

Django DBMS Project

Team members:

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Outline

- Introduction
- Requirements Analysis
- Implementation
- Demo

Introduction

- Project commitment:

Delivering a web-based application for resource management and regular works conduct of general purpose store

- Users:

Store Manger, Staff

Requirements Analysis

- User Story

Scenario 11

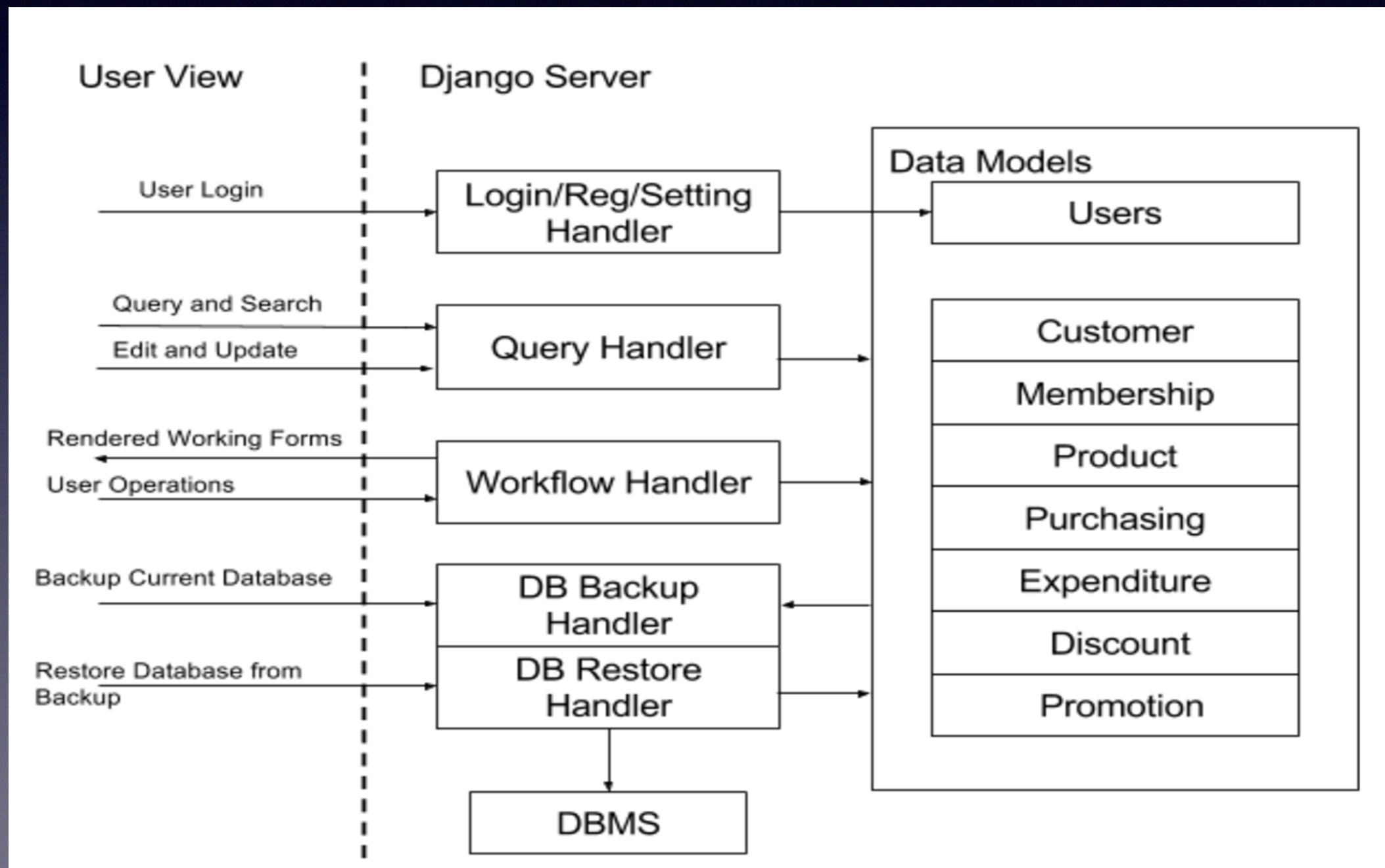
select Query menu
select Backup and Restore menu.
select backup.
back up intraday table of database
cover previous date.
Exit function.

Scenario 12

select Query menu
select Backup and Restore menu
select restore
do query and specify the date.
submit query get the table.
Exit function.

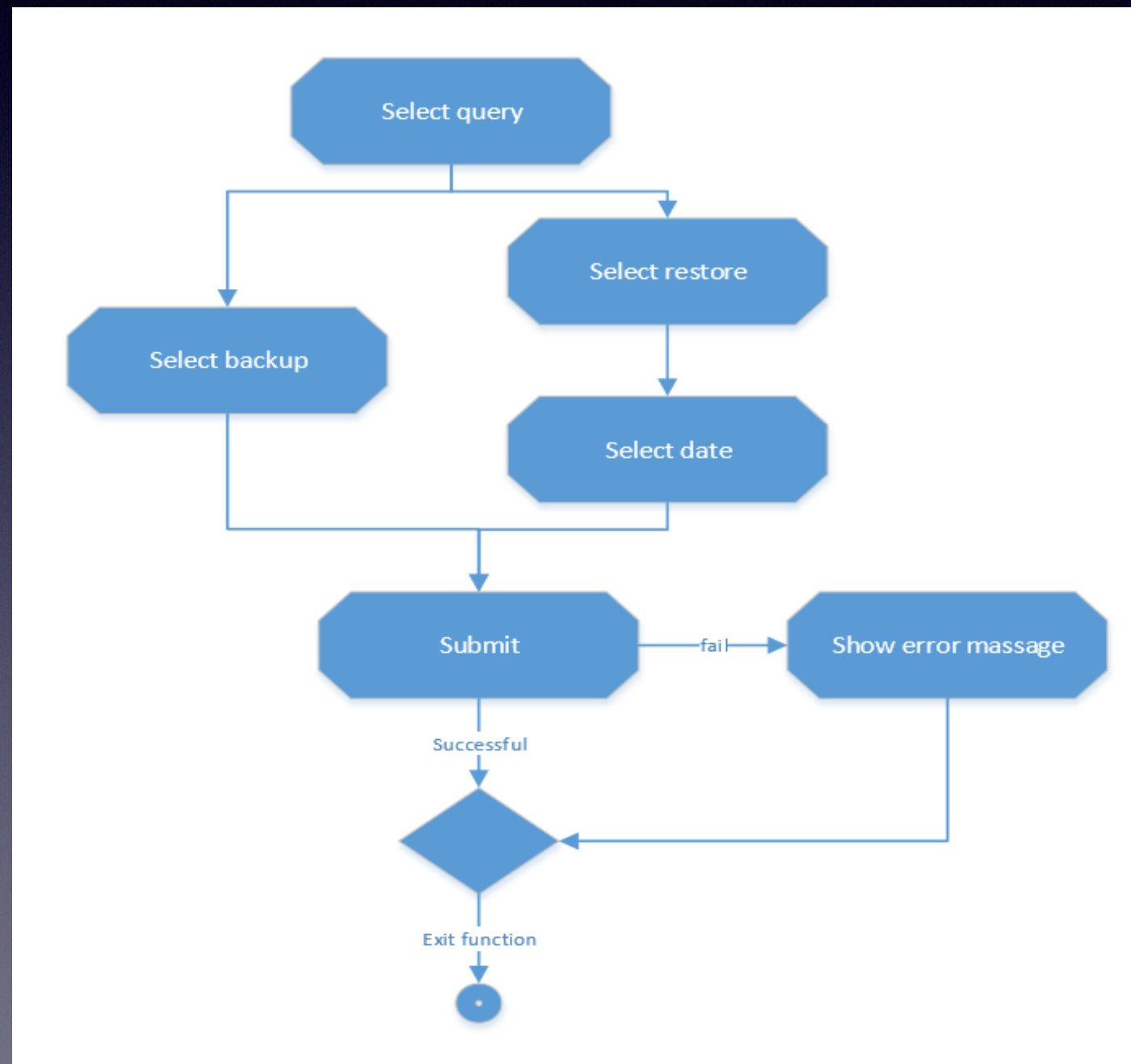
Design

- Architecture



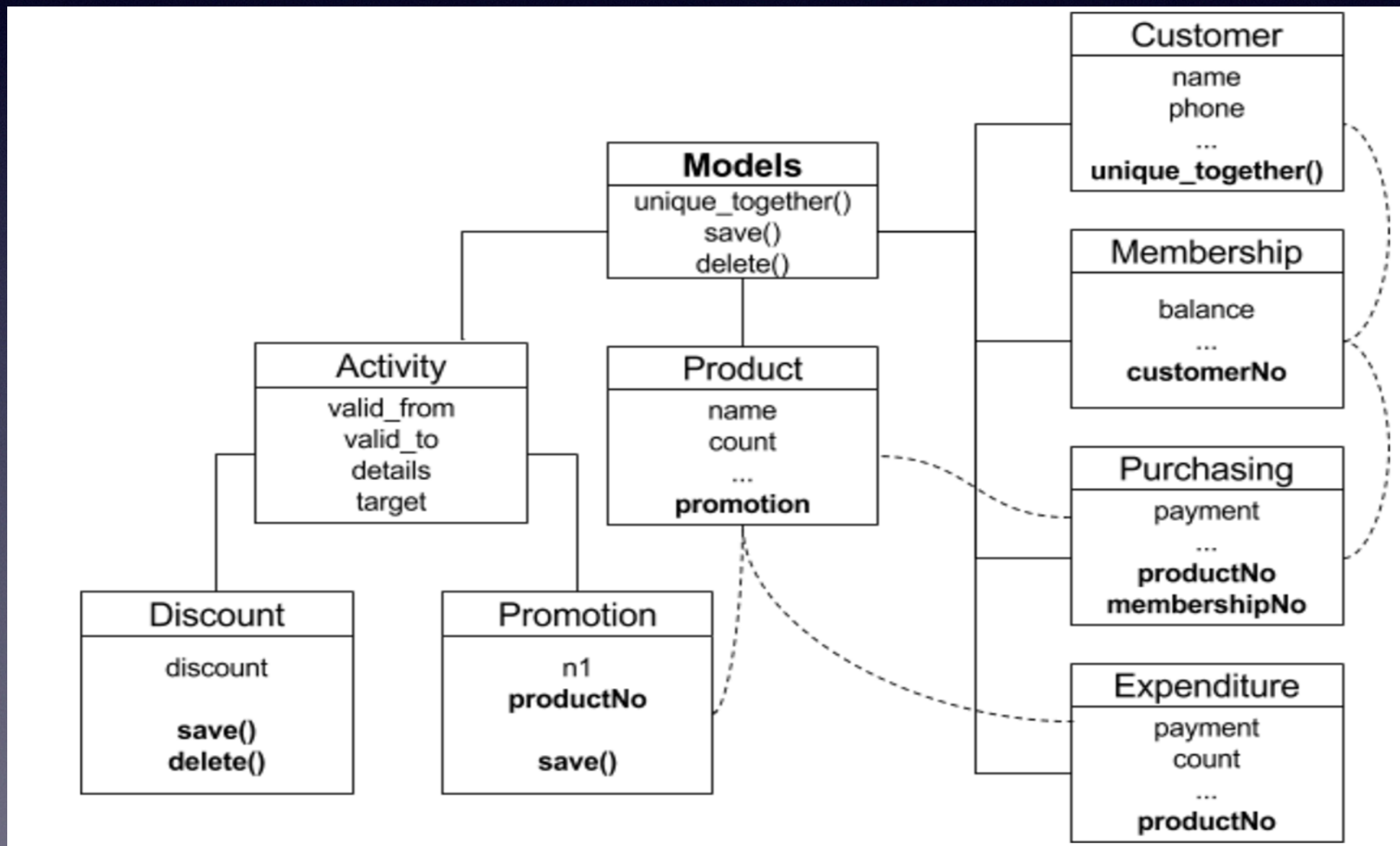
Design

- Activity Diagram

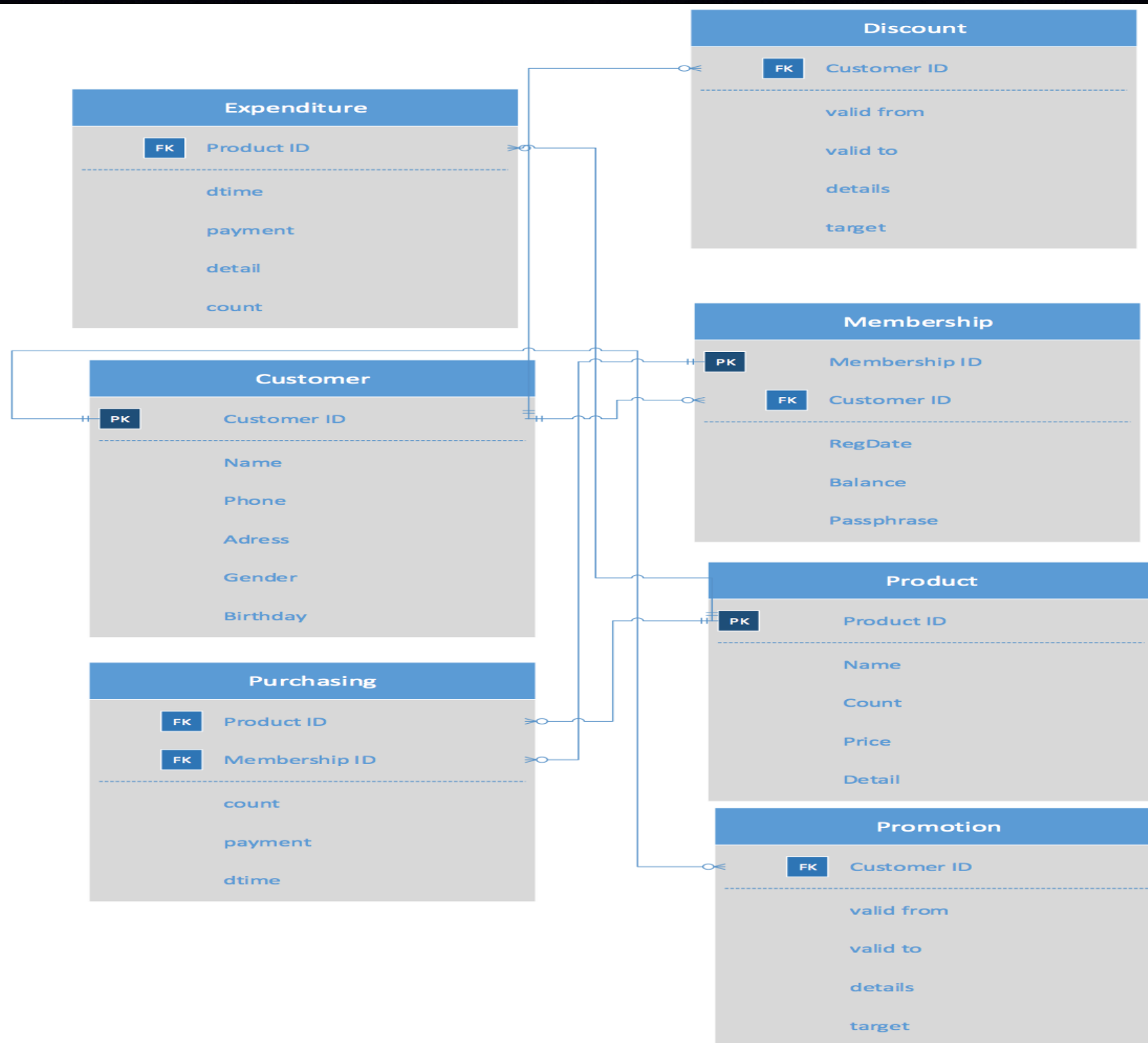


Design

- Class and Components Diagram



Database



Implementation

- Server Host:
 - Python2.7
 - Django 1.8.4
 - MySQL(Optional)
- UI and Interaction
 - JavaScript
 - jQuery/FancyBox/Bootstrap

Implementation

- System Backup/Restore Request Handler

```
# Recover database from specified date backup
@login_required
def restore_date(request):
    resp = 'Restore successes!'

    try:
        bak_date = request.POST.get('bak_date')
        print 'restore from backup date: ' + bak_date
        call_command('loaddata', str(bak_date) + '.json', verbosity=3, interactive=False)
    except:
        resp = sys.exc_info()[0]

    return HttpResponse(resp)

# Backup database of current date
@login_required
def backup_date(request):
    resp = "Backup successes!"

    try:
        today = datetime.datetime.now().date()
        #call_command('dumpdata', '>', str(today) + '.json', verbosity=3, interactive=False)
        subprocess.check_call("./manage.py dumpdata > " + str(today) + ".json", shell=True)
    except:
        resp = sys.exc_info()[0]

    return HttpResponse(resp)
```


Implementation

- Design Module Matrix

Module Name	PIC	S	O	L	I	D	Cohesion	Coupling	Reason of Ranks
Login/Register	Chao	8	8	6	6	10	8	8	Login and register should be separated interfaces
Membership	Chao	10	8	8	10	10	10	9	Simple logic and strong cohesion.
Purchase	Yihang	10	8	8	10	10	10	9	Simple logic and strong cohesion.
Product	Saheed	10	8	8	10	10	10	9	Simple logic and strong cohesion.
Activity	Chao	10	10	8	10	10	10	9	Decorator Class
Promotion	Yihang	10	9	8	10	10	9	8	Using decorator pattern.
Discount	Saheed	10	9	8	10	10	9	8	Using decorator pattern.
Query Handler	Chao	10	9	7	10	10	8	8	Few coupling with data models.
Workflow Handler	Chao	10	9	7	10	10	8	7	Few coupling with data models and UI.
Promotion Handler	Yihang	10	9	7	10	10	8	7	Few coupling with data models and Purchase
Discount Handler	Saheed	10	9	7	10	10	8	7	Few coupling with data models and Purchase
Backup/Restore	Chao	10	9	7	10	10	9	9	Very few coupling with server environment.
Query JS	Saheed	8	7	5	8	10	8	8	Few coupling with UI.
Workflow JS	Yihang Chao	7	6	5	7	10	7	6	Few coupling with data models and UI
Login JS	Chao	8	7	5	6	10	8	8	Few coupling with UI
Backup/Restore JS	Yihang	8	7	5	8	10	9	9	Very few coupling with Backup/Restore handler.

Demo

localhost:8000/query/init/

Waka

HomeQueryWorkflowAbout

cchen

Query and Edit

Backup and Restore

Backup to Date

Backup successes!

Restore from Date

11/16/2016

November 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3