

Server-side code example:

```
from flask import Flask, render template, redirect, request, session, flash
from mysqlconnection import connectToMySQL as connect
app= Flask( name )
@app.route('/dashboard')
def index():
  mysql = connect('books')
  query = "SELECT * FROM books;"
  allbooks = mysql.query db(query)
  return render template('dashboard.html', data=allbooks)
@app.route('/add_book')
def add book():
  return render template('Add Book.html')
@app.route('/insertingintodb', methods=['POST'])
def insertingintodb():
  mysql=connect('books')
  query = "INSERT INTO books (tittle, description, created at, updated at) VALUES (%(title)s, %(description)s,
NOW(),NOW());"
  data = {
    'title': request.form['title'],
    'description' : request.form['description']
  insert = mysql.query db(query,data)
  print(insert)
  return redirect('/dashboard')
@app.route('/edit book/<id>', methods=["POST"])
def edit book(id):
  mysql = connect('books')
  query = "SELECT * FROM books WHERE id = %(id)s;"
  data = { 'id' : id}
  edit = mysql.query_db(query, data)
  print(edit)
  return render template('edit.html', books=edit)
@app.route('/edit process', methods=['POST'])
def edit_process():
  mysql = connect('books')
  query = "UPDATE books SET tittle = %(tittle)s, description = %(description)s WHERE id = %(id)s;"
```

Add Book page

Add Book:

Book Title:

Book Title

Description:

Description

Submit

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css" integrity="sha384-MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO" crossorigin="anonymous">
<title>Add Book</title>
</head>
<body>
<div class="container">
<h1>Add Book:</h1>
<form action="/insertingintodb" method="POST">
```

Edit Book page

Edit Book

Book Title

{{books[0]['tittle']}}

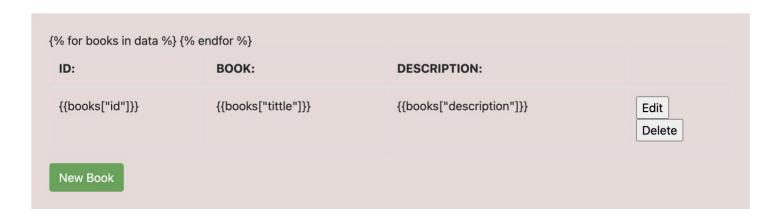
Description:

{{books[0]['description']}}

Submit

```
<h1>Edit Book</h1>
    <form action="/edit_process" method="POST">
      <input type="hidden" name="bookID" value="{{books[0]['id']}}">
      <div class="form-group">
        <label >Book Title</label>
        <input type="text" class="form-control" value="{{books[0]['tittle']}}" name="tittle">
      </div>
      <div class="form-group">
          <label>Description:</label>
          <input type="text" class="form-control" value="{{books[0]['description']}}" name="description">
        </div>
      <button type="submit" class="btn btn-primary">Submit</button>
    </form>
  </div>
</body>
</html>
```

Dashboard page



```
padding: 2%;
    background-color: rgb(235, 217, 217);
  }
 </style>
</head>
<body>
 <div class="container">
  <thead>
       ID:
        BOOK:
        DESCRIPTION:
       </thead>
     {% for books in data %}
        {{books["id"]}}
        {{books["tittle"]}}
        {{books["description"]}}
        <form action="/edit_book/{{books['id']}}" method="POST">
         <input type="submit" value="Edit">
       </form>
       <form action="/delete/{{books['id']}}" method="POST">
         <input type="submit" value="Delete">
       </form>
      {% endfor %}
     <a href="/add_book" class="btn btn-success">New Book</a>
 </div>
</body>
</html>
```

{% with messages = get_flashed_messages(cate {% endfor%} {% endif %} {% endwith %} Login and Registratio	tegory_filter=["permission"]) %} {% if messages %} {% for message in messages %} {{ message }} On	_t }
{% with messages = get_flashed_messages(cat {% endfor%} {% endif %} {% endwith %}	tegory_filter=["register"]) %} {% if messages %} {% for message in messages %} {{ message }}	
Register here!	Login here!	
First name:	{% with messages =	
This field is required	get_flashed_messages(category_filter=["login"]) %} {% if messages %} {% for message in	
Last name:	messages %} {{ message }} {% endfor%} {% endif %} {% endwith %}	
This field is required	Email:	
Email:	This field is required	
This field is required	Password	
Password	This field is required	
This field is required	Login!	
Confirm Password		
This field is required		
Register!		

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta http-equiv="X-UA-Compatible" content="ie=edge">
  k rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.1/css/bootstrap.min.css"
integrity="sha384-WskhaSGFgHYWDcbwN70/dfYBj47jz9qbsMId/iRN3ewGhXQFZCSftd1LZCfmhktB"
    crossorigin="anonymous">
  <title>Login and Registration</title>
  <style>
    div.container {
      width: 1080px;
      min-height: 720px;
      background-color: lightgrey;
      margin: 0px auto;
      padding: 5px;
```

```
}
    div.registration {
      display: inline-block;
      vertical-align: top;
      width: 335px;
      margin-left: 20px;
      padding: 10px;
    }
    div.login_here {
      display: inline-block;
      vertical-align: top;
      width: 390px;
      padding: 10px;
      margin-left: 235px;
    }
    .error {
      color: red;
    }
    #text {
      margin-left: 50px;
  </style>
</head>
<body>
  <div class="container">
    {% with messages = get flashed messages(category filter=["permission"]) %}
    {% if messages %}
    {% for message in messages %}
    <span class="error">{{ message }}</span><br />
    {% endfor%}
    {% endif %}
    {% endwith %}
    <h2 id="text">Login and Registration</h2>
    {% with messages = get_flashed_messages(category_filter=["register"]) %}
    {% if messages %}
    {% for message in messages %}
    <span class="error">{{ message }}</span><br />
    {% endfor%}
    {% endif %}
    {% endwith %}
    <br>
    <br>
```

```
<div class="registration">
      <h4>Register here!</h4>
      <form action="/register" method="POST">
        <div class="form-group">
           <label for="first_name">First name:</label>
           <!-- <span class="error">This field is required</span> -->
           <input class="form-control is-invalid" type="text" id="first_name" name="first_name"
placeholder="This field is required">
        </div>
        <div class="form-group">
           <label for="last_name">Last name:</label>
           <!-- <span class="error">This field is required</span> -->
           <input class="form-control is-invalid" type="text" id="last_name" name="last_name"
placeholder="This field is required">
        </div>
        <div class="form-group">
           <label for="email">Email:</label>
           <!-- <span class="error">This field is required</span> -->
           <input class="form-control is-invalid" type="text" id="email" name="email" placeholder="This field
is required">
        </div>
        <div class="form-group">
           <label for="password">Password</label>
           <!-- <span class="error">This field is required</span> -->
           <input class="form-control is-invalid" type="password" id="password hash"
name="password hash"
             placeholder="This field is required">
        </div>
        <!-- <div class="invalid-feedback">
        </div> -->
        <div class="form-group">
           <label for="password2">Confirm Password</label>
           <!-- <span class="error">This field is required</span> -->
           <input class="form-control is-invalid" type="password" id="password2" name="password2"
placeholder="This field is required">
           <!-- <div class="invalid-feedback">
           </div> -->
        </div>
        <button class="btn btn-success" type="submit">Register!</button>
    </div>
    </form>
    <div class="login here">
      <h4>Login here!</h4>
      {% with messages = get flashed messages(category filter=["login"]) %}
      {% if messages %}
      {% for message in messages %}
```

```
<span class="error">{{ message }}</span><br />
      {% endfor%}
      {% endif %}
      {% endwith %}
      <form action="/login" method="POST">
        <div class="form-group">
          <label for="email">Email:</label>
          <input class="form-control is-invalid" type="text" id="email" name="email" placeholder="This field
is required">
        </div>
        <div class="form-group">
          <label for="password">Password</label>
          <input class="form-control is-invalid" type="text" id="password" name="password"
placeholder="This field is required">
        </div>
        <button class="btn btn-success" type="submit">Login!</button>
      </form>
    </div>
  </div>
</body>
</html>
```

Server-side code:

```
from flask import Flask, render_template, request, redirect, session, flash from mysqlconnection import connectToMySQL from flask_bcrypt import Bcrypt import re

app = Flask(__name__)
bcrypt = Bcrypt(app)

EMAIL_REGEX = re.compile(r'^[a-zA-Z0-9.+_-]+@[a-zA-Z0-9._-]+\.[a-zA-Z]+$')
Name_REGEX = re.compile(r'^[a-zA-Z]+$')
app.secret_key = "secret_key"

@app.route('/')
def index():
    if 'user_id' not in session:
        session['user_id'] = None
```

```
return render template('index.html')
@app.route("/register", methods=['POST'])
def register():
  pw hash = bcrypt.generate password hash(request.form['password hash'])
  print(pw hash)
  session.clear()
  errors = False
  for key in request.form:
    flash(request.form[key], 'register')
    if len(request.form[key]) < 1:
      if errors == False:
         flash("Please complete the form!", "register")
      errors = True
  if errors:
    return redirect('/')
  if len(request.form['password hash']) < 1:
    flash("please complete all required fields prior to submission"
       ) # just pass a string to flass function broski
    return redirect('/')
  if len(request.form['password2']) < 1:
    flash("please complete all required fields prior to submission"
       ) # just pass a string to flass function broski
    return redirect('/')
  if request.form['password2'] != request.form['password hash']:
    flash("password fields do not match"
       ) # just pass a string to flash function
    return redirect('/')
  mysql = connectToMySQL('registrations')
  query = "SELECT * FROM users WHERE email = %(email)s;"
  data = {"email": request.form['email']}
  results = mysql.query_db(query, data)
  if results:
    flash("This email address is already taken!", "register")
  else:
    mysql = connectToMySQL('registrations')
    query2 = "INSERT INTO users (first name, last name, email, password hash) VALUES(%(first name)s,
%(last name)s, %(email)s, %(pw hash)s);"
    data = {
       'first name': request.form['first name'],
      'last name': request.form['last name'],
       'email': request.form['email'],
       'pw hash': pw hash
    }
```

```
mysql.query db(query2, data)
    mysql = connectToMySQL('registrations')
    query = "SELECT user id FROM users WHERE email = %(email)s;"
    session['user_id'] = mysql.query_db(query, data)
    return redirect('/success')
    # mysql = connectToMySQL('registrations')
    # newuserid = mysql.query db(query2, data)
    # if newuserid:
    # session['first name'] = request.form['first name']
    # session['user id'] = newuserid
    # flash("You have been successfully registered!", "register")
    # return redirect('/sucess')
    # else:
    # flash("We're sorry, we could not register you at this time",
    # "register")
  return redirect('/success')
@app.route('/login', methods=['POST'])
def login():
  session.clear()
  query = "SELECT * FROM users WHERE email = %(email)s;"
  data = {"email": request.form['email']}
  mysql = connectToMySQL('registrations')
  results = mysql.query db(query, data)
  if results:
    session['user id'] = results[0]['user id']
    session['first name'] = results[0]['first name']
    return redirect('/success')
  flash("We're sorry, we could not log you in", "login")
  return redirect("/")
@app.route('/success')
def success page():
  if 'user id' not in session or session['user id'] == None:
    flash("You must be logged in to enter the website", "permission")
    return redirect("/")
  return render_template("success.html")
@app.route('/logout')
def logout():
  session.clear()
  return redirect('/')
```