

The Fontastic

Sometimes, we

The Fontastic

Think about which font best fits to our Presentation

The Fontastic

We also concerned about our font now.

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

THE FONTASTIC

However, there are so many fonts in the world

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

The Fontastic

THE FONTASTIC

And we don't know the name of pretty fonts.

The Fontastic

So, we made..

The Fontastic

The Total Solution for you.

For your wise Font select

Total Solution;

Project_Fontastic

SoftwareEngineering | 김우진 김지훈 한세민 정권호 | 2017. 06. 15

당신의 현명한 폰트 선택을 위한

Total Solution; Project_Fontastic

SoftwareEngineering | 김우진 김지훈 한세민 정권호 | 2017. 06. 15

thanks to. 안주은

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Chapter 01

Introduction

: Why we made it?

01. Why we made Fontastic?

Demand for Font **Always Exists.**

“Users’ Thought about Font”

01. Why we made Fontastic?

: Demand for Font **Always Exists.**

“Users’ Thought about Font”



In our major, we made 5~8 Powerpoints in one semester. But, classmates don't changes because it's major. So we have to change Template and Fonts every classes. Actually, we reuse it. **Name of fonts are all weird and unique, so it's difficult to find.**

⟨Jong Ho Lee, 24, Chunang Univ. major in Adverting Creation⟩

I only use “Naver Font”. It's easy to download, and it's free. The biggest reason is that I **can't find even though the font is cool.**

During the class, other group used very cool fonts.

But I can't use it because I don't know what it is. It seems weird to ask stranger “What's that font?” .



⟨Ga uel Kook, 23, Inha Univ. Business school⟩

01. Why we made Fontastic?

: Demand for Font **Always Exists.**

“Users’ Thought about Font”



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⟨Ga uel Kook, 23, Inha Univ. Business school⟩

Nowadays, people use fonts somehow, and had trouble in choosing fonts.

01. Why we made Fontastic?

“If you know this web service?”



I'll definitely use it!

I'm in intern work , so powerpoint and fonts causes a lot of stress.
I continually submit reports, and make presentation. So, intern workers' sense depends on Fascinating fonts and PPT template.

⟨Sang Hwan Kim, 25, Intern worker⟩

I would use it even though it's charged. I'm serious.
Sometimes I see unique fonts during web surfing.
If we can find it, know the name,, and use it...
It seems really comfortable. I'll use it, so please make it for me.



⟨Bo ram Kim, 22, Kyung Hee Univ. College of art⟩

01. Why we made Fontastic?

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**Nowadays, we have to submit so many presentations and reports,
So help choosing appropriate Fonts,
Well be a ray of light to them.**

**Their concern is
our concern either.**

01. Why we made Fontastic?

“4 Reasons we made Fontastic”

Users’ Needs
No similar services
Learn ‘Machine Learning’
Challenge

01. Why we made Fontastic?

Project Goals

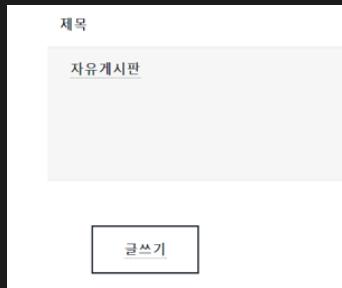
Breaking “Font concerns” down

Overall Function

: about overall function

02. Web service with basic Machine Learning

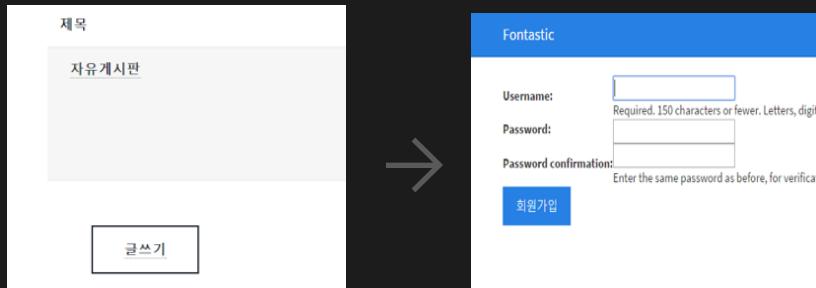
“Reactive Webpage”



Board
(Q&A, Request, etc..)

02. Web service with basic Machine Learning

“Reactive Webpage”

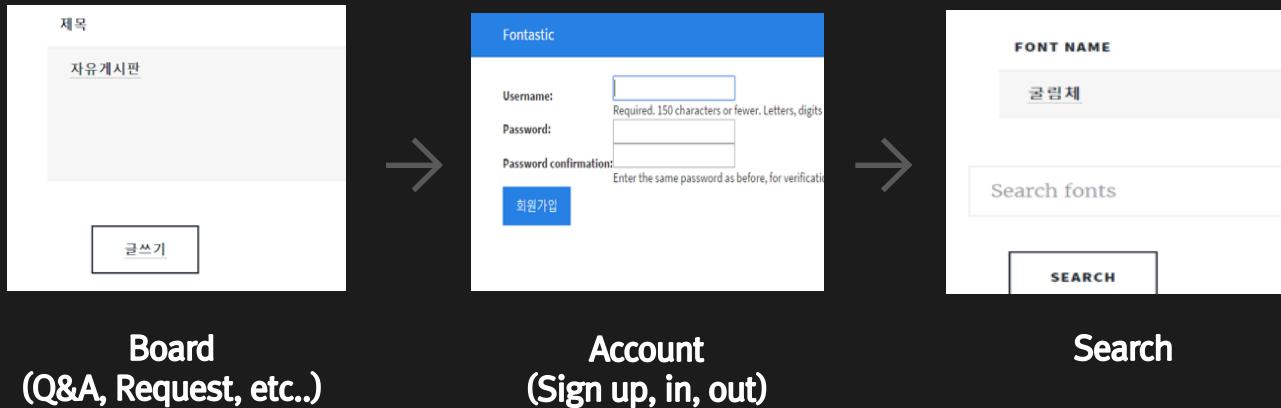


Board
(Q&A, Request, etc..)

Account
(Sign up, in, out)

02. Web service with basic Machine Learning

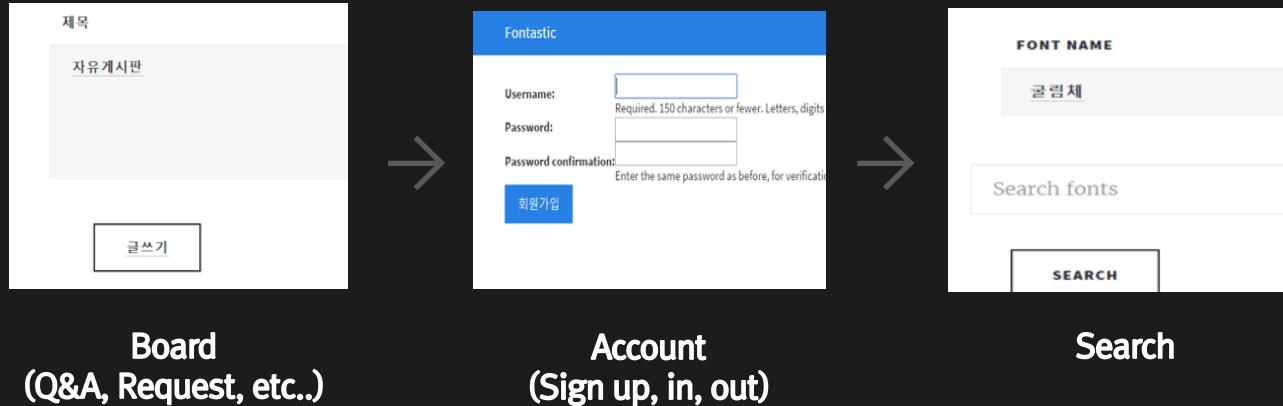
“Reactive Webpage”



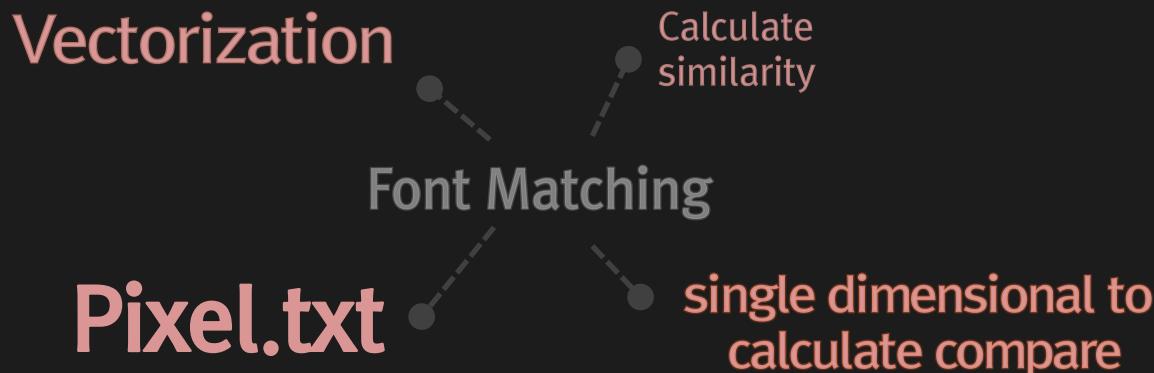
Overall Function

02. Web service with basic Machine Learning

“Reactive Webpage”



“Main function_ Font Matching”



02. Web service with basic Machine Learning

“Reactive Webpage”



Board
(Q&A, Request, etc..)

Account
(Sign up, in, out)

Search

“Main function_ Font Matching”

Vectorization

tf.idf

Pixel.txt

NumPy

Font Matching

python

Calculate
similarity

image

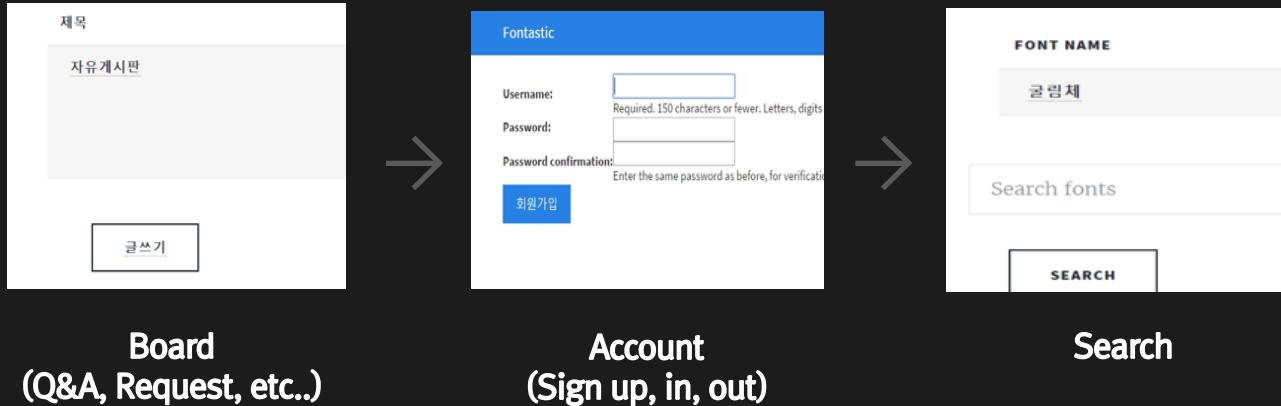
Django

etc.

single dimensional to
calculate compare

02. Web service with basic Machine Learning

“Reactive Webpage”



“Main function_ Font Matching”

Vectorization

tf.idf

Pixel.txt

NumPy

Font Matching

python

etc.

Calculate similarity

image

Django

single dimensional to
calculate compare

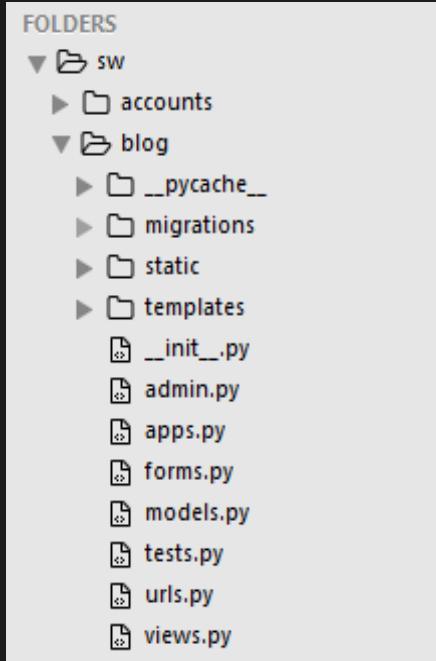
Implementation was continuous
challenge

Chapter 03

Implementation

03. Exposition of Function Implementation

“Board Model”



```

class Post(models.Model):
    title = models.CharField(max_length=100)
    content = models.TextField()
    photo = models.ImageField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    class Meta:
        ordering = ['-id']

    def __str__(self):
        return self.title

```

```

class Question(models.Model):
    title = models.CharField(max_length=30)
    contents = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    def __str__(self):
        return self.title

    class Meta:
        ordering=[ 'id']

```

```

class Call(models.Model):
    title = models.CharField(max_length=30)
    contents = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    def __str__(self):
        return self.title

    class Meta:
        ordering=[ 'id']

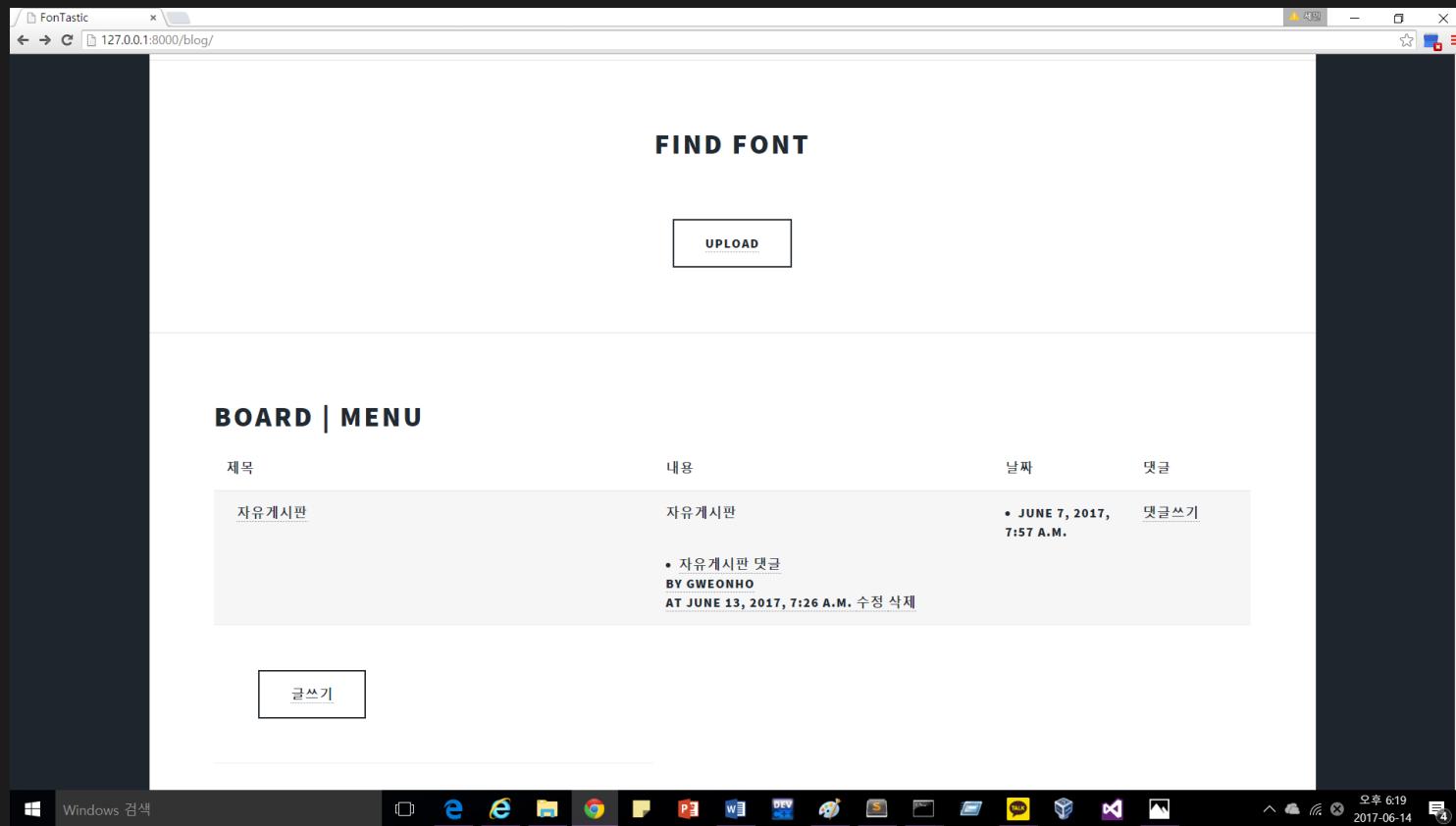
```

3 Web Functions
: Board, Member Managing, Search Function

3 Functions in Model.py in Blog App
: Board Model – Post, Call, Question

03. Exposition of Function Implementation

“Board”



03. Exposition of Function Implementation

“Board Model - Comments”

```
class Comment(models.Model):
    post = models.ForeignKey(Post)
    author = models.ForeignKey(settings.AUTH_USER_MODEL)
    message = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    class Meta:
        ordering = ['-id']

    def get_edit_url(self):
        return reverse('blog:comment_edit', args=[self.post.pk, self.pk])

    def get_delete_url(self):
        return reverse('blog:comment_delete', args=[self.post.pk, self.pk])
```

```
class question_Comment(models.Model):
    question = models.ForeignKey(Question)
    author = models.ForeignKey(settings.AUTH_USER_MODEL)
    message = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    def get_question_edit_url(self):
        return reverse('blog:question_comment_edit', args=[self.question.pk, self.pk])

    def get_question_delete_url(self):
        return reverse('blog:question_comment_delete', args=[self.question.pk, self.pk])
```

```
class call_Comment(models.Model):
    call = models.ForeignKey(Call)
    author = models.ForeignKey(settings.AUTH_USER_MODEL)
    message = models.TextField()
    created_at = models.DateTimeField(auto_now_add=True)
    updated_at = models.DateTimeField(auto_now=True)

    def get_call_edit_url(self):
        return reverse('blog:call_comment_edit', args=[self.call.pk, self.pk])

    def get_call_delete_url(self):
        return reverse('blog:call_comment_delete', args=[self.call.pk, self.pk])
```

Suv-functions in Board_Comment Function
To manage Comments modify and erase in Board

03. Exposition of Function Implementation

“ Blog – URL ”

```
urlpatterns = [
    url(r'^$', views.index, name='index'),

    #post board
    url(r'^(?P<pk>\d+)/$', views.post_detail, name='post_detail'),
    url(r'^post_new/$', views.post_new , name='post_new'),

    url(r'^(?P<post_pk>\d+)/comment/new/$', views.comment_new, name='comment_new'),
    url(r'^(?P<post_pk>\d+)/comment/(?P<pk>\d+)edit/$', views.comment_edit, name='comment_edit'),
    url(r'^(?P<post_pk>\d+)/comment/(?P<pk>\d+)delete/$', views.comment_delete, name='comment_delete'),

    # call board
    url(r'^call_new/$',views.call_new, name='call_new'),
    url(r'^(?P<pk>\d+)/call/$',views.call_detail, name='call_detail'),
    url(r'^(?P<call_pk>\d+)/call_comment/new/$', views.call_comment_new, name='call_comment_new'),
    url(r'^(?P<call_pk>\d+)/call_comment/(?P<pk>\d+)edit/$', views.call_comment_edit, name='call_comment_edit'),
    url(r'^(?P<call_pk>\d+)/call_comment/(?P<pk>\d+)delete/$', views.call_comment_delete, name='call_comment_delete'),

    #question board
    url(r'^question_new/$',views.question_new, name='question_new'),
    url(r'^(?P<pk>\d+)/question/$',views.question_detail, name='question_detail'),
    url(r'^(?P<question_pk>\d+)/question_comment/new/$', views.question_comment_new, name='question_comment_new'),
    url(r'^(?P<question_pk>\d+)/question_comment/(?P<pk>\d+)edit/$', views.question_comment_edit, name='question_comment_edit'),
    url(r'^(?P<question_pk>\d+)/question_comment/(?P<pk>\d+)delete/$', views.question_comment_delete, name='question_comment_delete'),

    #upload
    url(r'^upload_new/$',views.upload_new, name='upload_new'),
    url(r'^(?P<pk>\d+)/upload/$',views.upload_detail, name='upload_detail'),
]
```

URL pattern Set up
: Set own URL in each Board, Comments, Functions

03. Exposition of Function Implementation

“ Blog – Views.py ”

```
@login_required
def post_new(request):
    if request.method=="POST":
        form = PostForm(request.POST, request.FILES)
        if form.is_valid():
            form = form.save(commit=False)
            form.save()
            return redirect('blog:post_detail' , form.pk)
    else:
        form = PostForm()
    return render(request, "blog/post_form.html",{
        "form":form,
    })
```

```
def post_detail(request, pk):
    post = get_object_or_404(Post, pk=pk)
    return render(request, 'blog/post_detail.html', {
        'post' : post,
    })

def question_detail(request, pk):
    question = get_object_or_404(Question, pk=pk)
    return render(request, 'blog/question_detail.html', {
        'question' : question,
    })

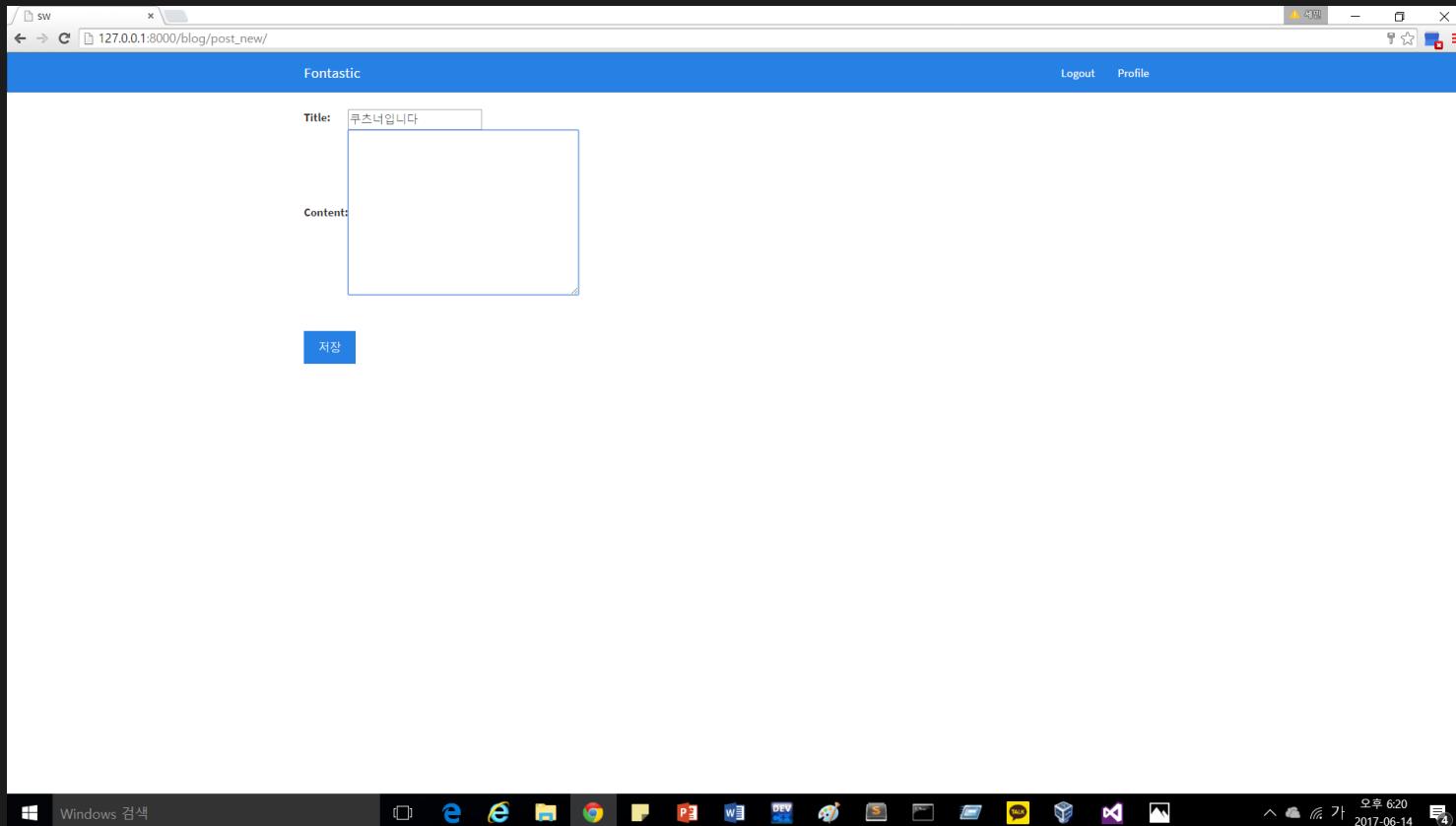
def call_detail(request, pk):
    call = get_object_or_404(Call, pk=pk)
    return render(request, 'blog/call_detail.html', {
        'call' : call,
    })

def upload_detail(request, pk):
    request = get_object_or_404(Request, pk=pk)
    return render(request, 'blog/upload_detail.html', {
        'upload' : upload,
    })
```

Implementation in Views.py
: implement functions html shown in real

03. Exposition of Function Implementation

“ ex) Free Board ”



03. Exposition of Function Implementation

“ Blog – Views.py ”

```

@login_required
def comment_new(request, post_pk):
    post = get_object_or_404(Post, pk = post_pk)

    if request.method =='POST':
        form = CommentForm(request.POST, request.FILES)
        if form.is_valid():
            comment = form.save(commit=False)
            comment.post = post
            comment.author = request.user
            comment.save()
            return redirect('blog:post_detail', post.pk)
    else:
        form = CommentForm()
    return render(request, 'blog/comment_form.html', {
        'form':form,
    })

@login_required
def comment_edit(request, post_pk, pk):
    comment = get_object_or_404(Comment, pk=pk)
    if comment.author != request.user:
        return redirect('blog:post_detail', post_pk)

    if request.method =='POST':
        form = CommentForm(request.POST, request.FILES, instance=comment)
        if form.is_valid():
            comment = form.save()
            return redirect('blog:post_detail', post_pk)
    else:
        form = CommentForm(instance=comment)
    return render(request, 'blog/comment_form.html', {
        'form':form,
    })

@login_required
def comment_delete(request, post_pk, pk):
    comment = get_object_or_404(Comment, pk=pk)
    if comment.author != request.user:
        return redirect('blog:post_detail', post_pk)

    if request.method =='POST':
        comment.delete()
        return redirect('blog:post_detail', post_pk)

    return render(request, 'blog/comment_confirm_delete.html', {
        'comment': comment,
    })

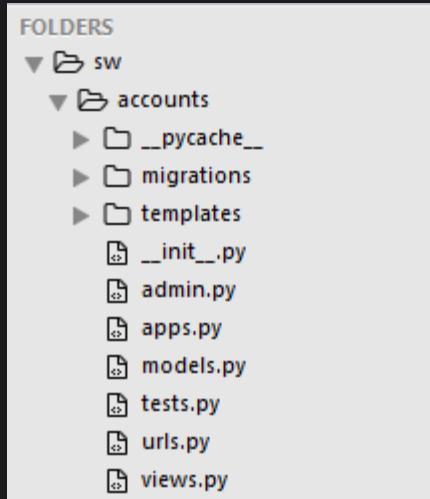
```

Comment's views.py

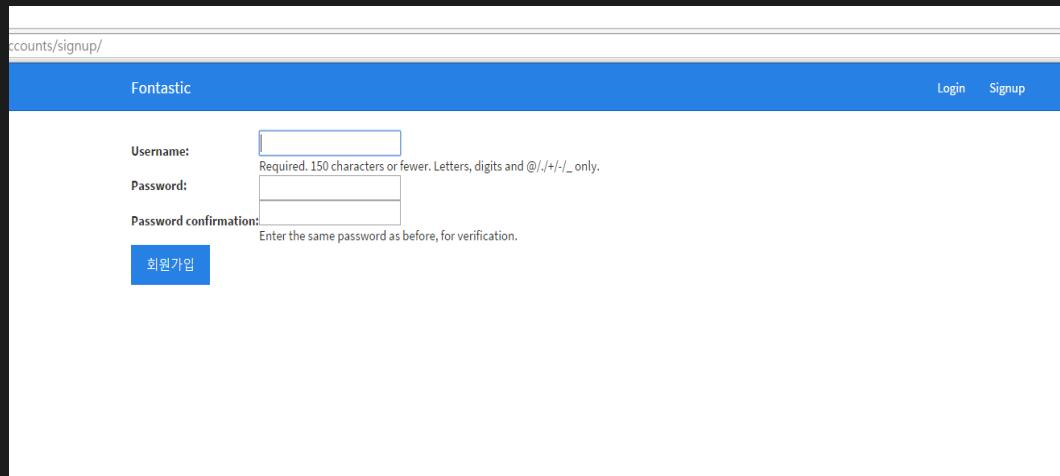
: Implement comment modify,erase,write functions
 . Get Post_pk as a Primary Key.

03. Exposition of Function Implementation

“ Member Managing Function; account ”



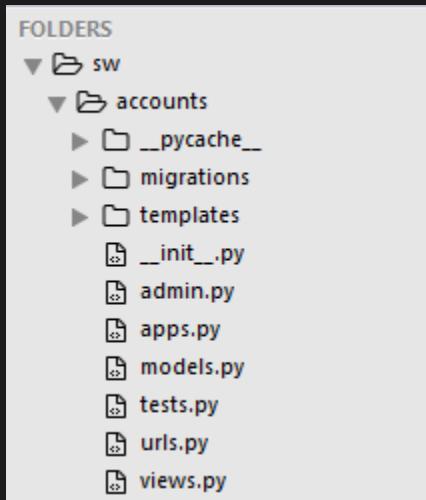
```
def signup(request):
    if request.method == 'POST':
        form = UserCreationForm(request.POST)
        if form.is_valid():
            user = form.save()
            return redirect(settings.LOGIN_URL)
    else:
        form = UserCreationForm()
    return render(request, 'accounts/signup_form.html', {
        'form' : form,
    })
```



**Member managing Function
: account app**

03. Exposition of Function Implementation

“ account –Urls.py ”

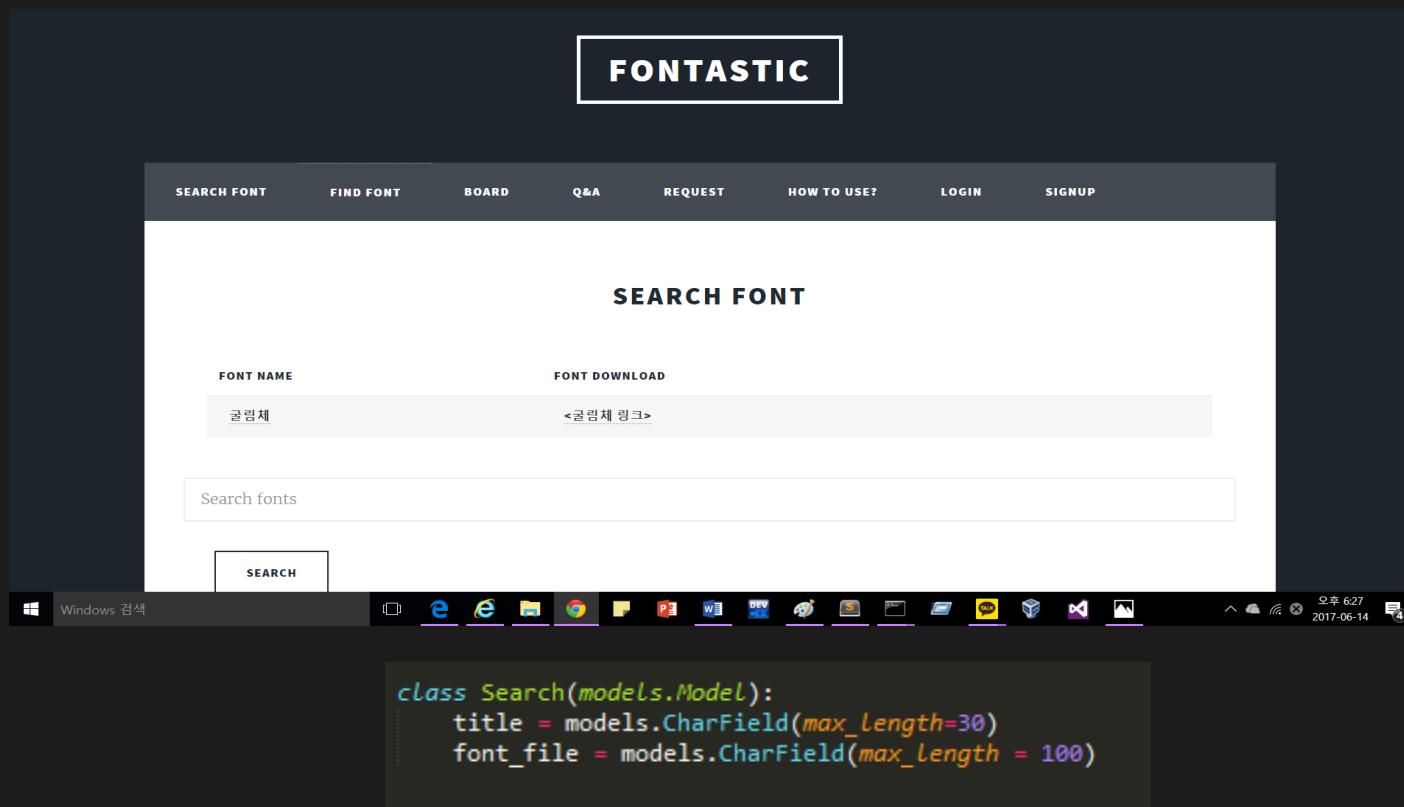


```
urlpatterns = [
    url(r'^login/$', login, name='login', kwargs={
        'template_name': 'accounts/login_form.html',
    }),
    url(r'^logout/$', logout, name='logout', kwargs={
        'next_page':'login',
    }),
    url(r'^signup/$', views.signup, name='signup'),
    url(r'^profile/$', views.profile, name='profile'),
]
```

Accounts templates Url patterns
:Set unique Url in accounts App urls.py

03. Exposition of Function Implementation

“Search Function”



Font Searching Function
: Users can search font by Search Box

03. Exposition of Function Implementation

“Search Function”

```
def index(request):
    post_list = Post.objects.all()
    question_list = Question.objects.all()
    call_list = Call.objects.all()
    search_list = Search.objects.all()

    #Search function
    query = request.GET.get("q")
    if query:
        search_list = search_list.filter(title__icontains=query)

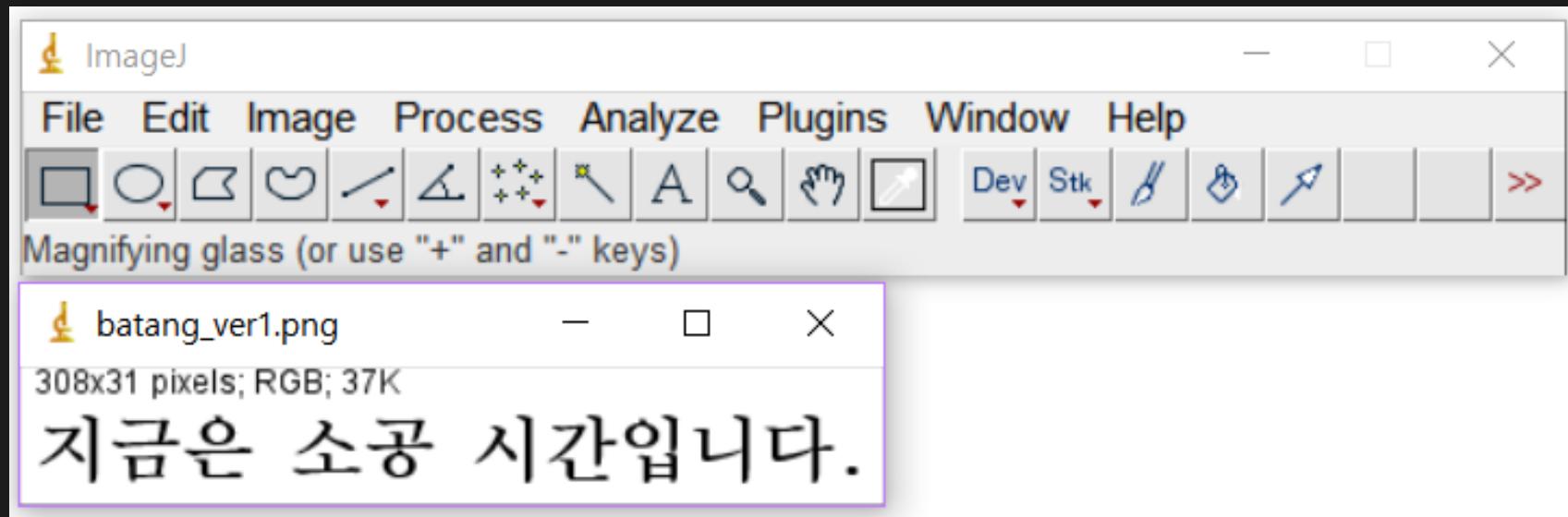
    return render(request, 'blog/post_list.html', {
        'post_list' : post_list,
        'question_list':question_list,
        'call_list':call_list,
        'search_list':search_list,
    })
```

Font Searching Function

: Compare contents in Search Box with Search Model, and find the same one

03. Exposition of Function Implementation

“imageJ”



03. Exposition of Function Implementation

“imageJ”

03. Exposition of Function Implementation

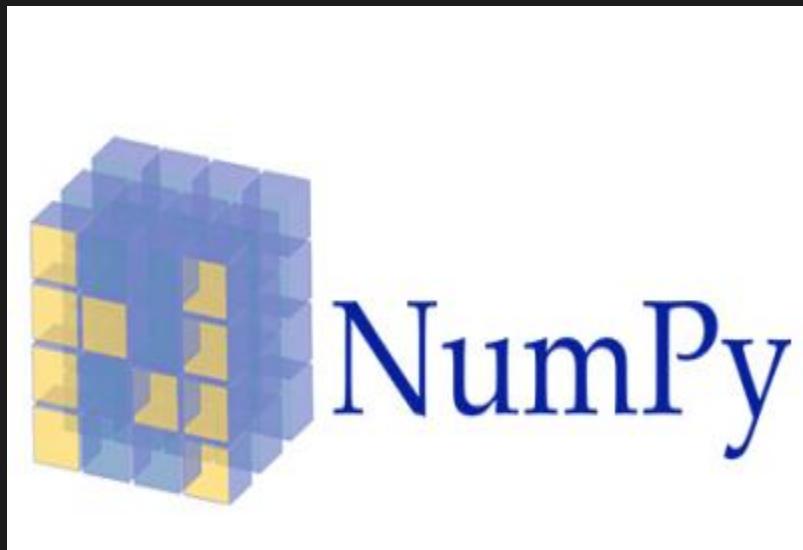
“tf.idf”

tf.idf

0.03467514	0.00424219	0.02926775	0.01040254	0.01074636	0.02350311
0.55472381	0.00396848	0.01696878	0.01951183	0.01979238]	
[0.81668077	0.01093525	0.01613525	0.02975513	0.01346845	0.00352722
0.00682874	0.00835435	0.03522342	0.0102431	0.01058165	0.01653063
0.57273717	0.01169341	0.00835435	0.03842555	0.0038978]	
[0.78183142	0.00348954	0.00386168	0.01582523	0.	0.0033767
0.00653734	0.	0.03372037	0.00980601	0.01350681	0.00949514
0.62191136	0.00373148	0.00399893	0.00919646	0.00373148]	
[0.77225251	0.	0.	0.01563134	0.00424525	0.
0.00322862	0.	0.02725137	0.	0.00333533	0.00312627
0.63435028	0.00368576	0.00394993	0.01211172	0.00368576]	
[0.77811684	0.00347296	0.00384333	0.01575005	0.	0.00336066
0.00325314	0.	0.03356016	0.00325314	0.01008198	0.00945003
0.62653564	0.00371375	0.	0.01830554	0.00371375]	
[0.79451015	0.00354613	0.	0.01608187	0.00436761	0.00343146
0.00664335	0.	0.0280368	0.00664335	0.	0.00321637
0.60620092	0.	0.	0.0093456	0.]
[0.791119356	0.00353133	0.00781585	0.00640589	0.01304812	0.00341714
0.006611562	0.00809362	0.03722636	0.00992343	0.01708569	0.01281179
0.60880803	0.00755232	0.	0.03102196	0.]
[0.79313282	0.010611995	0.	0.00963239	0.	0.00342551
0.00663184	0.00405673	0.015549	0.00331592	0.	0.0064216
0.60772515	0.00757083	0.	0.031098	0.00378542]	
[0.75066225	0.00335042	0.00370773	0.00607773	0.	0.
0.00313836	0.	0.01177311	0.00313836	0.00324209	0.

03. Exposition of Function Implementation

“ NumPy ”



0.03467514	0.00424219	0.02926775	0.01040254	0.01074636	0.02350311
0.55472381	0.00395848	0.01696878	0.01951183	0.01979238]	
[0.81668077	0.01093525	0.01613525	0.02975513	0.01346845	0.00352722
0.00682874	0.00835435	0.03522342	0.0102431	0.01058165	0.01653063
0.57273717	0.01169341	0.00835435	0.03842555	0.0038978]	
[0.78183142	0.00348954	0.00386168	0.01582523	0.	0.0033767
0.00653734	0.	0.03372037	0.00980601	0.01350681	0.00949514
0.62191136	0.00373148	0.00399893	0.00919646	0.00373148]	
[0.77225251	0.	0.	0.01563134	0.00424525	0.
0.00322862	0.	0.02725137	0.	0.00333533	0.00312627
0.63435028	0.00368576	0.00394993	0.01211172	0.00368576]	
[0.77811684	0.00347296	0.00384333	0.01575005	0.	0.00336066
0.00325314	0.	0.03356016	0.00325314	0.01008198	0.00945003
0.62653564	0.00371375	0.	0.01830554	0.00371375]	
[0.79451015	0.00354613	0.	0.01608187	0.00436761	0.00343146
0.00664335	0.	0.0280368	0.00664335	0.	0.00321637
0.60620092	0.	0.	0.0093456	0.	
[0.79119356	0.00353133	0.00781585	0.00640589	0.01304812	0.00341714
0.00661562	0.00809362	0.03722636	0.00992343	0.01708569	0.01281179
0.60880803	0.00755232	0.	0.03102196	0.	
[0.79313282	0.01061995	0.	0.00963239	0.	0.00342551
0.00663184	0.00405673	0.015549	0.0031592	0.	0.0064216
0.60772515	0.00757083	0.	0.031098	0.00378542]	
[0.75066225	0.00335042	0.00370773	0.00607773	0.	0.
0.00313836	0.	0.01177311	0.00313836	0.00324209	0.

03. Exposition of Function Implementation

“ Similarity Score ”

Which font is this?

Myfont may be similar with..

맑은고딕체

0.18083182640144665

바탕체

0.32679738562091504

돋움체

100.0

궁서체

0.3053435114503817

My file=dodum_vpM1dEj.txt

목록으로

03. 기능 구현에 대한 자세한 설명

“Jaccard Similarity”

Jaccard similarity:

Jaccard Similarity

Set A = {    }

Set B = {     }

$$|A| = 4$$

$$|B| = 5$$

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03. 기능 구현에 대한 자세한 설명

“ Jaccard Similarity ”

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$$\text{Union}(A,B) = \left\{ \begin{array}{c} \text{panda} \\ \text{tiger} \\ \text{monkey} \\ \text{fox} \\ \text{crane} \\ \text{elephant} \\ \text{bird} \end{array} \right\}$$

$$\text{Intersection } (A,B) = \left\{ \begin{array}{c} \text{panda} \\ \text{monkey} \end{array} \right\}$$

$$|\text{Union } (A,B)| = 7$$

$$|\text{Intersection } (A,B)| = 2$$

03. 기능 구현에 대한 자세한 설명

“Jaccard Similarity”

$$\text{Jaccard Similarity } J(A, B) = \frac{|\text{Intersection}(A, B)|}{|\text{Union}(A, B)|}$$

$$= 2 / 7$$

$$= 0.286$$

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Chapter 04

Expectancy effect

04. Physically, Mentally expected effects

Physical

Time Saving



Psycological

04. Physically, Mentally expected effects

Physical

Time Saving



Psychological

Getting out of Stress, while making things.



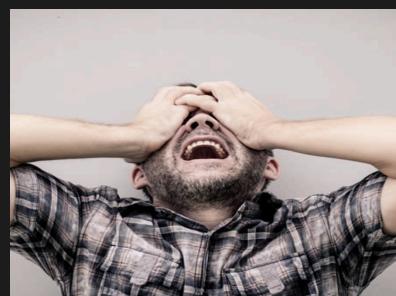
04. Physically, Mentally expected effects

Physical

Time Saving



Prepare presentation efficiently



Getting out of Stress, while making things.



Confidence of presenting
high quality materials.

Psychological

04. Physically, Mentally expected effects

Physical

Time Saving



Prepare presentation efficiently



Fast Promotion with good Presentation



Psycological

Getting out of Stress, while making things.

Confidence of presenting
high quality materials.

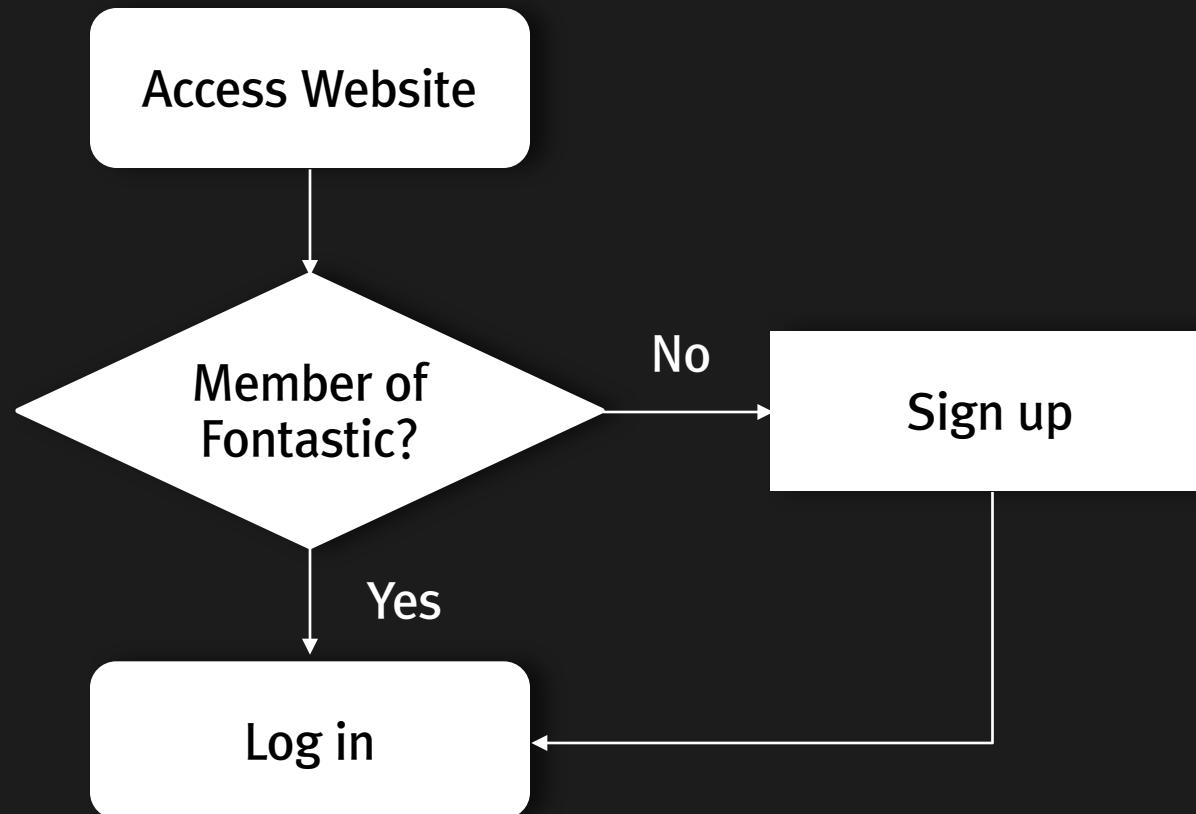
Pleasure

Chapter 05

Use Case

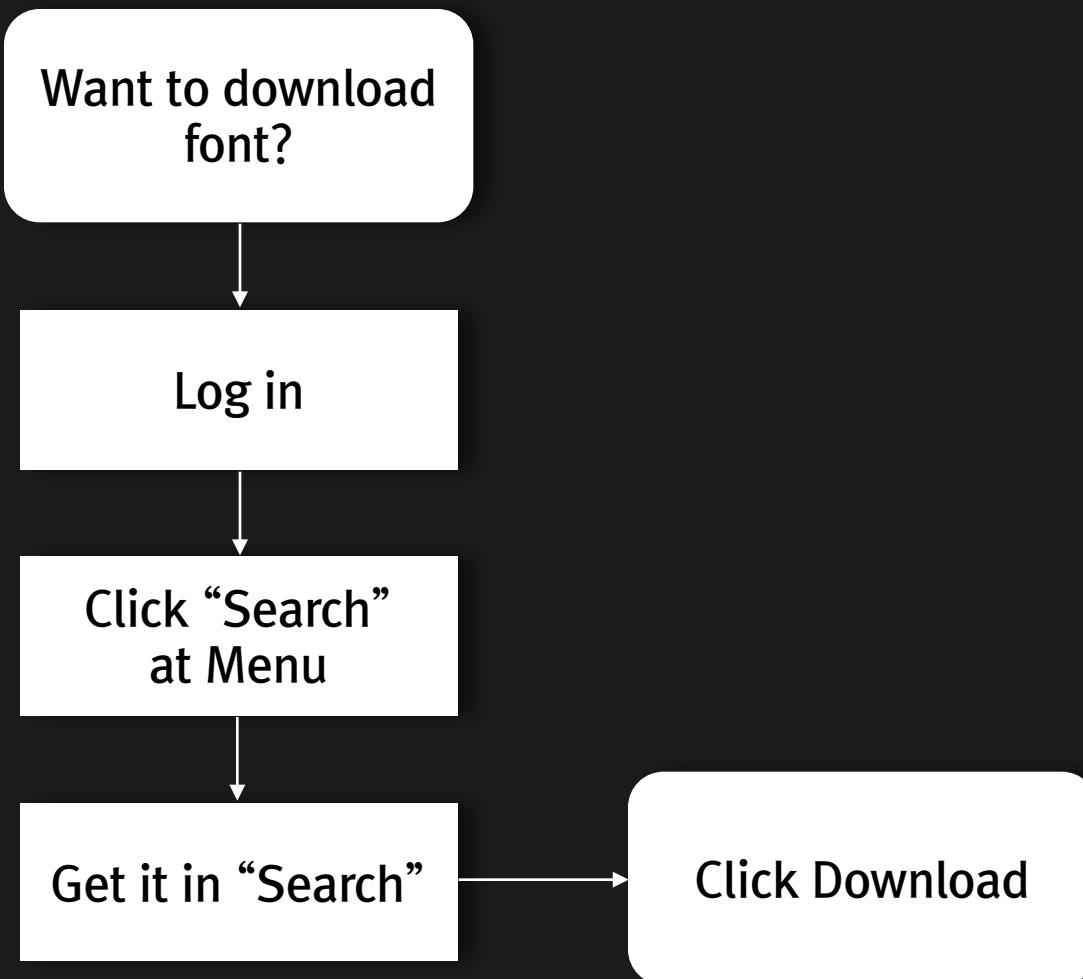
05. Use case in user's perspective

“ START ”



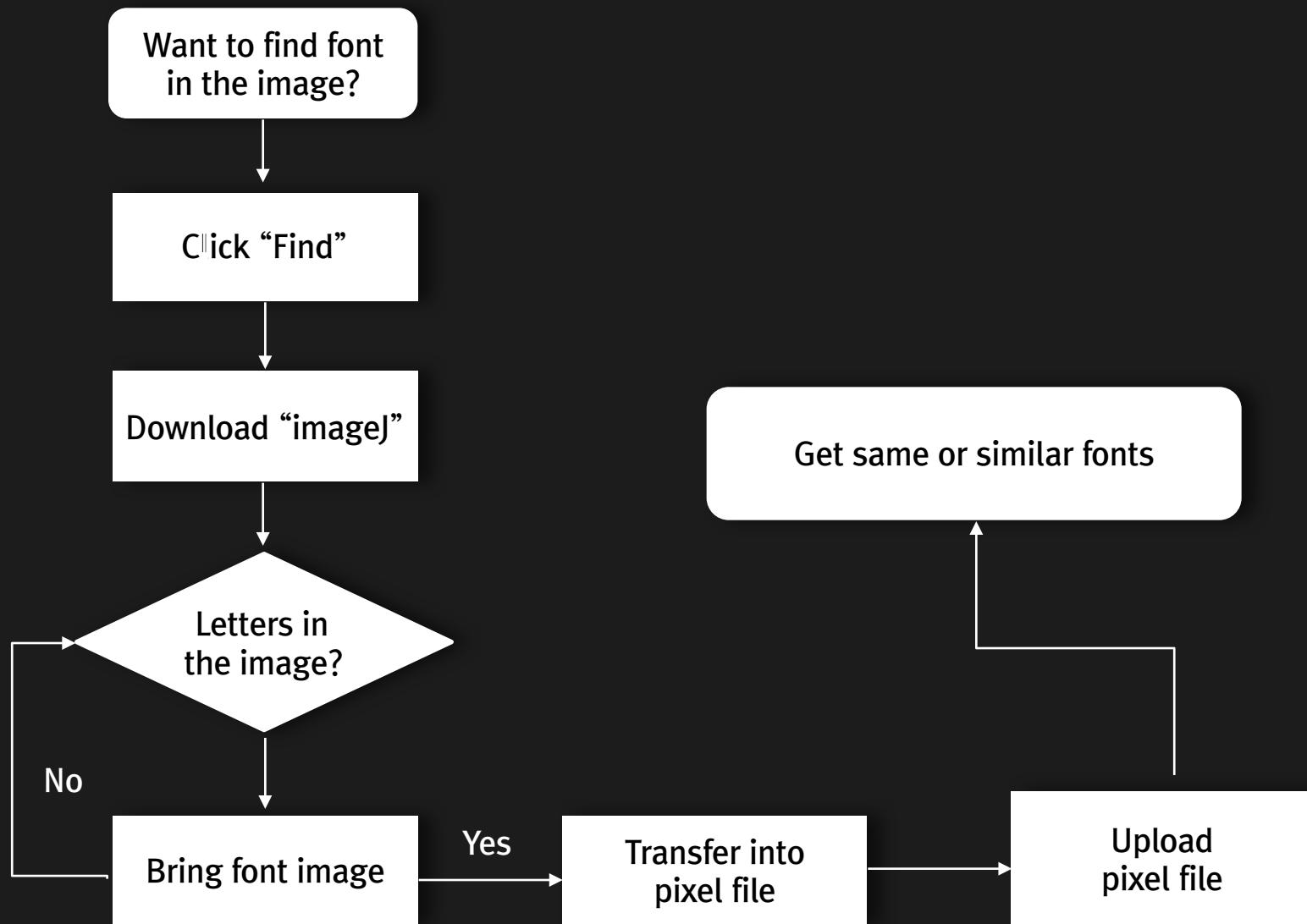
05. Use case in user's perspective

“ SEARCH ”



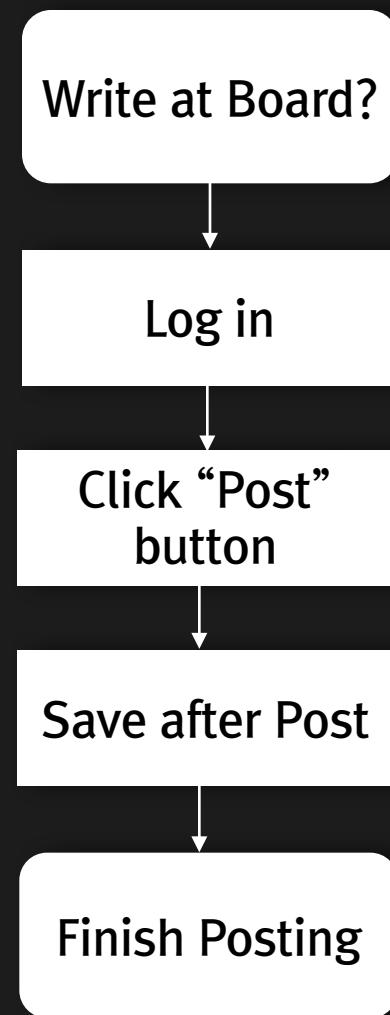
05. Use case in user's perspective

“ Find font in image ”



05. Use case in user's perspective

“ Posting ”



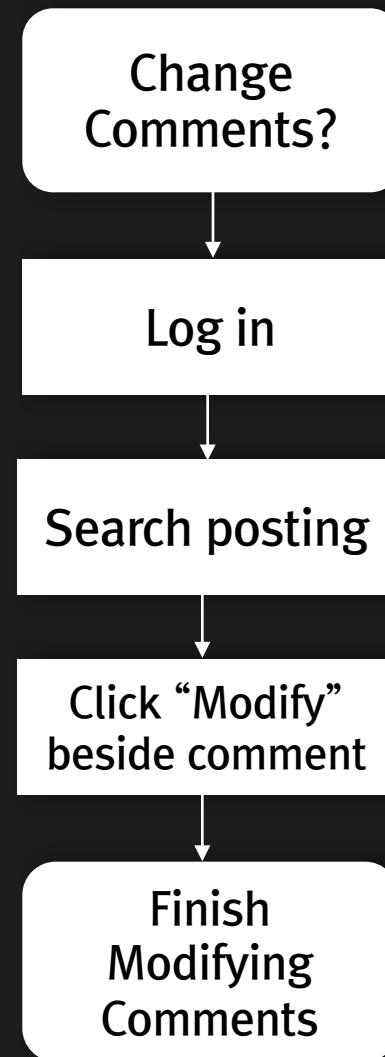
05. Use case in user's perspective

“ Comment ”



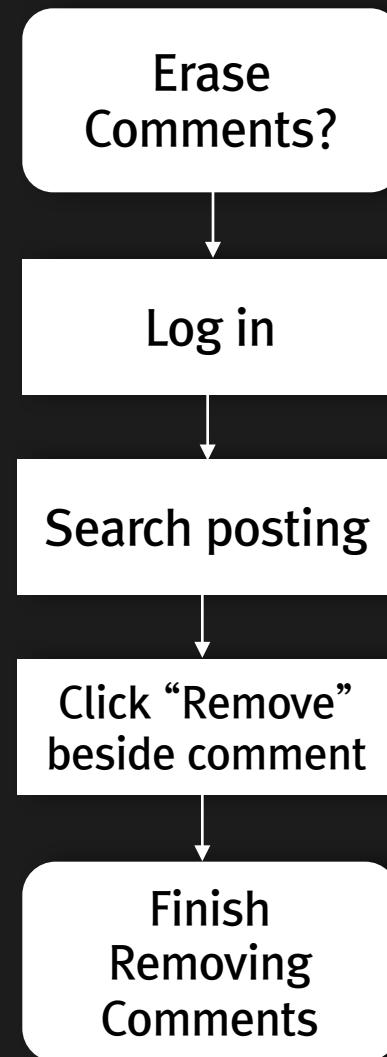
05. Use case in user's perspective

“ Modify ”



05. Use case in user's perspective

“ Remove ”



Chapter 06

Demonstration

Chapter 07

Question & Answer

thank
you,