1) 기본 함수 구성

execute_commit, execute_commit_data : 각각의 sql문을 실행하고 commit하는 함수

check(sql) : 해당 데이터베이스에 특정 id, name 등이 있는지 확인할 때 사용하는 함수

print_all(sql), print_all_data(sql) : 해당 table의 모든 attribute 출력하는 함수

(2) main문

(초기메뉴 구성)

```python
44 │ if __name__ == "__main__" :
45 │     status = 1
46 │     print("Select Mode")
47 │     print("0. Administrator Mode")
48 │     print("1. User Mode")
49 │     mode = int(input('Input : '))
50 │     crt = -1 #certification
51 │
52 │     if (mode == 0) :
53 │         while 1:
54 │             print("\nInsert Admin ID")
55 │             id = input('Admin ID : ') #root id = 11111
56 │             sql = "SELECT * FROM `administrator` WHERE Id = '{}'".format(id)
57 │             if check(sql) :
58 │                 crt = 0
59 │                 break
60 │             else : print("Wrong!!! Do it again")
61 │     elif (mode == 1) :
62 │         while 1:
63 │             print("Insert User ID")
64 │             id = input ('User ID : ')
65 │             sql = "SELECT * FROM `user` WHERE Id = '{}'".format(id)
66 │             if check(sql) :
67 │                 crt = 1
68 │                 break
69 │             else : print("Wrong!!! Do it again")
70 │
```

administrator Mode와 User Mode 구분하여 crt 변수(certification : flag의 기능)을 통해 해당 모드로 들어갈 수 있음.

Admin과 User는 각각 본인의 ID를 통해 로그인할 수 있다.

(3) [Administration Mode]- (Admin 정보모음, User 정보모음, Music 정보모음으로 구성)

(Admin 정보 모음)

1   새로운 Admin 등록

     이름과 ID를 입력하여 새로운 tuple을 Administrator table에 삽입

2   모든 Admin 정보 출력

     2.1   Delete Admin : 이 중 원하는 Admin tuple 삭제 진행

     2.2   Update Admin : 이 중 원하는 Admin tuple 변경 진행

3   Admin 관련 Attribute Select

     3.1   원하는 Attribute number를 입력하여 Select 진행

(Admin 정보 모음에 대한 코드. line 82 ~ 150)

```python
print("\n0. Return to previous menu")
print("1. Register new Administrator")
print("2. View all Administrators")
print("3. View attributes")
second = int(input('Input : '))
if(second == 0) : #Status 3
    status -= 1
elif(second == 1) : #Status = 3
    while (1) :
        name = input('\nName : ')
        new_id = input('ID, should be 5 numbers :')
        sql = "SELECT * FROM `administrator` WHERE Id = '{}'".format(new_id)
        if check(sql) : print("ID already exists. Insert other ID!")
        else :
            sql = "INSERT INTO `administrator` (`Name`, Id) VALUE ('{}', '{}')".format(name, new_id)
            execute_commit(sql)
            break
elif(second == 2) : #Status 3
    #Admin 모두 보여주고 delete, update 진행
    while 1:
        sql = "select * from `administrator`"
        print("\n----------------------------\nIndex : (ID, Name, Sex, Address, Phone_no, Mgr_id)\n----------------------------\n")
        print_all(sql)
        print("\n----------------------------\n")
        print("\n0. Return to previous menu")
        print("1. Delete Administrator")
        print("2. Update Administrator")
        third = int(input('Input : '))
        if (third == 0):
            break
        elif (third == 1):
            delete_id = input('Write the Admin id you want to Delete : ')
            sql = "delete from `administrator` where Id = '{}'".format(delete_id)
            execute_commit(sql)
        elif (third == 2):
            while 1 :
                update_id = input('\nWrite the Admin id you want to Update : ')
                sql = "SELECT * FROM `administrator` WHERE Id = '{}'".format(update_id)
                if (check(sql)) : break
                else :
                    flag = input('Check the id Again. Want to try again?(y/n) : ')
                    if (flag == 'n'): break
            while 1:
                name = input('Name : ')
                if name == '': print("Name should not be Nonetype")
                else : break
            sex = input('Sex(f/m) : ')
            if sex == '' : sex =None
            address = input('Address : ')
            if address == '': address =None
            phone_no = input('Phone Number : ')
            if phone_no == '' : phone_no = None
            mgr_id = input('Manager ID : ')
            if mgr_id == '' : mgr_id = None
            sql = "update administrator set Name= %s, Sex= %s, Address= %s, Phone_no= %s, Mgr_id = %s where Id = {}".format(update_id)
            data = (name, sex, address, phone_no, mgr_id)
            execute_commit_data(sql, data)
```

```python
elif (second == 3) : #Status 3
    #atribute 출력하고 거기에 해당하는 attribute 선택 후 출력
    print("1.Id\t2.Name\t3.Sex\t4.Address\t5.Phone_no\t6.Mgr_id")
    flag = int(input('Which attribute do you want to see?\nType the right number : '))
    if flag == 1: sql = "select Id from `administrator`"
    elif flag == 2: sql = "select distinct Name from `administrator`"
    elif flag == 3: sql = "select distinct Sex, count(*) from `administrator` group by Sex"
    elif flag == 4: sql = "select distinct Address from `administrator`"
    elif flag == 5: sql = "select distinct Phone_no from `administrator`"
    elif flag == 6: sql = "select distinct Mgr_id from `administrator`"
    print_all(sql)
```

각각에 해당하는 sql문을 구현하여 execute, commit 실행

(User 정보 모음)

1   새로운 User등록

    이름과 ID를 입력하여 새로운 tuple을 User table에 삽입

2   모든 User 정보 출력

    2.1   Delete User : 이 중 원하는 User tuple 삭제 진행

    2.2   Update User : 이 중 원하는 User tuple 변경 진행

3   User 관련 Attribute Select

    3.1   원하는 Attribute number를 입력하여 Select 진행

(User 정보 모음 관련 코드. line 151 ~ 240)

```
print("\n0. Return to previous menu")
print("1. Register new User")
print("2. View All Users")
print("3. View attributes")
second = int(input('Input : '))
if(second == 0) :
    status -= 1
elif (second == 1) :
    while (1) :
        name = input('\nName : ')
        new_id = input('ID, should be 5 numbers :')
        sql = "SELECT * FROM `user` WHERE Id = '{}'".format(new_id)
        if check(sql) : print("ID already exists. Insert other ID!")
        else :
            sql = "INSERT INTO `user` (`Name`, Id, Ad_id) VALUE ('{}', '{}', '{}')".format(name, new_id, id)
            execute_commit(sql)
            sql = "Insert into `playlist` (Usr_id) value ('{}')".format(new_id)
            execute_commit(sql)
            break
elif (second == 2) :
    #User 모두 보여주고 delete, update, ban진행
    while 1:
        sql = "select * from `user`"
        print("\n-------------------------------\nIndex : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)\n------------
        print_all(sql)
        print("\n-------------------------------\n")
        print("\n0. Return to previous menu")
        print("1. Delete User")
        print("2. Update User")
        print("3. Ban User")
        print("4. Permit User ")
        third = int(input('Input : '))
        if third == 0 :break
        elif (third == 1):
            delete_id = input('Write the User id you want to Delete : ')
            sql = "delete from `add_on` where Usr_id = '{}'".format(delete_id)
            execute_commit(sql)
            sql = "delete from `playlist` where Usr_id = '{}'".format(delete_id)
            execute_commit(sql)
            sql = "delete from `user` where Id = '{}'".format(delete_id)
            execute_commit(sql)
```

```
            elif (third == 2):
                while 1 :
                    update_id = input('\nWrite the User id you want to Update : ')
                    sql = "SELECT * FROM `User` WHERE Id = '{}'".format(update_id)
                    if (check(sql)) : break
                    else :
                        flag = input('Check the id Again. Want to try again?(y/n) : ')
                        if (flag == 'n'): break
                while 1:
                    name = input('Name : ')
                    if name == '': print("Name should not be None")
                    else : break
                sex = input('Sex(f/m) : ')
                if sex == '' : sex =None
                coin = input('Coin : ')
                if coin == '' : coin = 0
                else : coin = int(coin)
                address = input('Address : ')
                if address == '': address =None
                phone_no = input('Phone Number : ')
                if phone_no == '' : phone_no = None
                ad_id = input('Administrator ID : ')
                if ad_id == '' : ad_id = None
                sql = "update user set Name= %s, Sex= %s, Coin = %s, Address= %s, Phone_no= %s, Ad_id = %s where Id = {}".format(update_id)
                data = (name, sex, coin, address, phone_no, ad_id)
                execute_commit_data(sql,data)
            elif (third == 3) :
                ban_id = input('Write the User id you want to ban : ')
                sql = "update user set banned = True where Id = '{}'".format(ban_id)
                execute_commit(sql)
            elif (third == 4) :
                permit_id = input('Write the User id you want to permit : ')
                sql = "update user set banned = False where Id = '{}'".format(permit_id)
                execute_commit(sql)
    elif(second == 3) :
        #attribute 출력하고 거기 해당하는 attribute 선택 후 출력
        print("1.Id\t2.Name\t3.Sex\t4.Coin\t5.Address\t6.Phone_no\t7.Ad_id")
        flag = int(input('Which attribute do you want to see?\nType the right number : '))
        if flag == 1: sql = "select Id from `user`"
        elif flag == 2: sql = "select distinct Name from `user`"
        elif flag == 3: sql = "select distinct Sex, count(*) from `user` group by Sex"
        elif flag == 4: sql = "select distinct Coin from `user`"
        elif flag == 5: sql = "select distinct Address from `user`"
        elif flag == 6: sql = "select distinct Phone_no from `user`"
        elif flag == 7: sql = "select distinct Ad_id, count(*) from `user`  group by Ad_id"
        print_all(sql)
```

각각에 해당하는 sql문 구성 후 수행. Administrator와 거의 유사함

(Music 정보 모음)

1   새로운 Music등록

     이름과 ID를 입력하여 새로운 tuple을 Music table에 삽입

2   모든 Music 정보 출력

     2.1   Delete Music : 이 중 원하는 User tuple 삭제 진행

     2.2   Update Music : 이 중 원하는 User tuple 변경 진행

3   User 관련 Attribute Select

     3.1   원하는 Attribute number를 입력하여 Select 진행

(Music 정보 모음 관련 코드. line 241 ~ 312)

```python
print("\n0. Return to previous menu")
print("1. Insert new music")
print("2. View all musics")
print("3. View attributes")
second = int(input('Input : '))
if (second == 0):
    status -= 1
elif (second == 1):
    while (1) :
        title = input('Title : ')
        new_id = input('ID, should be 5 numbers :')
        sql = "SELECT * FROM `music` WHERE Id = '{}'".format(id)
        if check(sql) : print("ID already exists. Insert other ID!")
        else :
            sql = "INSERT INTO `music` (`Title`, Id) VALUE ('{}', '{}')".format(title, new_id)
            execute_commit(sql)
            break
elif (second == 2) :
    #Music 모두 보여주고 delete, update 진행
    while 1:
        sql = "select * from `music`"
        print("\n--------------------------\nIndex : (ID, Title, Artist, Composer, Lyricist, Ad_id)\n--------------------------\n")
        print_all(sql)
        print("\n--------------------------\n")
        print("\n0. Return to previous menu")
        print("1. Delete Music")
        print("2. Update Music")
        third = int(input('Input : '))
        if third == 0 :break
        elif (third == 1):
            delete_id = input('Write the Music id you want to Delete : ')
            sql = "delete from `music` where Id = '{}'".format(delete_id)
            execute_commit(sql)
        elif (third == 2):
            while 1 :
                update_id = input('\nWrite the Music id you want to Update : ')
                sql = "SELECT * FROM `music` WHERE Id = '{}'".format(update_id)
                if (check(sql)) : break
                else :
                    flag = input('Check the id Again. Want to try again?(y/n) : ')
                    if (flag == 'n'): break
            while 1:
                title = input('Title : ')
                if title == '': print("Title should not be None")
                else : break
            artist = input('Artist : ')
            if artist == '': artist = None
            composer = input('Composer : ')
            if composer == '': composer = None
            lyricist = input('Lyricist : ')
            if lyricist == '': lyricist = None
            sql = "alter table music drop Foreign key music_ibfk_1"
            execute_commit(sql)
            sql = "update music set Title = %s, Artist = %s, Composer = %s, Lyricist = %s, Ad_id = %s where Id = '{}'".format(update_id)
            data = (title, artist, composer, lyricist, id)
            execute_commit_data(sql, data)
            sql = "alter table music add foreign key (Ad_id) references Administrator(id)"
            execute_commit(sql)
```

```python
elif (second == 3) :
    #attribute 출력하고 거기 해당하는 attribute 선택 후 출력
    print("1.Id\t2.Title\t3.Artist\t4.Composer\t5.Lyricist\t6.Ad_id")
    flag = int(input('Which attribute do you want to see?\nType the right number : '))
    if flag == 1: sql = "select Id from `music`"
    elif flag == 2: sql = "select distinct Title from `music`"
    elif flag == 3: sql = "select distinct Artist, count(*) from `music` group by Artist"
    elif flag == 4: sql = "select distinct Composer, count(*) from `music` group by Composer"
    elif flag == 5: sql = "select distinct Lyricist, count(*) from `music` group by Lyricist"
    elif flag == 6: sql = "select distinct Ad_id, count(*) from `music`  group by Ad_id"
    print_all(sql)
```

(4) [User Mode] – (본인 플레이리스트 출력, 음악 삽입, 삭제, 코인 충전, 본인 User data 출력)

(참고 : Banned된 User는 음악 삽입, 삭제가 불가)

1   본인 플레이리스트 내부 음악 모두 출력

2   본인이 원하는 음악 플레이리스트에 삽입 (3코인 사용, 코인 없을 시 사용 불가)

    2.1   데이터 베이스 모든 음악 출력 후 고르기 (이후 남은 코인 출력)

    2.2   데이터 베이스에서 Title을 검색하여 고르기 (이후 남은 코인 출력)

3   본인이 원하지 않는 음악 플레이리스트에서 삭제

4   코인 충전 (100원 = 1코인, 음악 1곡 삽입 = 3코인)

5   본인 User data 출력

    5.1   원하는 경우 data 수정

([User Mode] 관련 코드. line 314 ~ 402)

```python
print("\n0. Exit")
print("1. Show My Playlist")
print("2. Insert Music on The Playlist")
print("3. Delete Music on The Playlist")
print("4. Buy the coins")
print("5. Show my data")
first = int(input('Input : '))
if(first == 0):
    status -= 1
elif(first == 1):
    #playlist와 음악 모두 보여주기
    print("\n----------------------------\nIndex : (Id, Title, Artist, Composer, Lyricist)\n----------------------------\n")
    sql = "select Id, Title, Artist, Composer, Lyricist from `music`, `add_on` where Id = Msc_id and Usr_id = '{}'".format(id)
    print_all(sql)
    print("\n----------------------------\n")
elif(first == 2):
    #insert, coin 세개 써서 사기, 남은 코인 보여주기
    sql = "select banned from `user` where Id = '{}'".format(id)
    cursor.execute(sql)
    result = bool(cursor.fetchone()[0])
    if result is True : print("You are BANNED! You are not allowed to insert into Playlist!")
    else :
        sql = "select Coin from `user` where Id = '{}'".format(id)
        cursor.execute(sql)
        result = int(cursor.fetchone()[0])
        if result < 3 : print("Your coins are not enough")
        else :
            result -= 3
            choice = int(input('1.Show All\t2. Search by the Title : '))
            if choice == 1: #Show All
                sql = "select ID, Title, Artist, Composer, Lyricist from `music`"
                print("\n----------------------------\nIndex : (ID, Title, Artist, Composer, Lyricist)\n----------------------------\n")
                print_all(sql)
                print("\n----------------------------\n")
                flag = input('Which one do you want to add?\nID : ')
                sql = "INSERT INTO `add_on` (`Msc_id`, Usr_id) VALUE ('{}', '{}')".format(flag, id)
```

```
            execute_commit(sql)
            sql = "update user set coin = %s where Id = '{}'".format(id)
            execute_commit_data(sql, result)
elif(first == 3):
    #delete
    sql = "select banned from `user` where Id = '{}'".format(id)
    cursor.execute(sql)
    result = bool(cursor.fetchone()[0])
    if result is True : print("You are BANNED! You are not allowed to delete music!")
    else :
        flag = input('Which one do you want to delete?\nID : ')
        sql = "delete from add_on where Msc_id = '{}'".format(flag)
        execute_commit(sql)
        print("Delete Complete")
elif(first == 4):
    #coin 사기
    coin = int(input('How much money do you pay?(/won) : ')) // 100
    print("Complete! You earned " + str(coin) + " coins")
    sql = "update user set Coin = Coin + %s where ID = '{}'".format(id)
    data = (coin)
    execute_commit_data(sql, data)
elif(first == 5) :
    #show my data
    sql = "select * from `user` where Id = '{}'".format(id)
    print("\n---------------------------\nIndex : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)\n---------------------------\n")
    print_all(sql)
    print("\n---------------------------\n")
    flag = input('Want to update? (y/n) : ')
    if (flag == 'y'):
        while 1:
            name = input('Name : ')
            if name == '': print("Name should not be None")
            else : break
        sex = input('Sex(f/m) : ')
        if sex == '' : sex =None
        address = input('Address : ')
        if address == '': address =None
        phone_no = input('Phone Number : ')
        if phone_no == '' : phone_no = None
        sql = "update user set Name= %s, Sex= %s, Address= %s, Phone_no= %s where Id = {}".format(update_id)
        data = (name, sex, address, phone_no)
        execute_commit_data(sql,data)
        print("Update Complete")
```

(5) Code에 쓰인 대표적 sql문 예시

Insert :

```
sql = "INSERT INTO `administrator` (`Name`, Id) VALUE ('{}', '{}')".format(name, new_id)
```

Delete :

```
sql = "delete from `administrator` where Id = '{}'".format(delete_id)
```

Update :
```
sql = "update administrator set Name= %s, Sex= %s, Address= %s, Phone_no= %s, Mgr_id = %s where Id = {}".format(update_id)
data = (name, sex, address, phone_no, mgr_id)
```

참고 (foreign key constraint가 걸려있는 경우 drop후 다시 update진행)

(참고 예시 :
```
sql = "alter table music drop Foreign key music_ibfk_1" – drop –
execute_commit(sql)
```

```
sql = "update music set Title = %s, Artist = %s, Composer = %s, Lyricist = %s, Ad_id = %s where Id =
'{}'".format(update_id) - update -
data = (title, artist, composer, lyricist, id)
execute_commit_data(sql, data)
sql = "alter table music add foreigOn key (Ad_id) references Administrator(id)" - add FK -
execute_commit(sql) )
```

Select :

```
sql = "select distinct Ad_id, count(*) from `music`  group by Ad_id"
```
(관리자가 등록한 음악의 수)

2. 수행 기능 스크린샷 (Administrator Mode, User Mode)

(**Administration Mode** 선택)

(본인 ID로 로그인)

(**Admin 정보 모음**으로 이동)

(현재 저장되어 있는 Admin
출력)

(뒤로 돌아감)

(Admin에 Insert 진행)

```
0. Return to previous menu
1. Register new Administrator
2. View all Administrators
3. View attributes
Input : 2

_____
Index : (ID, Name, Sex, Address, Phone_no, Mgr_id)
_____

1 :   ('01125', 'Kevin', 'M', 'Wangsimni', '01057779888', '11111')
2 :   ('11111', 'root', 'F', 'Hanyang Univ', '01011111111', None)
3 :   ('11112', 'Christina', 'F', 'Han River', '01025552444', '11111')
4 :   ('12345', 'Paul', 'M', 'Hang Daeng', '01027596400', None)
5 :   ('22222', 'Joshua', 'F', 'Gimpo', '010622222222', '11111')
6 :   ('33333', 'Charlie', 'M', 'Incheon', '010422342222', '12345')
7 :   ('44444', 'Mr.Simpson', None, None, None, None)

_____


0. Return to previous menu
1. Delete Administrator
2. Update Administrator
Input : 1
Write the Admin id you want to Delete : 11111

_____
Index : (ID, Name, Sex, Address, Phone_no, Mgr_id)
_____

1 :   ('01125', 'Kevin', 'M', 'Wangsimni', '01057779888', None)
2 :   ('11112', 'Christina', 'F', 'Han River', '01025552444', None)
3 :   ('12345', 'Paul', 'M', 'Hang Daeng', '01027596400', None)
4 :   ('22222', 'Joshua', 'F', 'Gimpo', '010622222222', None)
5 :   ('33333', 'Charlie', 'M', 'Incheon', '010422342222', '12345')
6 :   ('44444', 'Mr.Simpson', None, None, None, None)

_____


0. Return to previous menu
1. Delete Administrator
2. Update Administrator
Input : 2

Write the Admin id you want to Update : 44444
Name : Ms.Simpson
Sex(f/m) : F
Address : USA
Phone Number : 01084888488
Manager ID : 22222
```

(Insert후 데이터 확인)

<- 추가

(Delete 진행)

(Update 진행)

```
----------------------------
Index : (ID, Name, Sex, Address, Phone_no, Mgr_id)
----------------------------

1 :  ('01125', 'Kevin', 'M', 'Wangsimni', '01057779888', None)
2 :  ('11112', 'Christina', 'F', 'Han River', '01025552444', None)
3 :  ('12345', 'Paul', 'M', 'Hang Daeng', '01027596400', None)
4 :  ('22222', 'Joshua', 'F', 'Gimpo', '010622222222', None)
5 :  ('33333', 'Charlie', 'M', 'Incheon', '010422342222', '12345')
6 :  ('44444', 'Ms.Simpson', 'F', 'USA', '01084888488', '22222')

----------------------------


0. Return to previous menu
1. Delete Administrator
2. Update Administrator
Input : 0

0. Return to previous menu
1. Register new Administrator
2. View all Administrators
3. View attributes
Input : 3
1.Id    2.Name  3.Sex   4.Address        5.Phone_no       6.Mgr_id
Which attribute do you want to see?
Type the right number : 3
1 :  ('F', 3)
2 :  ('M', 3)
```

관리자 목록은 여자 3명, 남자 3명이 있는 것으로 확인.

(User 정보 모음, Music 정보 모음) 역시 위와 유사한 방식으로 수행되는 것을 확인 가능.

차이점은 User를 Ban할 수 있다는 것인데, Ban 사용 시 해당 User는 Playlist에 음악을 insert, delete할 수 없음. 다음 장 예시 참고

(User 정보 모음 Banned 예시)

```
----------------------------
Index : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)
----------------------------

1 : ('00001', 'Kim', 'M', 30, 'BackStreet', '01052225222', '12345', 0)
2 : ('00002', 'Lee', 'F', 0, 'Dongdaemun', '01010101010', None, 0)
3 : ('00003', 'Park', 'M', 60, 'Gwangju', '01029992999', '01125', 0)
4 : ('00004', 'Choi', 'F', 20, 'Busan', '01058889222', '33333', 0)

----------------------------



0. Return to previous menu
1. Delete User
2. Update User
3. Ban User
4. Permit User
Input : 3
Write the User id you want to ban : 00001
----------------------------
Index : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)
----------------------------

1 : ('00001', 'Kim', 'M', 30, 'BackStreet', '01052225222', '12345', 1)
2 : ('00002', 'Lee', 'F', 0, 'Dongdaemun', '01010101010', None, 0)
3 : ('00003', 'Park', 'M', 60, 'Gwangju', '01029992999', '01125', 0)
4 : ('00004', 'Choi', 'F', 20, 'Busan', '01058889222', '33333', 0)

----------------------------
```

(**User 정보 모음 선택**)

(00001 Ban)

(Ban 확인)

(**Banned User로 로그인**)

```
C:\Windows\system32\cmd.exe
1. User Mode
Input : 1
Insert User ID
User ID : 00001

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 2
You are BANNED! You are not allowed to insert into Playlist!

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 3
You are BANNED! You are not allowed to delete music!
```

(Insert 실행)

(Delete 실행)

수행 거부 확인

(User Mode 선택)

```
C:\Windows\system32\cmd.exe

Select Mode
0. Administrator Mode
1. User Mode
Input : 1
Insert User ID
User ID : 00002

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 1
```

현재 플레이리스트

```
------------------------------
Index : (Id, Title, Artist, Composer, Lyricist)
------------------------------

1 :  ('15555', 'Snow Flower', 'Park Hyosin', 'Noil', 'Nilo')
2 :  ('15556', 'Hello', 'Adele', 'Adele', 'Adele')

------------------------------
```

(insert 진행 시 코인
이 부족하면 사야함)

```
0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 2
Your coins are not enough

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
```

(돈 내고 코인 사기)

```
Input : 4
How much money do you pay?(/won) : 5000
Complete! You earned 50 coins

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 5

------------------------------
Index : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)
------------------------------
```

(코인 늘어난 것 확
인)

```
1 :  ('00002', 'Lee', 'F', 50, 'Dongdaemun', '01010101010', None, 0)
------------------------------
```

(Insert 진행 시 모든 노래
를 보여주거나, 제목으로
검색 가능)

(모두 보여주기)

```
0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 2
1.Show All       2. Search by the Title : 1

---------------------------
Index : (ID, Title, Artist, Composer, Lyricist)
---------------------------

1 :  ('15555', 'Snow Flower', 'Park Hyosin', 'Noil', 'Nilo')
2 :  ('15556', 'Hello', 'Adele', 'Adele', 'Adele')
3 :  ('15557', 'Snowman', 'Sia', 'Sia', 'Sia')
4 :  ('15558', 'Symphony', 'Dont know', 'Mola', 'Mola')
5 :  ('15559', 'Sunday Morning', 'Maroon5', 'Adam', 'Chris')

---------------------------

Which one do you want to add?
ID : 15558
0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 2
1.Show All       2. Search by the Title : 2
Which one do you want to add?
Title : sn

---------------------------
Index : (ID, Title, Artist, Composer, Lyricist)
---------------------------

1 :  ('15555', 'Snow Flower', 'Park Hyosin', 'Noil', 'Nilo')
2 :  ('15557', 'Snowman', 'Sia', 'Sia', 'Sia')

---------------------------

Which one do you want to add?
ID : 15557
```

(제목으로 검색하기)

-제목의 일부로도 가능

(Insert 후 플레이리스트 곡 늘어난
것 확인)

```
---------------------------
Index : (Id, Title, Artist, Composer, Lyricist)
---------------------------

1 :  ('15555', 'Snow Flower', 'Park Hyosin', 'Noil', 'Nilo')
2 :  ('15556', 'Hello', 'Adele', 'Adele', 'Adele')
3 :  ('15557', 'Snowman', 'Sia', 'Sia', 'Sia')
4 :  ('15558', 'Symphony', 'Dont know', 'Mola', 'Mola')

---------------------------
```

(플레이리스트 내부 곡 Delete 가능)

```
0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 3
Which one do you want to delete?
ID : 15555
Delete Complete

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 1

-----------------------------
Index : (Id, Title, Artist, Composer, Lyricist)
-----------------------------

1 :  ('15556', 'Hello', 'Adele', 'Adele', 'Adele')
2 :  ('15557', 'Snowman', 'Sia', 'Sia', 'Sia')
3 :  ('15558', 'Symphony', 'Dont know', 'Mola', 'Mola')

-----------------------------
```

(본인 신상 정보 수정 가능)

```
0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 5

-----------------------------
Index : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)
-----------------------------
```

(코인 개수 줄은 것 확인)

(신상 정보 update)

```
1 :  ('00002', 'Lee', 'F', 44, 'Dongdaemun', '01010101010', None, 0)

-----------------------------

Want to update? (y/n) : y
Name : asdf
Sex(f/m) : M
Address :
Phone Number :
Update Complete

0. Exit
1. Show My Playlist
2. Insert Music on The Playlist
3. Delete Music on The Playlist
4. Buy the coins
5. Show my data
Input : 5

-----------------------------
Index : (ID, Name, Sex, Coin, Address, Phone_no, Ad_id, Banned)
-----------------------------

1 :  ('00002', 'asdf', 'M', 44, None, None, None, 0)

-----------------------------
```

(확인)