django-spese Documentation

Release 0.1

ldfa

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This is django-spese's documentation.

django-spese is a simple personal expenses register. It is an application for Django.

The source code of this project is hosted on github.com .

CHAPTER 1

Contents:

1.1 Installation

To install *django-spese*, you'll need some prerequisite:

- first of all you must know how type commands in console mode in your system;
- then, it's important you have some knowledge about how create/configure a Django project and apps;
- and, last but not least, you'll need to have a copy of Python version 3.5, or newer, already installed in your system.

Futhermore I take for granted you know how to use virtualenv and you'll use it to create a Django project to test this app.

Hereafter I describe how install from a distribution. You can download it from this tar.gz , or from this zip archive if you prefer a zipped version.

Note: If you are a developer, maybe you'd like to clone from the project source repository using git as version control software.

1.1.1 Creating a Django project to host the application

If you have your project to host *django-spese*, use it, and go to *Configuring the project*.

Otherwise create a base project using virtualenv as follows:

```
> mkdir progetto_servizi
> cd progetto_servizi
> virtualenv env                              (this loads a copy of the system's␣
↪python)
> source env/bin/activate                     (or, in Windows,␣
↪env\Scripts\activate)
> pip install path/to/django-spese-0.1.tar.gz     (this loads django-spese and its
                                               dependencies: django, django-
↪taggit, ...)
```

then and create the django project:

```
> django-admin startproject servizi
```

1.1.2 Configuring the project

Add *django-spese* and *taggit* to your `INSTALLED_APPS` in `setting.py`. Like this:

```
INSTALLED_APPS = [
    ...
    'spese',
    'taggit',
]
```

And, again in `settings.py` double check the presence of:

- `django.contrib.sessions.middleware.SessionMiddleware` and
- `django.contrib.messages.middleware.MessageMiddleware`

in `MIDDLEWARE_CLASSES = [ ... ]`

Include the *django-spese* URLconf in your project `urls.py`. Like this:

```
from django.conf.urls import include
...
url(r'^spese/', include('spese.urls')),
```

Provide the django login machinery in your project: that is a `template/login.html` template, in your project `url.py` add:

```
from django.contrib.auth import views as auth_views
...
url('^login/$', auth_views.login, {'template_name': 'login.html',}, name='login'),
url(r'^logout/$', auth_views.logout, {'next_page': '/login'}, name='logout'),
```

and in `setting.py` add:

```
LOGIN_REDIRECT_URL = '/' # It means home view
```

You can copy a `login.html` example from `.../env/Lib/site-packages/spese/templates/example/*` (in windows use backslashes)

Provide a `template/base.html` template in your project. In `base.html` the block `content` marks where *django-spese* is going to write its contents:

```
{% block content %}
{% endblock %}
```

You can copy a `base.html` examples from `.../env/Lib/site-packages/spese/templates/example/*` (in windows use backslashes)

1.1.3 Creating the database

Run `python manage.py migrate` to create the *django-spese* models and adding a minimal dataset: *user1*, *user2*, *transfer_funds* tag, and *cache* source for *user1* and *user2*.

Run `python manage.py createsuperuser` to create a *superuser*.

Start the development server (`python manage.py runserver`)

1.1.4 Refining the database contents

Visit http://127.0.0.1:8000/admin/ .

Login as *superuser* to add/change/delete DB base items: sources, tags, users (... and expenses. But furnish a user interface to accomplish this task is one target of spese app).

Note: you'll need the *Admin* app enabled

Note: As superuser, at least, reset the users *user1* and *user2* passwords at known values.

It might be a good idea to change the user names to something more meaningful too.

1.1.5 Enjoi

Visit http://127.0.0.1:8000/spese/ , login as a user and enjoi the app.

1.2 User Guide

Here we are going to talk about how use *django-spese* to register our personal expenses.

To understand better the available operations, we need know the base concepts underlining this application. So first of all we'll talk of *General concepts*.

Then we'll see the *Administration* operations.

And finally we'll see the details about *Using it* , where *it* means the application, of course.

Let's start.

1.2.1 General concepts

Well, we said *personal* and *expense*. Two terms to think about.

Thinking to *personal* we get the **first concept**: every expense *own* someone.

Who is this *one*? The logged user.

Hence, to use *django-spese* we need login using a `username` and a `password`. When we do it, the application will bind every new expense to us.

Follow the **second concept**: I, logged user, can add and work on *my* expenses; but I cannot do something on somebody's else expenses. Even I cannot see them.

Clarified the *personal* term implications, let's see the *expense* term.

An expense means *money* to buy something. Where is money from?

Here we are at the **third concept**: in *django-spese* a source of money is called, well, *source* :)

A source could be a wallet, or a credit card, or a bank account or something else. Every expense is bound to a source from where money is kept to fulfil it.

As opposed from everyday world, here a source hasn't limit: we can draw from it how much money as we wish. Or add to it.

Add? Yes, add. Why we could not add money instead of remove it? **Forth concept**: write positive numbers to add money to a source, and negative numbers to subtract money from the source. *django-money* don't know how to subtract money, it knows only how to add it :)

Fifth concept: a *source* is bound to one, or more, *user(s)*.

This means that every *user* could have one or more *source(s)*. But is also possible a *source* could be *shared* between two or more *users*.

Sixth concept: every expense could be classified using one or more *tag(s)*.

For example, maybe I wish classify my holidays expenses using the tag *freetime*, and the work expenses assigning them the *work* tag.

A last concept and we're done. **Seventh concept**: it is possible tranfer money from one *source* to another. We call this kind of operation: *tranfer funds*.

It must be clear: *transfer funds* is a shortcut to save time. We could subtract (remember: use a negative number) from a *source* and add the same (positive) number to another *source*. But it's a waste of time and it's even a bit error prone: it isn't so difficult write one of the two numbers with one more, or less, digit.

Since a picture is worth a thousand words, to summarize, please look at the figure below, which sum up the relationships between the exposed concepts.

As we can see, the most complex relations are between *source* and *user*, and between *tag* and *expense*. Technically speaking, these are m:n relationships. Every *source* could belong to more *users* and vice versa. Similarly for *tag* and *expense*.

The relationships *user / expense* and *source /expense* are much simpler: one *user* own more *expenses*, not viceversa. So between *source* and *expense*.

Ok. Now our global knowledge about *django-spese* is complete. We can start play around.

1.2.2 Administration

django-spese administrators are in charge to supply a simple but complete environment to application users.

To accomplish this target you use the URI http://127.0.0.1:8000/admin/ and login using the administrator's username and password.

Base administration window looks as below, without the ellipses:

Red ellipses show the most interesting entities for our duties: *user*, *source* and *tag*.

Green ellipses show the shortcuts to add and change the target entity.

User interface is immediate, so I don't explain it in detail. Only, I wish underline two points.

First. It isn't possible to know an existing user password. We can only reset it to a known value. To do so, select *user* entity, from the next users list select the desidered user, and then use link underlined with red ellipse in the picture below.

Second. When working on *sources*, remember: a source could be shared between different *users*. So the pertinent window looks like below:

Here red ellipse remember us the possibility to bind a single source to more users.

It's important bind the source to the correct user, and be aware to share sources that are truly shared between different users. I.e. let's to keep again the previous picture. There we have *cache* shared between *user1* and *user2*. This means that this two users have the **same cache**: see it as a shared wallet!

If I wish model a situation where *user1* and *user2* have different wallets, I must create them (for sake of example let's say *cache1* and *cache2*) and assign either of them to a single user (to complete the example: bind *cache1* to *user1* and *cache2* to *user2*).

A last word about *tags*. These are the folders used to classify our expense. So I urge you to create a tag set limited in size, that fit well with your necessities. It's a difficult matter change classification criterions while running :)

1.2.3 Using it

And now, provided of user's username and password, finally we can login visiting http://127.0.0.1:8000/spese/.

Home page welcome us, showing the list of our expenses:

Hereafter we call this window as *home*, even if the true home is the project home. But we need to focus on our application, so we call *home* this one.

In the previous figure we highlight the presence of two different menues: the project menu and the the *django-spese* menu.

Project menu depends on your project. The previous figure shows the one you obtain from the *django-spese* repository. It's there only as a demo to host our application.

We are concerned about the *django-spese* menu. At *home* we have two voices:

- *add* adding us a new expense;
- *transfer funds* to realize a transfer of money from one source to another.

If we click on an expense desciption, we'll get its detail:

and from there we can:

- *add* to insert a new expense (this is the same menu voice from home);
- *change* to edit the expense characteristics;
- *toggle* to change the amount sign of the expense;
- *delete* to remove the expense.

Adding expenses

At *home*, selecting the *django-spese* menu voice *add* we obtain a form to input an entirely new expense:

Here we can select the desidered *source*, write the date, description and amount. And we can choose between the showned tags to categorize our expense.

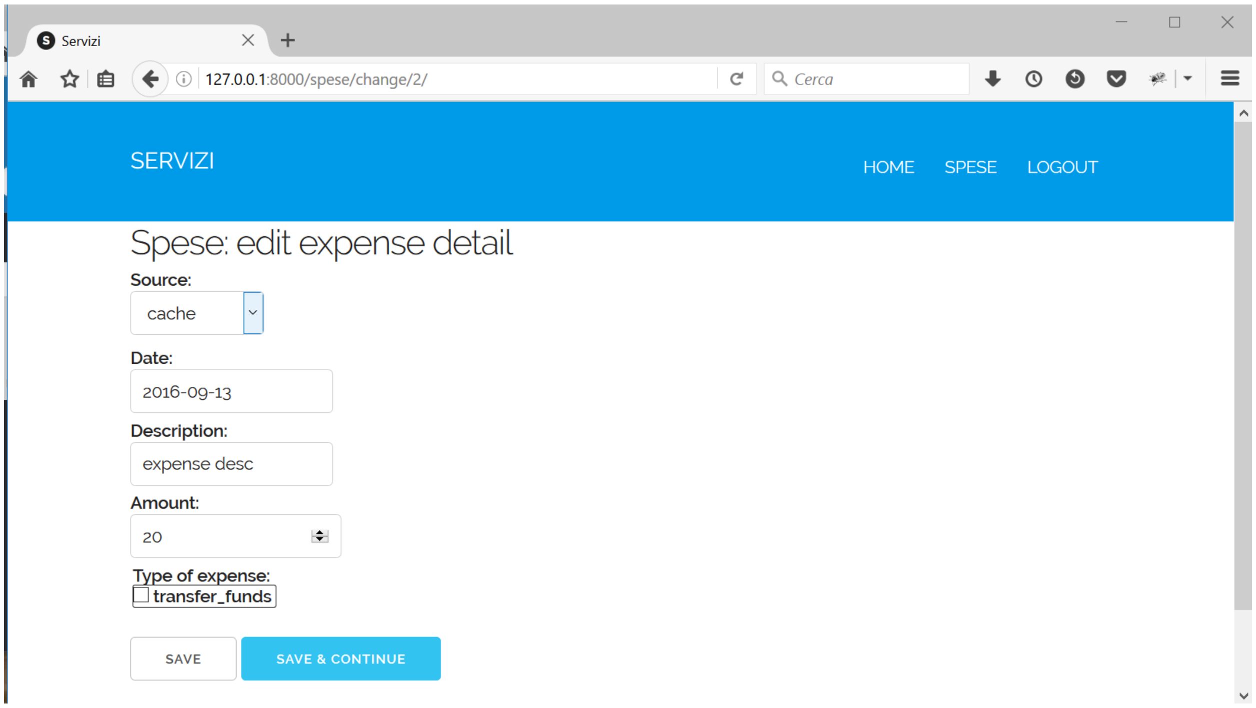
When we are done, we can save and return to *home*, using the *save* button. Or we can save and add again a new expense, using the *save & continue* button.

To leave the form without creating a new expense, simply use the browser's *back* button, or visit the *home* URL.

Changing expense

As we said, at *home*, selecting an expense, we obtain the expense *detail* window.

Here we can choose the *change* menu voice getting a form to change the expense characteristics:



Spese: edit expense detail

Source: cache

Date: 2016-09-13

Description: expense desc

Amount: 20

Type of expense: transfer_funds

In this form we can change whatever we wish. To save changes, we must push the *save* button, moving us to detail again. Or we can choose the *save & continue* button, that keep us on the current change form.

Toggling expense

From the *detail* window, we can choose the *toggle* menu voice.

If we hit this voice, the application change the sign of the amount of the displayed espense.

This action is immediatly shown. We can observe:

- a (hopefully) confirming message after the spese's menu area;
- the new amount of the expense, with the same quantity, but opposite sign.

Deleting expense

In the expense *detail* window there is another, very dangerous, menu voice: *delete*.

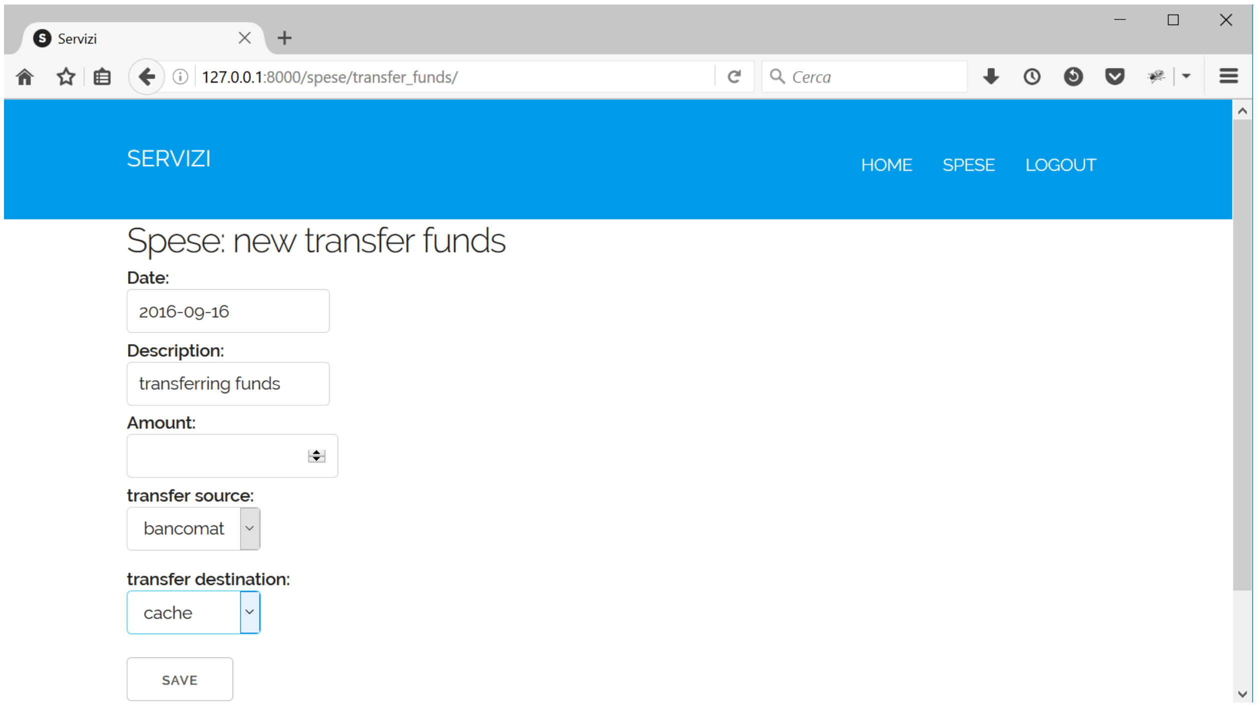
As we can imagine, this voice remove the showed expense.

Warning: What *you don't know* is that, by now, this operation **don't ask for confirmation**.

If we choose to delete the current expense this is what we *immediatly* obtain.

Transfer funds

At *home*, selecting the *django-spese* menu voice *transfer funds* we obtain the shortcut to transfer money from a *source* to another:



Spese: new transfer funds

Date: 2016-09-16

Description: transferring funds

Amount:

transfer source: bancomat

transfer destination: cache

As usual: we must compile the form with the appropiate values. Then choosing the *save* button we get the desired operation: the *amount* is subtracted from *tranfer source* and added to *transfer destination*.

1.3 Changelog

1.3.1 Version 0.3

- Added expense amount toggle functionality
- Added log facility

1.3.2 Version 0.2

- Added documentation

1.3.3 Version 0.1

- Initial release.
- WEB User interface to list, add, change, delete expenses.

1.4 License

Django-spese is licensed under the MIT License:

CHAPTER 2

Indices and tables

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