

```
from flask_wtf import FlaskForm

from wtforms import StringField, PasswordField, IntegerField, SelectField, DateField, BooleanField,
DateTimeField

from wtforms.validators import InputRequired, Optional, NumberRange

import datetime as dt
```

```
class RegisterForm(FlaskForm):

    """form to add a new user. Username, password, and email required"""
    username = StringField("Username", validators=[InputRequired()])
    password = PasswordField("Password", validators=[InputRequired()])
    email = StringField("Email")
    first_name = StringField("First Name")
    last_name = StringField("Last Name")
```

```
class LoginForm(FlaskForm):

    """form to login user with username and password"""
    username = StringField("Username", validators=[
        InputRequired(message="Please enter a username")])
    password = PasswordField("Password", validators=[
        InputRequired(message="Please enter a password")])
```

```
class SearchForm(FlaskForm):

    keyword = StringField("Enter a search term:", validators=[Optional()])

    source = SelectField("Choose source:", choices=[
        ('', 'All'), ('abc-news', 'ABC News'), ('al-jazeera-english',
```

```
        'Al Jazeera'), ('associated-press', 'Associated Press'), ('axios', 'Axios'),
        ('bbc-news', 'BBC News'), ('bloomberg', 'Bloomberg'), ('cbc-news',
        'CBC News'), ('cbs-news', 'CBS News'), ('cnn', 'CNN'), ('fox-news', 'Fox
News'),
        ('google-news', 'Google News'), ('independent', 'Independent'), ('msnbc',
        'MSNBC'), ('nbc-news', 'NBC News'), ('politico', 'Politico'),
        ('reuters', 'Reuters'), ('the-hill', 'The Hill'), ('the-huffington-post',
        'The Huffington Post'), ('the-wall-street-journal', 'The Wall Street
Journal'),
        ('the-washington-post', 'The Washington Post'), ('time', 'Time'), ('usa-today', 'USA Today'), ('vice-
news', 'Vice News']],
```

```
    validators=[Optional()]])
```

```
quantity = IntegerField("Enter # of many articles you want returned (max 15):",
```

```
    default=10, validators=[
```

```
        NumberRange(min=1, max=15, # this is represented by the "pageSize" parameter in the API where
        default and max are both set to 100
```

```
        message="Please enter a number between 1 and 10"))])
```

```
date_from = DateField("Select a starting date:", validators=[Optional()])
```

```
date_to = DateField("Up until which date?", # API default if will be newest to oldest with no limit
```

```
    default=dt.datetime.today, validators=[Optional()])
```

```
language = SelectField("Choose which language you want to see results from:", choices=[ # API default
is all languages
```

```
        ('en', 'English'), ('es', 'Spanish'), ('fr', 'French'),
```

```
        ('ar', 'Arabic'), ('he', 'Hebrew'), ('he', 'Hebrew'), ('it', 'Italian'),
```

```
        ('nl', 'Dutch'), ('no', 'Norwegian'), ('pt', 'Portuguese'), ('ru', 'Russian'),
```

```
('zh', 'Chinese'), ('se', 'Swedish']],
```

```
validators=[Optional()]) # can't find 'ud' language code as specified by api
```

```
sort_by = SelectField("Search by:", choices=[('relevancy', 'Relevant'), ('popularity', 'Popular'),  
('publishedAt', 'Recent'), # API default: publishedAt
```

```
    ('polarity', 'Polarity (results ordered from positive to negative)'),
```

```
    ('subjectivity', 'Objectivity (results ordered from objective to subjective)']],
```

```
validators=[Optional()])
```

```
default = BooleanField(
```

```
    "Make this your default search settings for your home page feed?"
```

```
saved_query = BooleanField(
```

```
    "Would you like to add this to your saved search queries?"
```

```
name = StringField("Give your saved search query a name (if applicable)", validators=[Optional()])
```