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PROBLEM STATEMENT

Sure, here's how you can present the problem statement as bullet points for a PowerPoint presentation:

- **New to the City?** Struggling to find local events and community activities?
- **Navigating the Local Scene:** Discovering events in a new area is like navigating a maze—time-consuming and often incomplete.
- **Scattered Information:** Event details are spread across multiple platforms, making it hard to get a full picture.
- **Stay Connected:** Experience the heart and soul of the community with just a tap, ensuring you never miss out on what's truly special.
- **Our Solution:** A single platform that consolidates all local events, from farmers' markets to art openings.

FUNCTIONALITIES

- User Accounts and Secure Authentication
- Event Aggregation Through API call
- Modular/Dynamic/Rendering Design

TECHNOLOGIES

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API

LIVE DEMO

cs122_final_project – app__init__.py

```python
from flask import Flask, render_template
from flask_sqlalchemy import SQLAlchemy
from flask_login import LoginManager
# from flask_migrate import Migrate
from app.config import Config
from os import path

# Create the database instance globally
db = SQLAlchemy()
DB_NAME = 'eventradar.db'
# Initialize login manager
login_manager = LoginManager()
# Login manager needs a view to redirect to when a login is required.
login_manager.login_view = 'auth.login'
# Initialize database migration tool
# migrate = Migrate()
```

FLASK

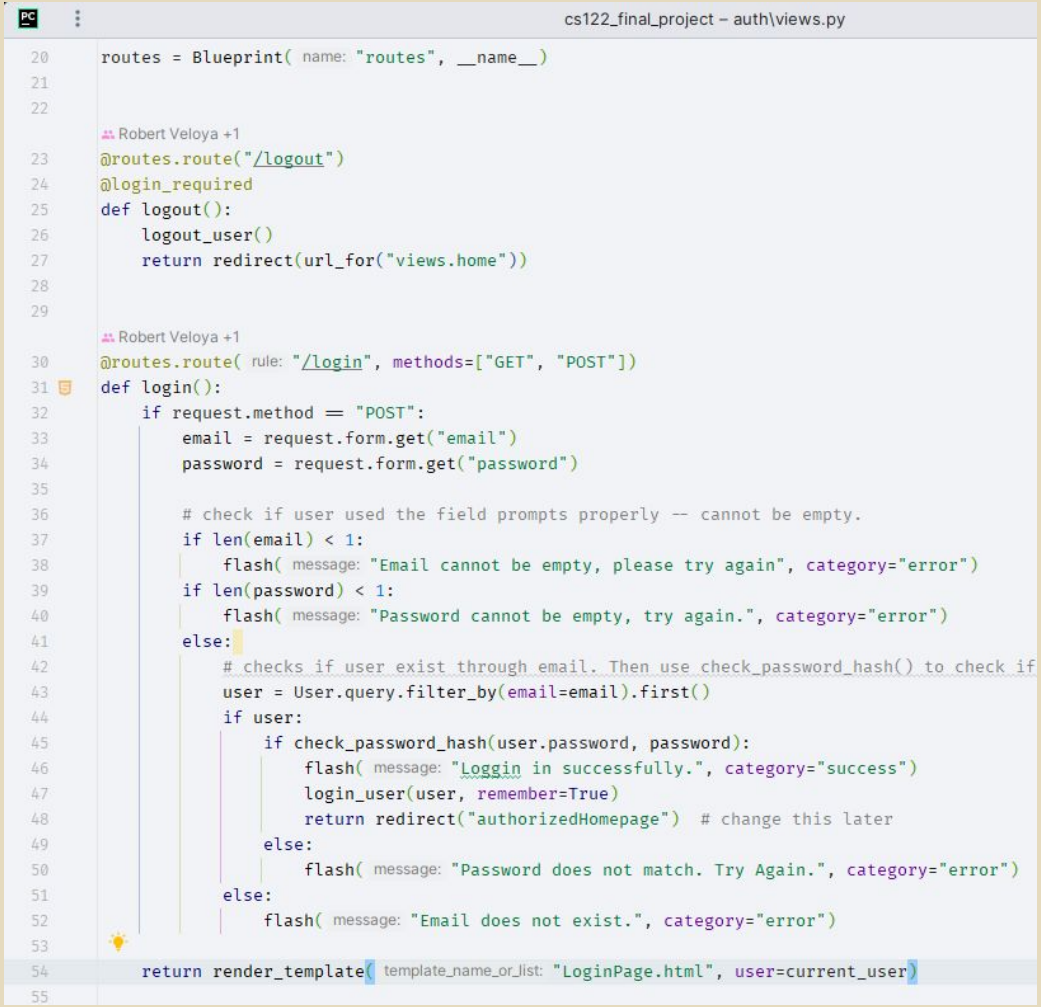
MODEL

cs122_final_project – models.py

```python
from datetime import datetime
from flask_sqlalchemy import SQLAlchemy
from flask_login import UserMixin
from werkzeug.security import generate_password_hash, check_password_hash
from app import db
#, login_manager

# User Loader for Flask-Login
# @login_manager.user_loader
# def load_user(user_id):
#     return User.query.get(int(user_id))

Robert Veloya
class User(db.Model, UserMixin):
    id = db.Column(db.Integer, primary_key=True)
    email = db.Column(db.String(120), unique=True, nullable=False)
    # username = db.Column(db.String(64), index=True, unique=True)
    first_name = db.Column(db.String(20), index=True, nullable=False)
    password = db.Column(db.String(100), index=True, nullable=False)
    #relationship between user and event to store all events users sign up for.
    # event = db.relationship('Event')

Robert Veloya
class Event(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    title = db.Column(db.String(128), nullable=False)
    description = db.Column(db.Text, nullable=True)
    location = db.Column(db.String(128), nullable=False)
    # 4/18/2024 @ 1:37 pm check if utcnow is causing any issues
    start_time = db.Column(db.DateTime, nullable=False, default=datetime.utcnow)
    end_time = db.Column(db.DateTime, nullable=False, default=datetime.utcnow)
    created_at = db.Column(db.DateTime(timezone=True), index=True, default=datetime.utcnow)
    # user_id = db.Column(db.Integer, db.ForeignKey('user.id'))
```

Database

- eventradar 1
  - main
    - tables 3
      - event
      - sqlite_master
      - user
        - columns 4
        - keys 2
        - indexes 3
    - Server Objects



CONTROLLER / ROUTING

TEMPLATE INHERITANCE

cs122_final_project – base.html

```
<!DOCTYPE html>
<html data-bs-theme="light" lang="en">

<head...>

<body>
<nav class="navbar navbar-expand bg-primary navigation-clean navbar-light"...>

{% with messages = get_flashed_messages(with_categories=true) %} {% if
        messages %} {% for category, message in messages %} {% if category ==
        'error' %}
    <div class="alert alert-danger alert-dismissible fade show" role="alert"...>
{% else %}
    <div class="alert alert-success alert-dismissible fade show" role="alert"...>
{% endif %} {% endfor %} {% endif %} {% endwith %}

{% block content %} {% endblock %}


<footer class="text-center"...>
<script src="/static/bootstrap/js/bootstrap.min.js"></script>
<script src="/static/js/bs-init.js"></script>
<script src="/static/js/Simple-Typing-Carousel-text-typing.js"></script>
<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"...>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.12.9/dist/umd/popper.min.js"...>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/js/bootstrap.min.js"
        integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl"
        crossorigin="anonymous"></script>
</body>

</html>
```

```
{% extends 'base.html' %} {% block title %}Search{% endblock %}

{% block content %}
    <div class="container d-md-flex d-xxl-flex justify-content-center justify-content-md-center justify-
    <div class="col" style="...">
        <div class="row" style="...">
            {% for event in events %}
                <div class="col-4 py-3 mx-auto col-xl-4 col-lg-6 col-md-6 col-sm-12"
                    style="...">
                    <div class="card" style="...">
                        <!-- Dynamically change the source of the image using Jinja2 -->
                        <img class="img-fluid card-img-top" style="..." src="{{ event.image_url }}">
                        <div class="card-body">
                            <!-- Use Jinja2 to insert event details dynamically -->
                            <h5>{{ event.event_name }}</h5>
                            <p>{{ event.venue }}, {{ event.city }}</p>
                            <p>{{ event.event_date }}</p>
                        </div>
                        <!-- Dynamically change the href to link to the Ticketmaster event page -->
                        <div class="card-footer text-center">
                            <small>
                                <a href="{{ event.event_url }}" style="...">
                                    <i class="fa fa-eye pe-1"></i>View Event
                                </a>
                            </small>
                        </div>
                    </div>
                </div>
            {% endfor %}
        </div>
    </div>
{% endblock %}
```

JINJA

API WEB SCRAPER

```python
@routes.route( rule: "/authorizedHomepage", methods=["POST", "GET"])
@login_required
def authorizedHomepage():
    if request.method == "POST":
        keyword = request.form.get("search")
        if not keyword:
            return flash( message: "keyword cannot be empty.", category="error")
        # redirect(url_for('routes.get_event', keyword = keyword))
        event_list = []

        for i in range(
            2
        ):  # you can change the number in range(num) for how many pages you want

            # get the json data
            event_data = fetch_event_details(Config.api_key, i, keyword)

            # Check if the response is an error message
            if isinstance(event_data, str):
                return make_response( *args: jsonify({"error": event_data}), 403)

            # get the events list in json file
            events = event_data.get("_embedded", {}).get("events", [])

            # create the dictionary for each event by traversing all the events
            for event in events:

                # create the new dictionary
                event_info = {}

                # get the event name, data, url
                event_info["event_name"] = event.get("name")
                event_info["event_date"] = (
                    event.get("dates", {})
                    .get("start", {})
                    .get("localDate", "Date not available")
                )
                event_info["event_url"] = event.get("url", "URL not available")

                # get the "venues" list for event
                venues = event.get("_embedded", {}).get("venues", [])

                # get the "city" information in the list
                for venue in venues:

                    # get the city name for the event and check the city is matched
                    city = venue.get("city", {}).get("name", "")
                    event_info["venue"] = venue.get("name", "Venue not available")
                    event_info["city"] = city
```

```python
                    # get the image url
                    images = event.get("images", [])
                    if images and len(images) > 3:
                        event_info["image_url"] = images[8].get(
                            "url", "No image available"
                        )

                    # if the city is mateched, the dictionary is added to the list 'event_list'
                    if event_info.get("event_name") and event_info.get("venue"):
                        event_list.append(event_info)
            if len(event_list) == 0:
                flash(
                    message: "There are no events happening in that area. Try again",
                    category="error",
                )
            else:
                return render_template(
                    template_name_or_list: "SearchEventPage.html", events=event_list, user=current_user
                )
        return render_template( template_name_or_list: "AuthorizedHomepage.html", user=current_user)
```

```python
# get the api key and page number
1 usage  Jonathan Manzano
def fetch_event_details(api_key, page, keyword):

    # url for events
    url = f"https://app.ticketmaster.com/discovery/v2/events.json?apikey={api_key}&locale=*&page={page}&keyword={keyword}"

    # request
    response = requests.get(url)

    # return the json if the data is successfully retrieved.
    if response.status_code == 200:
        return response.json()
    else:
        return "Failed to retrieve events."
```

CONCLUSION AND FUTURE DEVELOPMENT

EventRadar address the challenge of event discovery by providing a centralized platform that aggregates a wide range of events from Ticketmaster, secures user accounts with hashing algorithms, and offering a modular design that facilitates scalability.

Future Improvements:

- Sentence Recommendation in the Search Bar
- Google OAuth Integration
- SERP API Integration