# app.py

from flask import Flask, render\_template, request, redirect, url\_for, flash

from flask\_sqlalchemy import SQLAlchemy

from flask\_login import LoginManager, UserMixin, login\_user, login\_required, logout\_user, current\_user

app = Flask(\_\_name\_\_)

app.config['SECRET\_KEY'] = 'your\_secret\_key'

app.config['SQLALCHEMY\_DATABASE\_URI'] = 'sqlite:///site.db'

db = SQLAlchemy(app)

login\_manager = LoginManager(app)

login\_manager.login\_view = 'login'

# Database models

class User(db.Model, UserMixin):

id = db.Column(db.Integer, primary\_key=True)

username = db.Column(db.String(20), unique=True, nullable=False)

password = db.Column(db.String(60), nullable=False)

links = db.relationship('Link', backref='author', lazy=True)

class Link(db.Model):

id = db.Column(db.Integer, primary\_key=True)

original\_url = db.Column(db.String(2000), nullable=False)

short\_url = db.Column(db.String(10), unique=True, nullable=False)

clicks = db.Column(db.Integer, default=0)

user\_id = db.Column(db.Integer, db.ForeignKey('user.id'), nullable=False)

# Flask-Login

@login\_manager.user\_loader

def load\_user(user\_id):

return User.query.get(int(user\_id))

# Routes

@app.route('/')

def home():

return render\_template('home.html')

@app.route('/shorten', methods=['POST'])

@login\_required

def shorten():

original\_url = request.form.get('original\_url')

short\_url = generate\_short\_url()

link = Link(original\_url=original\_url, short\_url=short\_url, author=current\_user)

db.session.add(link)

db.session.commit()

return redirect(url\_for('dashboard'))

@app.route('/dashboard')

@login\_required

def dashboard():

user\_links = current\_user.links

return render\_template('dashboard.html', user\_links=user\_links)

@app.route('/<short\_url>')

def redirect\_to\_original(short\_url):

link = Link.query.filter\_by(short\_url=short\_url).first()

if link:

link.clicks += 1

db.session.commit()

return redirect(link.original\_url)

else:

flash('Invalid short URL', 'danger')

return redirect(url\_for('home'))

# Additional routes for authentication (login, logout, register)

if \_\_name\_\_ == '\_\_main\_\_':

app.run(debug=True)