

Session 6 - ORM Multitable

September 4, 2018

1 Python Training: Day 2 Session 6

1.1 2.6 Multitable Object Relational Mapping

1.1.1 Assignment 2.6.1

Write a simple database program that

1. First, create two tables named User and Post.
User's attributes: email, name
Post's attributes: id (36 characters uuid), text, post_date, author (as a foreign key to User email)
2. Several functions are required:
save_user: insert into User if user not exists, else update existing user
save_post: insert into Post if post not exists, else update existing post
delete_post: delete post if exists
delete_user: delete user if exists
print_all_users: print all users in database
print_all_posts: print all posts in database
print_post_by_user: print all posts given a user email
print_post_by_content_email: print all posts by email that contains certain string

Sample output:

```
>>> id1, id2, id3, id4, id5 = str(uuid1()), str(uuid1()), str(uuid1()), str(uuid1()), str(uuid1())
>>> print(id1, id2, id3, id4, id5)

d0f72930-af87-11e8-a1c0-f0038c428280 d0f72931-af87-11e8-b585-f0038c428280 d0f72932-af87-11e8-bd9
>>> save_user('andi@gmail.com', 'Andi')
>>> save_user('laila@live.com', 'Laila')
>>> save_user('siti@live.com', 'Siti')
>>> save_post(id1, 'aku bahagia', datetime.now(), 'laila@live.com')
>>> save_post(id2, 'skripsi datang..', datetime.now(), 'siti@live.com')
>>> save_post(id3, 'duh lupa makan siang', datetime.now(), 'laila@live.com')
>>> save_post(id4, 'jangan lupa bahagia', datetime.now(), 'andi@gmail.com')
>>> save_post(id5, 'mari ke kantin dulu', datetime.now(), 'siti@live.com')
```

```

>>> print_all_users()
>>> print_all_posts()

andi@gmail.com Andi
laila@live.com Laila
siti@live.com Siti
d0f72930-af87-11e8-a1c0-f0038c428280 aku bahagia 2018-09-03 21:44:13.216733 laila@live.com Laila
d0f72931-af87-11e8-b585-f0038c428280 skripsi datang.. 2018-09-03 21:44:13.216733 siti@live.com S
d0f72932-af87-11e8-bd95-f0038c428280 duh lupa makan siang 2018-09-03 21:44:13.216733 laila@live.
d0f72933-af87-11e8-969e-f0038c428280 jangan lupa bahagia 2018-09-03 21:44:13.231650 andi@gmail.c
d0f72934-af87-11e8-9886-f0038c428280 mari ke kantin dulu 2018-09-03 21:44:13.231650 siti@live.co

>>> print_post_by_user('laila@live.com')

d0f72932-af87-11e8-bd95-f0038c428280 duh lupa makan siang 2018-09-03 21:44:13.216733 laila@live.
d0f72930-af87-11e8-a1c0-f0038c428280 aku bahagia 2018-09-03 21:44:13.216733 laila@live.com Laila

>>> print_post_by_content_email('laila@live.com', 'makan')

Laila d0f72932-af87-11e8-bd95-f0038c428280 duh lupa makan siang 2018-09-03 21:44:13.216733

>>> print_post_by_content_email('siti@live.com', 'makan')

Siti d0f72932-af87-11e8-bd95-f0038c428280 duh lupa makan siang 2018-09-03 21:44:13.216733

>>> delete_post(id3)

>>> print_all_users()
>>> print_all_posts()

andi@gmail.com Andi
laila@live.com Laila
siti@live.com Siti
d0f72930-af87-11e8-a1c0-f0038c428280 aku bahagia 2018-09-03 21:44:13.216733 laila@live.com Laila
d0f72931-af87-11e8-b585-f0038c428280 skripsi datang.. 2018-09-03 21:44:13.216733 siti@live.com S
d0f72933-af87-11e8-969e-f0038c428280 jangan lupa bahagia 2018-09-03 21:44:13.231650 andi@gmail.c
d0f72934-af87-11e8-9886-f0038c428280 mari ke kantin dulu 2018-09-03 21:44:13.231650 siti@live.co

>>> delete_user('andi@gmail.com')

>>> print_all_users()
>>> print_all_posts()

laila@live.com Laila
siti@live.com Siti
d0f72930-af87-11e8-a1c0-f0038c428280 aku bahagia 2018-09-03 21:44:13.216733 laila@live.com Laila
d0f72931-af87-11e8-b585-f0038c428280 skripsi datang.. 2018-09-03 21:44:13.216733 siti@live.com S
d0f72934-af87-11e8-9886-f0038c428280 mari ke kantin dulu 2018-09-03 21:44:13.231650 siti@live.co

```

```

>>> save_post(id2, 'skripsi datang.. terjang!', datetime.now(), 'siti@live.com')

>>> print_all_users()
>>> print_all_posts()

laila@live.com Laila
siti@live.com Siti
d0f72930-af87-11e8-a1c0-f0038c428280 aku bahagia 2018-09-03 21:44:13.216733 laila@live.com Laila
d0f72934-af87-11e8-9886-f0038c428280 mari ke kantin dulu 2018-09-03 21:44:13.231650 siti@live.co
d0f72931-af87-11e8-b585-f0038c428280 skripsi datang.. terjang! 2018-09-03 21:45:17.127375 siti@l

In [ ]: import assignments.assignment_2_5_1
        from assignments.assignment_2_5_1 import save_user, save_post, delete_user, delete_post,

In [ ]: from datetime import datetime
        from uuid import uuid1

In [ ]: id1, id2, id3, id4, id5 = str(uuid1()), str(uuid1()), str(uuid1()), str(uuid1()), str(uuid1())
        print(id1, id2, id3, id4, id5)

In [ ]: save_user('andi@gmail.com', 'Andi')
        save_user('laila@live.com', 'Laila')
        save_user('siti@live.com', 'Siti')

        save_post(id1, 'aku bahagia', datetime.now(), 'laila@live.com')
        save_post(id2, 'skripsi datang..', datetime.now(), 'siti@live.com')
        save_post(id3, 'duh lupa makan siang', datetime.now(), 'laila@live.com')
        save_post(id4, 'jangan lupa bahagia', datetime.now(), 'andi@gmail.com')
        save_post(id5, 'mari ke kantin dulu', datetime.now(), 'siti@live.com')

In [ ]: print_all_users()
        print_all_posts()

In [ ]: print_post_by_user('laila@live.com')

In [ ]: print_post_by_content_email('laila@live.com', 'makan')

In [ ]: print_post_by_content_email('siti@live.com', 'makan')

In [ ]: delete_post(id3)

In [ ]: print_all_users()
        print_all_posts()

In [ ]: delete_user('andi@gmail.com')

In [ ]: print_all_users()
        print_all_posts()

In [ ]: save_post(id2, 'skripsi datang.. terjang!', datetime.now(), 'siti@live.com')

In [ ]: print_all_users()
        print_all_posts()

```