Topic: Custom Management Command Part 6: Adding Comments or Messages

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Django has built-in MESSAGES FRAMEWORK that we can use to show ERROR OR SUCCESS MESSAGES. See Django's documentation.

SETTINGS.PY has already the configurations needed to support the messages.

1. So, we just need to include the following in our SETTINGS.PY.

From Django documentation, we copy this and modify based on our needs.

```
from django.contrib.messages import constants as messages
MESSAGE_TAGS = {
    messages.INF0: "",
    50: "critical",
}
```

in our SETTINGS.PY, we modify it to where 'danger' is a bootstrap name.



2. Then in the TEMPLATES FOLDER, create a new HTML, ALERT.HTML and design as:

from our documentation:

Displaying messages **1**

```
get_messages(request)[source] *
```

In your template, use something like:

```
{% if messages %}

    {% for message in messages %}
        <li{% if message.tags %} class="{{ message.tags }}"{%
endif %}>{{ message }}
        {% endfor %}

{% endif %}
```

So, in our ALERTS.HTML, we add the same code:

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3. Now you can call this ALERTS.HTML in ANY HTML that will require messages or comments.

So, in DATAENTRY\IMPORTDATA.HTML, we add



^{4.} To add our custom messages, we go to DATAENTRY\VIEWS.PY

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	 importdata.py insertdata.py migrations 		<pre>model_name</pre>	<pre>"= request.POST.get(</pre>	'model_name')		
	 _initpy admin.py apps.py models.py 		upload = U	is file inside the U pload.objects.create	pload model <mark>(file=file_path,</mark>	model_name=mode	el_name)
	 tests.py • urls.py U • urls.py U • urls.py U • urls.py U 	19 20	<pre>** construc ** construc ** construc ** construc ** constructor ** constructo</pre>	t the full path of the ath = str(upload.fil	he file with the e.url)		
	🔹 views.py M	21	hace up] -	str(settings RASE D	TR)		



5. Now when you add a CSV file again, you should be able to see an error message.



Import Data From CSV File to Database Tables

Upload CSV File					
Choose File No file chosen					
Select Database Table					
Select	~				
Import Data					
You have successfully imported the file.					

6. Now to make the style of the message that follows the bootstrap style, go to this BOOTSTRAP ALERT documentation,

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Home Documentation	Examples Themes Expo Blog
:h	Examples
	Alerts are available for any length of text, as well as an optional dismiss button. For proper styling, use one
ng started	of the eight required contextual classes (e.g., .alert-success). For inline dismissal, use the alerts jQuery
ıt	plugin.
ent	
onents	This is a primary alert—check it out!
	This is a secondary alert—check it out!
trumb	
15	This is a success alert—check it out!
1 group	
sel	This is a danger alert—check it out!
se	
owns	This is a warning alert—check it out!
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oup	This is a light alert—check it out!
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ition	
ers	
XCC	(div class="alert alert-primary" role="alert")
.55	This is a primary alert-check it out!
P)	
25	<pre><div class="alert alert-secondary" role="alert"></div></pre>
es	
d	<pre><div class="alert alert-success" role="alert"></div></pre>
tion	This is a success alert-check it out!
ITION	<pre></pre>
t	This is a danger alert-check it out!
	<pre><grv class="alert alert-warning" role="alert"> This is a warning alert-check it out!</grv></pre>

ALERTS.HTML BEFORE:

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templates >	🗘 alerts.html >							
1 {	% if messag	es %}						
2 <	2 <ul class="messages">							
	{% for m	essage in	<pre>messages %}</pre>					
	<li{% if<="" td=""><td>message.</td><td>tags %} class="</td><td>{{ message.tags</td><td>}}"{% endif %</td><td>%}>{{ messag</td><td>e }}</td><td></td></li{%>	message.	tags %} class="	{{ message.tags	}}"{% endif %	%}>{{ messag	e }}	
	{% endfo	r %}						
6 <	/ul>							
7 {	% endif %}							

templates	> •• alerts.html >
	{% if messages %}
	<div class="messages"></div>
	<pre>{% for message in messages %}</pre>
	···· <div< b=""></div<>
	<pre>{% if message.tags %} class=" alert alert-{{ message.tags }}" {% endif %}>{{ message }}</pre>
	<pre></pre>
	<pre>{% endfor %}</pre>
9	{% endif %}

7. Run the server again and check the message shown.

Saving Student.CSV to Student Model.

() http://127.0.0.1:8000/import-data/		e	2 \$	Ď
	Import Data From CSV File to Database Tables			
	Upload C SV File Choose File No file chosen]		
	Select Database Table]		
	Import Data You have successfully imported the file.			

Saving Student.CSV to Customer Model

() http://127.0.0.1:8000/import-data/		Q	、☆
	Import Data From CSV File to Database Tables		

Upload CSV File	
Select Database Table	
Select	~
Import Data	
Customer() got unexpected keyword arguments: 'roll_no', 'name', 'age'	

Or a different file to CUSTOMER model.

8. To modify the error message into something user-friendly especially the user has used a different file with a different model, we update our IMPORTDATA.PY

To get the fields of our model, in our IMPORTDATA.PY, we add this:

compare CSV header with the model's field names and throw appropriate message # get all the field names of the model that we found model_fields = [field.name for field in target_model._meta.fields] print(model_fields)

So, when we upload our STUDENT.CSV FILE, we see this in our terminal:

[11/Aug/2024 15:41:11] "GET /import-data/ HTTP/1.1" 200 1907
['id', 'roll_no', 'name', 'age']
Data imported from the CSV file successfully.

CUSTOMER MODEL:



So, when we import a different file like EMPLOYEE.CSV into CUSTOMER Model, we get this user- friendly message:



pload CSV File	
Choose File No file chosen	
elect Database Table	
Select	~
Import Data	
CSV file does not match with the Customer table fields	

Instead of this:

Import Data From CSV File to Database Tables

Choose File	No file chosen
Select Databas	e Table
Select	
ітроп рата	
Customer() g	ot unexpected keyword arguments: 'employee_id', 'employee_name',
'designation',	'salary', 'retirement', 'other_benefits', 'total_benefits', 'total_compensation'

9. Your IMPORTDATA.PY should be:

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	EXPLORER ····			importdata.py M 🗙 🌵 exportdata	.py 🌵 urls.py autocommontasks_m	ain M 🍦 views.py autocommontasks_main U	home.html U dataer	
-	✓ AUTOMATINGCOMMONTASKS	dataentry >	management > comr	mands > 💠 importdata.py >				
G	> autocommontasks_m 🔍		class Comma	ind(BaseCommand):				
	✓ dataentry ●		def han	dle(self, *args, **kw	vargs):			
	>pycache	27		curen jor ene monee e	er 655 acc areacea ap	· P ~		
2 <u>0</u>	> pycache		tar	'get_model = None				
0	<pre>exportdata.pv</pre>		tor	• my_app_contig in app	<pre>os.get_app_contigs():</pre>			
♪	greeting.py							
	belloworld py			try:				
RP -	🍨 importdata.py 🛛 M							
	🐨 insertuata.py			<pre>target_model = a</pre>	apps.get_model(my_app_	_config.label, model_name)		
	> migrations			· · · · break · · # · stops · s				
	🖷 _Initpy			except LookupError:				
				continue # mode				
	models.py							
	🔹 tests.py							
	🔹 urls.py 🛛 U							
\mathbf{A}	🔹 utils.py 🛛 U		11	not target_model:				
	🔹 views.py 🛛 M			raise CommandError(†	"Model "{model_name}"	' not found in any app.')		
	> env	41						
	> media							
	> templates		mod	lel_fields = [field.na	ame for field in targe	<pre>et_modelmeta.fields]</pre>		
	> uploads		pri	.nt(model_fields)				
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	exported_Customer_data_2		wit	h open(file nath 'r') as file:			
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	<pre>exported_students_data_20</pre>				- incluating the neader			
	🌵 manage.py			reader = csv.Dictkea	ider(TILE)			
				csv_header = reader.	fieldnames			
				<pre>if csv_header != mod</pre>	lel_fields:			
				raise DataError				
				f'CSV file d	loes not match with th	ne {model name} table fields'		
				<pre># print(reader)</pre>				
				for row in reader:				
				the stands the power				
				target_model.obj	jects.create(**row)			
8								
	> OUTLINE			.f.stdout.write(self.s	style.SUCCESS(
	> TIMELINE			'Data imported from	the CSV file successf	Fully.'))		
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10. But this will give us an error message since we have the field 'ID' in our table but not in our CSV file, so we update our IMPORTDATA.PY as

get all the field names of the model that we found EXCEPT THE PK or ID
<pre>model_fields = [field.name for field in target_modelmeta.fields if field.name !=</pre>
· · · · · · · · · · · · · · · · · · ·
<pre>print(model_fields)</pre>
opens the file for reading and closes it automatically
with open(file_path, 'r') as file:
reads the csv file including the header
reader = csv.DictReader(file)
gets the header names of the csv file
<pre>csv_header = reader.fieldnames</pre>
compare CSV header with the model's field names and throw appropriate message
<pre>if csv_header != model_fields:</pre>
raise DataError(
f'CSV file does not match with the {model_name} table fields')

11. IF WE WANT TO HIDE THE ERROR MESSAGES RIGHT AWAY AFTER IT WAS DISPLAYED, we create a JAVASCRIPT. But we need to update our SETTINGS.PY STATIC FILES.

FROM:

TO:



12. Create an ID FOR YOUR ALERTS.HTML

FROM:





13. In our main project, we create a new folder and JS file, so in AUTOCOMMONTASKS_MAIN\STATIC\JS\CUSTOM.JS



14. Since we have our own static files like CUSTOM.JS, we need to run COLLECTSTATIC COMMAND in our DJANGO-SERVER bash terminal. This will create a new folder STATIC in the root directory.

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Ŀ	🗸 autocommontasks_m 🏾	110 # http://docs.dignonproject.com/en/1.2/topics/i18n/ \rightarrow ENV As $\underline{a}, \underline{s}$ 1of1
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γ	✓ static \js	
90	JS custom.js U	112 LANGUAGE_CODE = 'en-us'
	<pre></pre>	
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	> media	
ي الله	v static	
	> admin	122 #-https://docs.djangoproject.com/en/4.2/nowto/static-jiles/
~	v tempiates 🔷	124 STATIC_URL = 'static/'
	> dataentry	125 STATICFILES_DIRS = ['autocommontasks_main/static'] · # this is the source folder
	♦ alerts.html M	126 # this is the destination folder after COLLECTSTATIC command
	home.html	127 STATIC_ROOT = BASE_DIR / 'static'
	 aitianore M 	129 # Default primary key field type
	E db.sqlite3	
	exported_Customer_data_2	
	<pre>exported_Student_data_202</pre>	
	<pre>exported_students_data_20</pre>	132 DELADIT_ADIO_TILLO - GJango.ub.models.bigAutorietu
	🌵 manage.py	
		136 MEDIA_URL = //media/
		137 MEDIA_ROOT = BASE_DIR / 'media'
		PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
		in delete_file
		if self.storage.exists(prefixed_path): File_"C\llearChosilalAnonitat\localNongerse\Duthon\Duthon30\lin\cite_narkzggs\diangn\corp\files\storage
		return os.path.lexists(self-path(name))
		File "C:\Users\Rosilie\AppData\Local\Programs\Python\Python39\lib\site-packages\django\contrib\staticfiles\storage.py", line 39, in path
		django.core.exceptions.ImproperlyConfigured: You're using the staticfiles app without having set the STATIC_ROOT setting to a filesystem path.
		Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/AutomatineCommonTasks (main)
		<pre>\$ python manage.py collectstatic</pre>
8		126 static files copied to 'C:\Users\Rosilie\OneDrive\Desktop\LEARNING DJANGO PROJECTS\AutomatingCommonTasks\static'.
523	> OUTLINE	Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/AutomatingCommonTasks (main)
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Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/AutomatingCommonTasks (main)
\$ python manage.py collectstatic

126 static files copied to 'C:\Users\Rosilie\OneDrive\Desktop\LEARNING DJANGO PROJECTS\AutomatingCommonTasks\static'.

15. Include this CUSTOM.JS JAVASCRIPT FILE in our DATAENTRY.HTML

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COVELLA to Database Tables					
Import Data From CSV File to Database Tables					
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Push all changes to Github.

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