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# Flask-Blogging Documentation

*Release 1.2.0*

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**Jan 11, 2019**



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Flask-Blogging is a Flask extension for adding Markdown based blog support to your site. It provides a flexible mechanism to store the data in the database of your choice. It is meant to work with the authentication provided by packages such as [Flask-Login](#) or [Flask-Security](#).

The philosophy behind this extension is to provide a lean app based on Markdown to provide blog support to your existing web application. If you already have a web app and you need to have a blog to communicate with your user or to promote your site through content based marketing, then Flask-Blogging would help you quickly get a blog up and running.

Out of the box, Flask-Blogging has support for the following:

- Bootstrap based site
- Markdown based blog editor
- Upload and manage static assets for the blog
- Models to store blog
- Authentication of User's choice
- Sitemap, ATOM support
- Disqus support for comments
- Google analytics for usage tracking
- Open Graph meta tags
- Permissions enabled to control which users can create/edit blogs
- Integrated Flask-Cache based caching for optimization
- Well documented, tested, and extensible design
- DynamoDB storage for use in AWS
- Google Cloud Datastore support

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# CHAPTER 1

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## Quick Start Example

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```
from flask import Flask, render_template_string, redirect
from sqlalchemy import create_engine, MetaData
from flask_login import UserMixin, LoginManager, login_user, logout_user
from flask_blogging import SQLAlchemyStorage, BloggingEngine

app = Flask(__name__)
app.config["SECRET_KEY"] = "secret"  # for WTF-forms and login
app.config["BLOGGING_URL_PREFIX"] = "/blog"
app.config["BLOGGING_DISQUS_SITENAME"] = "test"
app.config["BLOGGING_SITEURL"] = "http://localhost:8000"
app.config["BLOGGING_SITENAME"] = "My Site"
app.config["BLOGGING_KEYWORDS"] = ["blog", "meta", "keywords"]
app.config["FILEUPLOAD_IMG_FOLDER"] = "fileupload"
app.config["FILEUPLOAD_PREFIX"] = "/fileupload"
app.config["FILEUPLOAD_ALLOWED_EXTENSIONS"] = ["png", "jpg", "jpeg", "gif"]

# extensions
engine = create_engine('sqlite:///tmp/blog.db')
meta = MetaData()
sql_storage = SQLAlchemyStorage(engine, metadata=meta)
blog_engine = BloggingEngine(app, sql_storage)
login_manager = LoginManager(app)
meta.create_all(bind=engine)

class User(UserMixin):
    def __init__(self, user_id):
        self.id = user_id

    def get_name(self):
        return "Paul Dirac"  # typically the user's name

@login_manager.user_loader
@blog_engine.user_loader
```

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```
def load_user(user_id):
    return User(user_id)

index_template = """
<!DOCTYPE html>
<html>
    <head> </head>
    <body>
        {% if current_user.is_authenticated %}
            <a href="/logout/"> Logout </a>
        {% else %}
            <a href="/login/"> Login </a>
        {% endif %}
        &nbsp;&nbsp;<a href="/blog/"> Blog </a>
        &nbsp;&nbsp;<a href="/blog/sitemap.xml">Sitemap</a>
        &nbsp;&nbsp;<a href="/blog/feeds/all.atom.xml">ATOM</a>
        &nbsp;&nbsp;<a href="/fileupload/">FileUpload</a>
    </body>
</html>
"""

@app.route("/")
def index():
    return render_template_string(index_template)

@app.route("/login/")
def login():
    user = User("testuser")
    login_user(user)
    return redirect("/blog")

@app.route("/logout/")
def logout():
    logout_user()
    return redirect("/")

if __name__ == "__main__":
    app.run(debug=True, port=8000, use_reloader=True)
```

The key components required to get the blog hooked is explained below. Please note that as of Flask-Login 0.3.0 the `is_authenticated` attribute in the `UserMixin` is a property and not a method. Please use the appropriate option based on your Flask-Login version. You can find more examples here in the [Flask-Blogging github project page](#).



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### Configuring your Application

---

The `BloggngEngine` class is the gateway to configure blogging support to your web app. You should create the `BloggngEngine` instance like this:

```
bloggng_engine = BloggngEngine()
bloggng_engine.init_app(app, storage)
```

You also need to pick the storage for blog. That can be done as:

```
from sqlalchemy import create_engine, MetaData

engine = create_engine("sqlite:///tmp/sqlite.db")
meta = MetaData()
storage = SQLAlchemyStorage(engine, metadata=meta)
meta.create_all(bind=engine)
```

Here we have created the storage, and created all the tables in the metadata. Once you have created the blogging engine, storage, and all the tables in the storage, you can connect with your app using the `init_app` method as shown below:

```
bloggng_engine.init_app(app, storage)
```

If you are using `Flask-Sqlalchemy`, you can do the following:

```
from flask_sqlalchemy import SQLAlchemy

db = SQLAlchemy(app)
storage = SQLAlchemyStorage(db=db)
db.create_all()
```

One of the changes in version 0.3.1 is the ability for the user to provide the metadata object. This has the benefit of the table creation being passed to the user. Also, this gives the user the ability to use the common metadata object, and hence helps with the tables showing up in migrations while using Alembic.

As of version 0.5.2, support for the multi database scenario under `Flask-SQLAlchemy` was added. When we have a multiple database scenario, one can use the `bind` keyword in `SQLAlchemyStorage` to specify the database to bind to, as

shown below:

```
# config value
SQLALCHEMY_BINDS = {
    'blog': "sqlite:///tmp/blog.db",
    'security': "sqlite:///tmp/security.db"
}
```

The storage can be initialised as:

```
db = SQLAlchemy(app)
storage = SQLAlchemyStorage(db=db, bind="blog")
db.create_all()
```

As of version 0.4.0, Flask-Cache integration is supported. In order to use caching in the blogging engine, you need to pass the Cache instance to the BloggingEngine as:

```
from flask_caching import Cache
from flask_blogging import BloggingEngine

blogging_engine = BloggingEngine(app, storage, cache)
```

*Flask-Blogging* lets the developer pick the authentication that is suitable, and hence requires her to provide a way to load user information. You will need to provide a *BloggingEngine.user\_loader* callback. This callback is used to load the user from the *user\_id* that is stored for each blog post. Just as in Flask-Login, it should take the *unicode user\_id* of a user, and return the corresponding user object. For example:

```
@blogging_engine.user_loader
def load_user(userid):
    return User.get(userid)
```

For the blog to have a readable display name, the User class must implement either the *get\_name* method or the *\_\_str\_\_* method.

The BloggingEngine accepts an optional *extensions* argument. This is a list of Markdown extensions objects to be used during the markdown processing step.

As of version 0.6.0, a plugin interface is available to add new functionality. Custom processes can be added to the posts by subscribing to the *post\_process\_before* and *post\_process\_after* signals, and adding new functionality to it.

The BloggingEngine also accepts *post\_processor* argument, which can be used to provide a custom post processor object to handle the processing of Markdown text. One way to do this would be to inherit the default *PostProcessor* object and override *process* method.

In version 0.4.1 and onwards, the BloggingEngine object can be accessed from your app as follows:

```
engine = app.extensions["blogging"]
```

The engine method also exposes a *get\_posts* method to get the recent posts for display of posts in other views.

In earlier versions the same can be done using the key *FLASK\_BLOGGING\_ENGINE* instead of *blogging*. The use of *FLASK\_BLOGGING\_ENGINE* key will be deprecated moving forward.

## 2.1 Models from SQLAlchemyStorage

*SQLAlchemy* ORM models for the *SQLAlchemyStorage* can be accessed after configuration of the *SQLAlchemyStorage* object. Here is a quick example:

```
storage = SQLAlchemyStorage(db=db)
from flask_blogging.sqlastorage import Post, Tag # Has to be after SQLAlchemyStorage_
↳ initialization
```

These ORM models can be extremely convenient to use with Flask-Admin.

## 2.2 Adding Custom Markdown Extensions

One can provide additional Markdown extensions to the blogging engine. One example usage is adding the codehilite Markdown extension. Additional extensions should be passed as a list while initializing the BloggingEngine as shown:

```
from markdown.extensions.codehilite import CodeHiliteExtension

extnl = CodeHiliteExtension({})
blogging_engine = BloggingEngine(app, storage, extensions=[extnl])
```

This allows for the Markdown to be processed using CodeHilite along with the default extensions. Please note that one would also need to include necessary static files in the view, such as for code highlighting to work.

## 2.3 Extending using Markdown Metadata

Let's say you want to include a summary for your blog post, and have it show up along with the post. You don't need to modify the database or the models to accomplish this. This is in fact supported by default by way of Markdown metadata syntax. In your blog post, you can include metadata, as shown below:

```
Summary: This is a short summary of the blog post
Keywords: Blog, specific, keywords

This is the much larger blog post. There are lot of things
to discuss here.
```

In the template `page.html` this metadata can be accessed as `post.meta.summary` and can be populated in the way it is desired. The same metadata for each post is also available in other template views like `index.html`.

If included, the first summary will be used as the page's meta `description`, and Open Graph `og:description`.

The (optional) blog post specific keywords are included in the page's meta keywords in addition to `BLOGGING_KEYWORDS` (if configured). Any tags are also added as meta keywords.

## 2.4 Extending using the plugin framework

The plugin framework is a very powerful way to modify the behavior of the blogging engine. Lets say you want to show the top 10 most popular tag in the post. Lets show how one can do that using the plugins framework. As a first step, we create our plugin:

```
# plugins/tag_cloud/__init__.py
from flask_blogging import signals
from flask_blogging.sqlastorage import SQLAStorage
import sqlalchemy as sqa
from sqlalchemy import func

def get_tag_data(sqa_storage):
    engine = sqa_storage.engine
    with engine.begin() as conn:
        tag_posts_table = sqa_storage.tag_posts_table
        tag_table = sqa_storage.tag_table

        tag_cloud_stmt = sqa.select([
            tag_table.c.text, func.count(tag_posts_table.c.tag_id)].group_by(
            tag_posts_table.c.tag_id
        ) .where(tag_table.c.id == tag_posts_table.c.tag_id).limit(10)
        tag_cloud = conn.execute(tag_cloud_stmt).fetchall()
    return tag_cloud

def get_tag_cloud(app, engine, posts, meta):
    if isinstance(engine.storage, SQLAStorage):
        tag_cloud = get_tag_data(engine.storage)
        meta["tag_cloud"] = tag_cloud
    else:
        raise RuntimeError("Plugin only supports SQLAStorage. Given storage"
                           "not supported")
    return

def register(app):
    signals.index_posts_fetched.connect(get_tag_cloud)
    return
```

The `register` method is what is invoked in order to register the plugin. We have connected this plugin to the `index_posts_fetched` signal. So when the posts are fetched to show on the index page, this signal will be fired, and this plugin will be invoked. The plugin basically queries the table that stores the tags, and returns the tag text and the number of times it is referenced. The data about the tag cloud we are storing in the `meta["tag_cloud"]` which corresponds to the metadata variable.

Now in the `index.html` template, one can reference the `meta.tag_cloud` to access this data for display. The plugin can be registered by setting the config variable as shown:

```
app.config["BLOGGING_PLUGINS"] = ["plugins.tag_cloud"]
```

---

## Configuration Variables

---

The Flask-Blogging extension can be configured by setting the following app config variables. These arguments are passed to all the views. The keys that are currently supported include:

- `BLOGGING_SITENAME` (*str*): The name of the blog to be used as the brand name. This is also used in the feed heading and `og:site_name` meta tag. (default “Flask-Blogging”)
- `BLOGGING_SITEURL` (*str*): The url of the site. This is also used in the `og:publisher` meta tag.
- `BLOGGING_BRANDURL` (*str*): The url of the site brand.
- `BLOGGING_TWITTER_USERNAME` (*str*): @name to tag social sharing link with.
- `BLOGGING_RENDER_TEXT` (*bool*): Value to specify if the raw text (markdown) should be rendered to HTML. (default `True`)
- `BLOGGING Disqus_SITENAME` (*str*): Disqus sitename for comments. A `None` value will disable comments. (default `None`)
- `BLOGGING_GOOGLE_ANALYTICS` (*str*): Google analytics code for usage tracking. A `None` value will disable google analytics. (default `None`)
- `BLOGGING_URL_PREFIX` (*str*): The prefix for the URL of blog posts. A `None` value will have no prefix. (default `None`)
- `BLOGGING_FEED_LIMIT` (*int*): The number of posts to limit to in the feed. If `None`, then all are shown, else will be limited to this number. (default `None`)
- `BLOGGING_PERMISSIONS` (*bool*): If `True`, this will enable permissions for the blogging engine. With permissions enabled, the user will need to have “blogger” `Role` to edit or create blog posts. Other authenticated users will not have blog editing permissions. The concepts here derive from `Flask-Principal`. (default `False`)
- `BLOGGING_PERMISSIONNAME` (*str*): The role name used for permissions. It is effective, if “BLOGGING\_PERMISSIONS” is “True”. (default “blogger”)
- `BLOGGING_POSTS_PER_PAGE` (*int*): The default number of posts per index page. to be displayed per page. (default 10)
- `BLOGGING_CACHE_TIMEOUT` (*int*): The timeout in seconds used to cache. the blog pages. (default 60)

- `BLOGGING_PLUGINS` (*list*): A list of plugins to register.
- `BLOGGING_KEYWORDS` (*list*): A list of meta keywords to include on each page.
- `BLOGGING_ALLOW_FILEUPLOAD` (*bool*): Allow static file uploads `flask_fileupload`
- `BLOGGING_ESCAPE_MARKDOWN` (*bool*): Escape input markdown text input. This is `False` by default. Set this to `True` to forbid embedding HTML in markdown.

There are various views that are exposed through Flask-Blogging. The URL for the various views are:

- `url_for('blogging.index')` (GET): The index blog posts with the first page of articles. The meta variable passed into the view holds values for the keys `is_user_blogger`, `count` and `page`.
- `url_for('blogging.page_by_id', post_id=<post_id>)` (GET): The blog post corresponding to the `post_id` is retrieved. The meta variable passed into the view holds values for the keys `is_user_blogger`, `post_id` and `slug`.
- `url_for('blogging.posts_by_tag', tag=<tag_name>)` (GET): The list of blog posts corresponding to `tag_name` is returned. The meta variable passed into the view holds values for the keys `is_user_blogger`, `tag`, `count` and `page`.
- `url_for('blogging.posts_by_author', user_id=<user_id>)` (GET): The list of blog posts written by the author `user_id` is returned. The meta variable passed into the view holds values for the keys `is_user_blogger`, `count`, `user_id` and `pages`.
- `url_for('blogging.editor')` (GET, POST): The blog editor is shown. This view needs authentication and permissions (if enabled).
- `url_for('blogging.delete', post_id=<post_id>)` (POST): The blog post given by `post_id` is deleted. This view needs authentication and permissions (if enabled).
- `url_for('blogging.sitemap')` (GET): The sitemap with a link to all the posts is returned.
- `url_for('blogging.feed')` (GET): Returns ATOM feed URL.

The view can be easily customised by the user by overriding with their own templates. The template pages that need to be customized are:

- `blogging/index.html`: The blog index page used to serve index of posts, posts by tag, and posts by author
- `blogging/editor.html`: The blog editor page.
- `blogging/page.html`: The page that shows the given article.
- `blogging/sitemap.xml`: The sitemap for the blog posts.





## CHAPTER 5

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### Permissions

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In version 0.3.0 Flask-Blogging, enables permissions based on Flask-Principal. This addresses the issue of controlling which of the authenticated users can have access to edit or create blog posts. Permissions are enabled by setting `BLOGGING_PERMISSIONS` to `True`. Only users that have access to Role “blogger” will have permissions to create or edit blog posts.



### 6.1 Blog Page

## Dirac Equation

 Delete  Edit  New

Posted by [Paul Dirac](#) on 16 May, 2017



In particle physics, the Dirac equation is a relativistic wave equation derived by British physicist Paul Dirac in 1928. In its free form, or including electromagnetic interactions, it describes all spin-1/2 massive particles such as electrons and quarks for which parity is a symmetry. It is consistent with both the principles of quantum mechanics and the theory of special relativity,[1] and was the first theory to account fully for special relativity in the context of quantum mechanics. It was validated by accounting for the fine details of the hydrogen spectrum in a completely rigorous way.



The Dirac Equation is given as

$$\left( \beta mc^2 + c \left( \sum_{n=1}^3 \alpha_n p_n \right) \right) \psi(x, t) = i\hbar \frac{\partial \psi(x, t)}{\partial t}$$

 [QUANTUM MECHANICS](#)

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## 6.2 Blog Editor

### Title

**B** **I** **H**       [Preview](#) 

In particle physics, the Dirac equation is a relativistic wave equation derived by British physicist Paul Dirac in 1928. In its free form, or including electromagnetic interactions, it describes all spin-1/2 massive particles such as electrons and quarks for which parity is a symmetry. It is consistent with both the principles of quantum mechanics and the theory of special relativity,[1] and was the first theory to account fully for special relativity in the context of quantum mechanics. It was validated by accounting for the fine details of the hydrogen spectrum in a completely rigorous way.

The Dirac Equation is given as

$$\left(\beta mc^2 + c\left(\sum_{n=1}^3 \alpha_n p_n\right)\right)\psi(x,t) = i\hbar \frac{\partial \psi(x,t)}{\partial t}$$

Learn more about [Markdown](#)

[Upload new File](#)

### Tags

- **Migrations with Alembic:** (Applies to versions 0.3.0 and earlier) If you have migrations part of your project using Alembic, or extensions such as Flask-Migrate which uses Alembic, then you have to modify the Alembic configuration in order for it to ignore the Flask-Blogging related tables. If you don't set these modifications, then every time you run migrations, Alembic will not recognize the tables and mark them for deletion. And if you happen to upgrade by mistake then all your blog tables will be deleted. What we will do here is ask Alembic to exclude the tables used by Flask-Blogging. In your `alembic.ini` file, add a line:

```
[alembic:exclude]
tables = tag, post, tag_posts, user_posts
```

If you have a value set for `table_prefix` argument while creating the `SQLAlchemy`, then the table names will contain that prefix in their names. In which case, you have to use appropriate names in the table names.

And in your `env.py`, we have to mark these tables as the ones to be ignored.

```
def exclude_tables_from_config(config_):
    tables_ = config_.get("tables", None)
    if tables_ is not None:
        tables = tables_.split(",")
    return tables

exclude_tables = exclude_tables_from_config(config.get_section('alembic:exclude'))

def include_object(object, name, type_, reflected, compare_to):
    if type_ == "table" and name in exclude_tables:
        return False
    else:
        return True

def run_migrations_online():
    """Run migrations in 'online' mode.

    In this scenario we need to create an Engine
```

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```
and associate a connection with the context.

"""
engine = engine_from_config(
    config.get_section(config.config_ini_section),
    prefix='sqlalchemy.',
    poolclass=pool.NullPool)

connection = engine.connect()
context.configure(
    connection=connection,
    target_metadata=target_metadata,
    include_object=include_object,
    compare_type=True
)

try:
    with context.begin_transaction():
        context.run_migrations()
finally:
    connection.close()
```

In the above, we are using `include_object` in `context.configure(...)` to be specified based on the `include_object` function.

## CHAPTER 8

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### Release Notes

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- **Version 1.2.0** (*Release January 19, 2019*)
- `GoogleCloudDatastore` provides Google cloud support
- Updated markdown js script
- **Version 1.1.0** (*Release September 12, 2018*)
- `SQLAStorage` query optimization
- Updated Disqus to latest
- Some minor docs fixes
- **Version 1.0.2** (*Release September 2, 2017*)
- Add social links
- Add a choice to escape markdown input
- Remove negative offset for `SQLAStorage` storage engine.
- **Version 1.0.1** (*Release July 22, 2017*)
- Expanded the example with `S3Storage` for Flask-FileUpload
- Post id for DynamoDB only uses lower case alphabet and numbers
- **Version 1.0.0** (*Release July 15, 2017*)
  - Added DynamoDB storage
  - Add Open Graph support
- **Version 0.9.2** (*Release June 25, 2017*)
  - Additional fixes to `automap_base` in creating `Post` and `Tag` models
- **Version 0.9.1** (*Release June 23, 2017*)
  - Fixes to `automap_base` in creating `Post` and `Tag` models
  - Some improvements to blog page generation

- **Version 0.9.0** (*Release Jun 17, 2017*)
  - Added information contained in the `meta` variable passed to the views as requested in (#102)
  - Add missing space to Prev pagination link text (#103)
  - Only render the modal of the user is a blogger (#101)
  - Added `Post` and `Tag` models in `sqlastorage` using `automap_base`.
- **Version 0.8.0** (*Release May 16, 2017*)
  - Added integration with Flask-FileUpload to enable static file uploads (#99)
  - Updated compatibility to latest Flask-WTF package (#96, #97)
  - Updated to latest bootstrap-markdown package (#92)
  - Added alert fade outs (#94)
- **Version 0.7.4** (*Release November 17, 2016*)
  - Fix `Requirements.txt` error
- **Version 0.7.3** (*Release November 6, 2016*)
  - Fix issues with slugs with special characters (#80)
- **Version 0.7.2** (*Release October 30, 2016*)
  - Moved default static assets to `https` (#78)
  - Fixed the issue where post fetched wouldn't emit when no posts exist (#76)
- **Version 0.7.1** (*Released July 5, 2016*)
  - Improvements to docs
  - Added extension import transition (@slippers)
- **Version 0.7.0** (*Released May 25, 2016*)
- **Version 0.6.0** (*Released January 14, 2016*)
  - The plugin framework for Flask-Blogging to allow users to add new features and capabilities.
- **Version 0.5.2** (*Released January 12, 2016*)
  - Added support for multiple binds for `SQLAStorage`
- **Version 0.5.1** (*Released December 6, 2015*)
  - Fixed the flexibility to add custom extensions to *BloggingEngine*.
- **Version 0.5.0** (*Released November 23, 2015*)
  - Fixed errors encountered while using Postgres database
- **Version 0.4.2** (*Released September 20, 2015*)
  - Added compatibility with Flask-Login version 0.3.0 and higher, especially to handle migration of `is_authenticated` attribute from method to property. (#43)
- **Version 0.4.1** (*Released September 16, 2015*)
  - Added javascript to center images in blog page
  - Added method in blogging engine to render post and fetch post.
- **Version 0.4.0** (*Released July 26, 2015*)



- Integrated Flask-Cache to optimize blog page rendering
- Fixed a bug where anonymous user was shown the new blog button
- **Version 0.3.2** (*Released July 20, 2015*)
  - Fixed a bug in the edit post routines. The edited post would end up as a new one instead.
- **Version 0.3.1** (*Released July 17, 2015*)
  - The `SQLAStorage` accepts metadata, and `SQLAlchemy` object as inputs. This adds the ability to keep the blogging table metadata synced up with other models. This feature adds compatibility with `Alembic` `autogenerate`.
  - Update docs to reflect the correct version number.
- **Version 0.3.0** (*Released July 11, 2015*)
  - `Permissions` is a new feature introduced in this version. By setting `BLOGGING_PERMISSIONS` to `True`, one can restrict which of the users can create, edit or delete posts.
  - Added `BLOGGING_POSTS_PER_PAGE` configuration variable to control the number of posts in a page.
  - Documented the url construction procedure.
- **Version 0.2.1** (*Released July 10, 2015*)
  - `BloggingEngine` `init_app` method can be called without having to pass a `storage` object.
  - Hook tests to `setup.py` script.
- **Version 0.2.0** (*Released July 6, 2015*)
  - `BloggingEngine` configuration moved to the `app` config setting. This breaks backward compatibility. See compatibility notes below.
  - Added ability to limit number of posts shown in the feed through `app` configuration setting.
  - The `setup.py` reads version from the module file. Improves version consistency.
- **Version 0.1.2** (*Released July 4, 2015*)
  - Added Python 3.4 support
- **Version 0.1.1** (*Released June 15, 2015*)
  - Fixed PEP8 errors
  - Expanded `SQLAStorage` to include Postgres and MySQL flavors
  - Added `post_date` and `last_modified_date` as arguments to the `Storage.save_post(...)` call for general compatibility
- **Version 0.1.0** (*Released June 1, 2015*)
  - Initial Release
  - Adds detailed documentation
  - Supports Markdown based blog editor
  - Has 90% code coverage in unit tests



---

### Compatibility Notes

---

- **Version 0.4.1:**

The documented way to get the blogging engine from app is using the key `blogging` from `app.extensions`.

- **Version 0.3.1:**

The `SQLAStorage` will accept metadata and set it internally. The database tables will not be created automatically. The user would need to invoke `create_all` in the metadata or `SQLAlchemy` object in `Flask-SQLAlchemy`.

- **Version 0.3.0:**

- In this release, the templates folder was renamed from `blog` to `blogging`. To override the existing templates, you will need to create your templates in the `blogging` folder.
- The blueprint name was renamed from `blog_api` to `blogging`.

- **Version 0.2.0:**

In this version, `BloggingEngine` will no longer take `config` argument. Instead, all configuration can be done through app config variables. Another `BloggingEngine` parameter, `url_prefix` is also available only through config variable.



## 10.1 Module contents

## 10.2 Submodules

## 10.3 flask\_blogging.engine module

The BloggingEngine module.

```
class flask_blogging.engine.BloggingEngine(app=None, storage=None,  
                                           post_processor=None, extensions=None,  
                                           cache=None, file_upload=None)
```

Bases: object

The BloggingEngine is the class for initializing the blog support for your web app. Here is an example usage:

```
from flask import Flask
from flask_blogging import BloggingEngine, SQLAlchemyStorage
from sqlalchemy import create_engine

app = Flask(__name__)
db_engine = create_engine("sqlite:///tmp/sqlite.db")
meta = MetaData()
storage = SQLAlchemyStorage(db_engine, metadata=meta)
blog_engine = BloggingEngine(app, storage)
```

```
__init__(app=None, storage=None, post_processor=None, extensions=None, cache=None,  
         file_upload=None)
```

### Parameters

- **app** (*object*) – Optional app to use

- **storage** (*object*) – The blog storage instance that implements the `Storage` class interface.
- **post\_processor** (*object*) – (optional) The post processor object. If none provided, the default post processor is used.
- **extensions** (*list*) – (optional) A list of markdown extensions to add to post processing step.
- **cache** (*Object*) – (Optional) A Flask-Cache object to enable caching
- **file\_upload** (*Object*) – (Optional) A FileUpload object from flask\_fileupload extension

#### Returns

**blogger\_permission**

**get\_posts** (*count=10, offset=0, recent=True, tag=None, user\_id=None, include\_draft=False, render=False*)

**classmethod get\_user\_name** (*user*)

**init\_app** (*app, storage=None, cache=None*)  
Initialize the engine.

#### Parameters

- **app** (*Object*) – The app to use
- **storage** (*Object*) – The blog storage instance that implements the
- **cache** (*Object Storage class interface.*) – (Optional) A Flask-Cache object to enable caching

**is\_user\_blogger** ()

**process\_post** (*post, render=True*)

A high level view to create post processing. :param post: Dictionary representing the post :type post: dict  
:param render: Choice if the markdown text has to be converted or not :type render: bool :return:

**user\_loader** (*callback*)

The decorator for loading the user.

**Parameters** **callback** – The callback function that can load a user given a unicode `user_id`.

**Returns** The callback function

## 10.4 flask\_blogging.processor module

**class** flask\_blogging.processor.PostProcessor

Bases: object

**classmethod all\_extensions** ()

**classmethod construct\_url** (*post*)

**static create\_slug** (*title*)

**static extract\_images** (*post*)

**classmethod is\_author** (*post, user*)

**classmethod process** (*post, render=True*)

This method takes the post data and renders it :param post: :param render: :return:

```
classmethod render_text(post)
classmethod set_custom_extensions(extensions)
```

## 10.5 flask\_blogging.sqlastorage module

```
class flask_blogging.sqlastorage.SQLASTorage(engine=None, table_prefix="", metadata=None, db=None, bind=None)
```

Bases: `flask_blogging.storage.Storage`

The SQLASTorage implements the interface specified by the `Storage` class. This class uses SQLAlchemy to implement storage and retrieval of data from any of the databases supported by SQLAlchemy.

```
__init__(engine=None, table_prefix="", metadata=None, db=None, bind=None)
```

The constructor for the SQLASTorage class.

**Parameters** `engine` – The SQLAlchemy engine instance created by calling

`create_engine`. One can also use Flask-SQLAlchemy, and pass the engine property. :type engine: object :param table\_prefix: (Optional) Prefix to use for the tables created

(default "").

**Parameters**

- **metadata** (*object*) – (Optional) The SQLAlchemy MetaData object
- **db** (*object*) – (Optional) The Flask-SQLAlchemy SQLAlchemy object
- **bind** – (Optional) Reference the database to bind for multiple

database scenario with binds :type bind: str

**all\_tables**

```
count_posts(tag=None, user_id=None, include_draft=False)
```

Returns the total number of posts for the give filter

**Parameters**

- **tag** (*str*) – Filter by a specific tag
- **user\_id** (*str*) – Filter by a specific user
- **include\_draft** (*bool*) – Whether to include posts marked as draft or not

**Returns** The number of posts for the given filter.

```
delete_post(post_id)
```

Delete the post defined by `post_id`

**Parameters** `post_id` (*int*) – The identifier corresponding to a post

**Returns** Returns True if the post was successfully deleted and False otherwise.

**engine**

```
get_post_by_id(post_id)
```

Fetch the blog post given by `post_id`

**Parameters** `post_id` (*str*) – The post identifier for the blog post

**Returns** If the `post_id` is valid, the post data is retrieved, else returns None.

**get\_posts** (*count=10, offset=0, recent=True, tag=None, user\_id=None, include\_draft=False*)

Get posts given by filter criteria

**Parameters**

- **count** (*int*) – The number of posts to retrieve (default 10)
- **offset** (*int*) – The number of posts to offset (default 0)
- **recent** (*bool*) – Order by recent posts or not
- **tag** (*str*) – Filter by a specific tag
- **user\_id** (*str*) – Filter by a specific user
- **include\_draft** (*bool*) – Whether to include posts marked as draft or not

**Returns** A list of posts, with each element a dict containing values for the following keys: (title, text, draft, post\_date, last\_modified\_date). If count is `None`, then all the posts are returned.

**metadata**

**post\_model**

**post\_table**

**save\_post** (*title, text, user\_id, tags, draft=False, post\_date=None, last\_modified\_date=None, meta\_data=None, post\_id=None*)

Persist the blog post data. If `post_id` is `None` or `post_id` is invalid, the post must be inserted into the storage. If `post_id` is a valid id, then the data must be updated.

**Parameters**

- **title** (*str*) – The title of the blog post
- **text** (*str*) – The text of the blog post
- **user\_id** (*str*) – The user identifier
- **tags** (*list*) – A list of tags
- **draft** (*bool*) – (Optional) If the post is a draft or if needs to be published. (default `False`)
- **post\_date** (*datetime.datetime*) – (Optional) The date the blog was posted (default `datetime.datetime.utcnow()` )
- **last\_modified\_date** (*datetime.datetime*) – (Optional) The date when blog was last modified (default `datetime.datetime.utcnow()` )
- **post\_id** (*str*) – (Optional) The post identifier. This should be `None` for an insert call, and a valid value for update. (default `None`)

**Returns** The `post_id` value, in case of a successful insert or update. Return `None` if there were errors.

**tag\_model**

**tag\_posts\_table**

**tag\_table**

**user\_posts\_table**



## 10.6 flask\_blogging.storage module

**class** flask\_blogging.storage.Storage

Bases: object

**count\_posts** (*tag=None, user\_id=None, include\_draft=False*)

Returns the total number of posts for the give filter

**Parameters**

- **tag** (*str*) – Filter by a specific tag
- **user\_id** (*str*) – Filter by a specific user
- **include\_draft** (*bool*) – Whether to include posts marked as draft or not

**Returns** The number of posts for the given filter.

**delete\_post** (*post\_id*)

Delete the post defined by *post\_id*

**Parameters** **post\_id** (*int*) – The identifier corresponding to a post

**Returns** Returns True if the post was successfully deleted and False otherwise.

**get\_post\_by\_id** (*post\_id*)

Fetch the blog post given by *post\_id*

**Parameters** **post\_id** (*int*) – The post identifier for the blog post

**Returns** If the *post\_id* is valid, the post data is retrieved,

else returns None.

**get\_posts** (*count=10, offset=0, recent=True, tag=None, user\_id=None, include\_draft=False*)

Get posts given by filter criteria

**Parameters**

- **count** (*int*) – The number of posts to retrieve (default 10). If count is None, all posts are returned.
- **offset** (*int*) – The number of posts to offset (default 0)
- **recent** (*bool*) – Order by recent posts or not
- **tag** (*str*) – Filter by a specific tag
- **user\_id** (*str*) – Filter by a specific user
- **include\_draft** (*bool*) – Whether to include posts marked as draft or not

**Returns** A list of posts, with each element a dict containing values for the following keys: (title, text, draft, post\_date, last\_modified\_date). If count is None, then all the posts are returned.

**static normalize\_tag** (*tag*)

**classmethod normalize\_tags** (*tags*)

**save\_post** (*title, text, user\_id, tags, draft=False, post\_date=None, last\_modified\_date=None, meta\_data=None, post\_id=None*)

Persist the blog post data. If *post\_id* is None or *post\_id* is invalid, the post must be inserted into the storage. If *post\_id* is a valid id, then the data must be updated.

**Parameters**

- **title** (*str*) – The title of the blog post

- **text** (*str*) – The text of the blog post
- **user\_id** (*str*) – The user identifier
- **tags** (*list*) – A list of tags
- **draft** (*bool*) – If the post is a draft or if needs to be published.
- **post\_date** (*datetime.datetime*) – (Optional) The date the blog was posted (default `datetime.datetime.utcnow()`)
- **last\_modified\_date** (*datetime.datetime*) – (Optional) The date when blog was last modified (default `datetime.datetime.utcnow()`)
- **meta\_data** (*dict*) – The meta data for the blog post
- **post\_id** (*int*) – The post identifier. This should be `None` for an insert call, and a valid value for update.

**Returns** The `post_id` value, in case of a successful insert or update.

Return `None` if there were errors.

## 10.7 flask\_blogging.views module

`flask_blogging.views.cached_func` (*blogging\_engine, func*)

`flask_blogging.views.create_blueprint` (*import\_name, blogging\_engine*)

`flask_blogging.views.delete` (*\*args, \*\*kwargs*)

`flask_blogging.views.editor` (*\*args, \*\*kwargs*)

`flask_blogging.views.feed` ()

`flask_blogging.views.index` (*count, page*)

Serves the page with a list of blog posts

### Parameters

- **count** –
- **offset** –

### Returns

`flask_blogging.views.page_by_id` (*post\_id, slug*)

`flask_blogging.views.posts_by_author` (*user\_id, count, page*)

`flask_blogging.views.posts_by_tag` (*tag, count, page*)

`flask_blogging.views.sitemap` ()

`flask_blogging.views.unless` (*blogging\_engine*)

## 10.8 flask\_blogging.forms module

**class** `flask_blogging.forms.BlogEditor` (*formdata=<object object>, \*\*kwargs*)

`draft = <UnboundField(BooleanField, ('draft',), {'default': False})>`

```
submit = <UnboundField(SubmitField, ('submit',), {})>
tags = <UnboundField(StringField, ('tags',), {'validators': [<wtforms.validators.Data
text = <UnboundField(TextAreaField, ('text',), {'validators': [<wtforms.validators.Data
title = <UnboundField(StringField, ('title',), {'validators': [<wtforms.validators.Data
```

## 10.9 flask\_blogging.signals module

The flask\_blogging signals module

```
flask_blogging.signals = <module 'flask_blogging.signals' from '/home/docs/checkouts/readt
The flask_blogging signals module
```

```
flask_blogging.signals.engine_initialised = <blinker.base.NamedSignal object at 0x7f7a4ad6
Signal send by the BloggingEngine after the object is initialized. The arguments passed by the signal are:
```

### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized

```
flask_blogging.signals.post_processed = <blinker.base.NamedSignal object at 0x7f7a4ad60350
Signal sent when a post is processed (i.e., the markdown is converted to html text). The arguments passed along
with this signal are:
```

### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **post** (*dict*) – The post object which was processed
- **render** (*bool*) – Flag to denote if the post is to be rendered or not

```
flask_blogging.signals.page_by_id_fetched = <blinker.base.NamedSignal object at 0x7f7a4ad6
Signal sent when a blog page specified by id is fetched, and prior to the post being processed.
```

### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **post** (*dict*) – The post object which was fetched
- **meta** (*dict*) – The metadata associated with that page

```
flask_blogging.signals.page_by_id_processed = <blinker.base.NamedSignal object at 0x7f7a4a
Signal sent when a blog page specified by id is fetched, and prior to the post being processed.
```

### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **post** (*dict*) – The post object which was processed
- **meta** (*dict*) – The metadata associated with that page

```
flask_blogging.signals.posts_by_tag_fetched = <blinker.base.NamedSignal object at 0x7f7a4a
Signal sent when posts are fetched for a given tag but before processing
```

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched with a given tag
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.posts_by_tag_processed = <blinker.base.NamedSignal object at 0x7f7a...`  
Signal sent after posts for a given tag were fetched and processed

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched and processed with a given tag
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.posts_by_author_fetched = <blinker.base.NamedSignal object at 0x7f7a...`  
Signal sent after posts by an author were fetched but before processing

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched with a given author
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.posts_by_author_processed = <blinker.base.NamedSignal object at 0x7f7a...`  
Signal sent after posts by an author were fetched and processed

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched and processed with a given author
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.index_posts_fetched = <blinker.base.NamedSignal object at 0x7f7a4ad...`  
Signal sent after the posts for the index page are fetched

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched for the index page
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.index_posts_processed = <blinker.base.NamedSignal object at 0x7f7a4ad...`  
Signal sent after the posts for the index page are fetched and processed

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized

- **posts** (*list*) – Lists of post fetched and processed with a given author
- **meta** (*dict*) – The metadata associated with that page

`flask_blogging.signals.feed_posts_fetched = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal send after feed posts are fetched

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched and processed with a given author

`flask_blogging.signals.feed_posts_processed = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal send after feed posts are processed

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **feed** (*list*) – Feed of post fetched and processed

`flask_blogging.signals.sitemap_posts_fetched = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal send after posts are fetched

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched and processed with a given author

`flask_blogging.signals.sitemap_posts_processed = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal send after posts are fetched and processed

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **posts** (*list*) – Lists of post fetched and processed with a given author

`flask_blogging.signals.editor_post_saved = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal sent after a post was saved during the POST request

#### Parameters

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **post\_id** (*int*) – The id of the post that was deleted
- **user** (*object*) – The user object
- **post** (*object*) – The post that was deleted

`flask_blogging.signals.editor_get_fetched = <blinker.base.NamedSignal object at 0x7f7a4ad60000>`  
Signal sent after fetching the post during the GET request

#### Parameters

- **app** (*object*) – The Flask app which is the sender

- **engine** (*object*) – The blogging engine that was initialized
- **post\_id** (*int*) – The id of the post that was deleted
- **form** (*object*) – The form prepared for the editor display

`flask_blogging.signals.post_deleted = <blinker.base.NamedSignal object at 0x7f7a4ad60710;`  
The signal sent after the post is deleted.

**Parameters**

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **post\_id** (*int*) – The id of the post that was deleted
- **post** (*object*) – The post that was deleted

`flask_blogging.signals.blueprint_created = <blinker.base.NamedSignal object at 0x7f7a4ad60710;`  
The signal sent after the blueprint is created. A good time to add other views to the blueprint.

**Parameters**

- **app** (*object*) – The Flask app which is the sender
- **engine** (*object*) – The blogging engine that was initialized
- **blueprint** (*object*) – The blog app blueprint

`flask_blogging.signals.sqla_initialized = <blinker.base.NamedSignal object at 0x7f7a4ad60710;`  
Signal sent after the SQLAlchemy object is initialized

**Parameters**

- **sqlastorage** (*object*) – The SQLAlchemy object
- **engine** (*object*) – The blogging engine that was initialized
- **table\_prefix** (*str*) – The prefix to use for tables
- **meta** (*object*) – The metadata for the database
- **bind** (*object*) – The bind value in the multiple db scenario.

# CHAPTER 11

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## Contributors

---

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