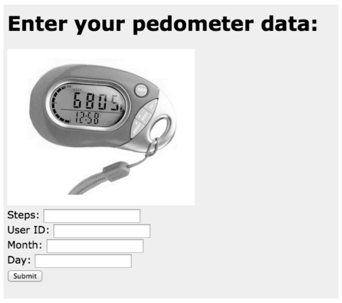
ECS 89

5/12

Announcements

- Checkpoint on Proj3 due Wednesday night (pushed back one day)
- Set up user ID Django database, Web sites for user ID entry

Pedometer data entry – use it!


Enter your pedometer data:

Steps:
User ID:
Month:
Day:
Submit

pc110.cs.ucdavis.edu:10002/hw2/index.html

Steps so far - checklist

- Start app (python manage.py startapp newpolls)
- Edit newpolls/models.py, add database classes
- Edit mysite/settings.py to connect models to Django
- python manage.py syncdb
- Put some data in with shell (not necessary in HW)
- Edit mysite/urls.py
- Add and edit newpolls/urls.py
- Add and edit newpolls/views.py
- Put templates into newpolls/templates/newpolls

Today

- Getting a form onto a Django Web page
- Getting data out of URL and using it
- Familiar data transfer strategy: pass variables in a little dictionary

Template for voting page

```
 <h1>{{ question }}</h1>

{% if message %}<p><strong>{{ message }}</strong></p>{% endif %}
<form action="/django/newpolls/vote" method="get">
{% for choice in choices %}
    <label><input type="radio" name="choice"
        value="{{ choice.id }}" />
      {{ choice.choice_text }}</label>
    <br /> <br />
{% endfor %}
<input type="submit" value="Vote" />
</form>
```

Django templates

- A variable is inside {{ }}
  {{ message }}
- Attributes of objects via the usual dot notation,
  eg. choice.choice_text or choice.votes

More templates

- Programming constructs inside {% %}
  {% if message %} – this means if message is not empty.
- Block ends with {% endif %}
- Can have {% if…%}…{% else %}…{% endif %}
- For loop
  {% for choice in choices %}…{% endfor %}

Fill in data for template in views.py

```
def detail(request):
   p = Poll.objects.get(id=1)
   context = { 'question': p.question,
               'choices': p.choice_set.all(),
               'message': "" }
   return render(request, 'newpolls/detail.html', context)
```

- context is a dictionary where keys are template variable names and whose values can be constants or items from database

GET vs POST HTTP request

```
<form action="/django/newpolls/vote" method="get">
```

- Recall these are two ways to send form data to the server. GET puts it into the URL; POST puts it in the body of the HTTP request.
- Tutorial uses POST, but GET is visible.
- Produces URL such as:

pc110.cs.ucdavis.edu:10000/django/newpolls/vote?choice=1

Template for reporting votes

```
<h1>{{ question }}</h1>

<ul>
{% for choice in choices %}
  <li>{{ choice.choice_text }} got {{choice.votes}} votes.</li>
{% endfor %}
</ul>
<a href="/django/newpolls/detail">Return to poll</a>
```

Finding the vote in views.py

```
def votes(request):
   p = Poll.objects.get(id=1)
   try:
      selected_choice = p.choice_set.get(id=request.GET['choice'])
```

- request is an HttpRequest object
- request.GET is a method returning a dictionary of variable names and values, from the URL, eg.
  …./votes?choice=1&poll=1
- Will give the dictionary:
  {"choice": 1, "poll":1}

Do something with the vote

```
def votes(request):
   p = Poll.objects.get(id=1)
   try:
      selected_choice = p.choice_set.get(id=request.GET['choice'])
```

- Why put it in a try-except construct?

Do something with the vote

```
def votes(request):
   p = Poll.objects.get(id=1)
   try:
      selected_choice = p.choice_set.get(id=request.GET['choice'])
```

- Why put it in a try-except construct?
- Because the request might not be coming from the poll but from a malicious or random source. So the code in the GET string might not correspond to a real choice.

When it is a good choice

```
except :
   …
else:
      selected_choice.votes += 1
      selected_choice.save()
      context = { 'question': p.question,
            'choices': p.choice_set.all()}
      return render(request, 'newpolls/vote.html', context)
```

- Count the vote, and produce the Web page

When it is a bad choice

```
except (KeyError, Choice.DoesNotExist):
      # Redisplay the poll voting form.
      context = { 'question': p.question,
            'choices': p.choice_set.all(),
            'message': "You didn't select a choice"
      }
      return render(request, 'newpolls/detail.html', context)
```

- Go back to the poll, this time with an error message

Try reloading vote count page

- What happens and why?
- How to fix – next time.

Permissions tip

- Once you get into Django, you should get informative error messages.
- If you get 505 server errors, chances are something does not have the right permission.
- Try going to /var/www/yourname and:

  chmod 770 –R mysite
- This sets permission on everything in mysite to rwxrwx---