Free On Campus Resources

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https://github.com/xiolian/Free-On-Campus-Resources

Project Description

Free On Campus resource

Users can provide input on their desired resource type or specific resource item desired

Using user input, database will sort through data and pull list of locations that offer specific resource type or specific item

Custom Data collected through accessing school websites and campus locations

Use Cases

User

View return from query

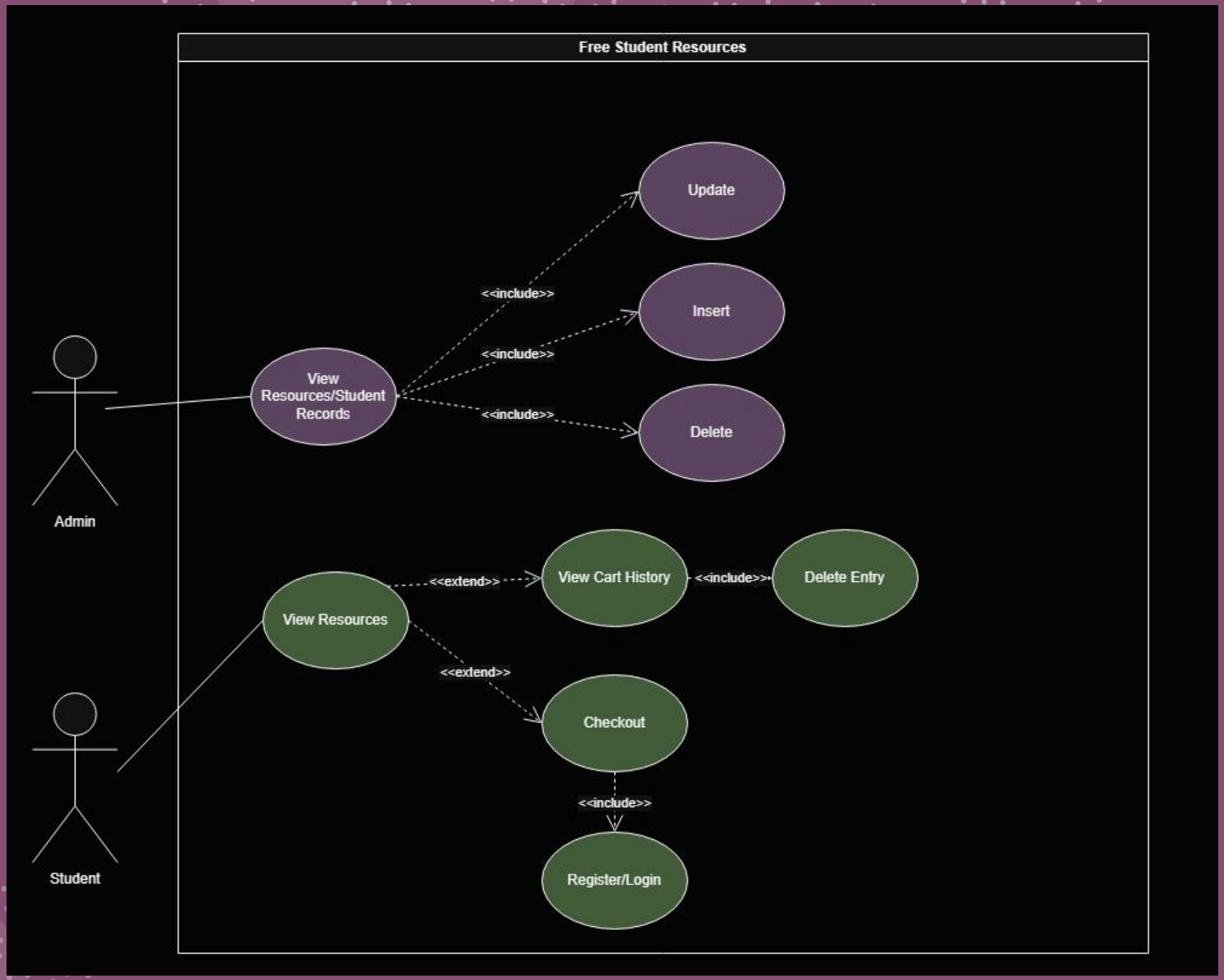
Put item on checklist for items desired

Generate Google Map with icon pins

Default is no login, login is to save info

Admin

Able to view, update, edit, delete data from database



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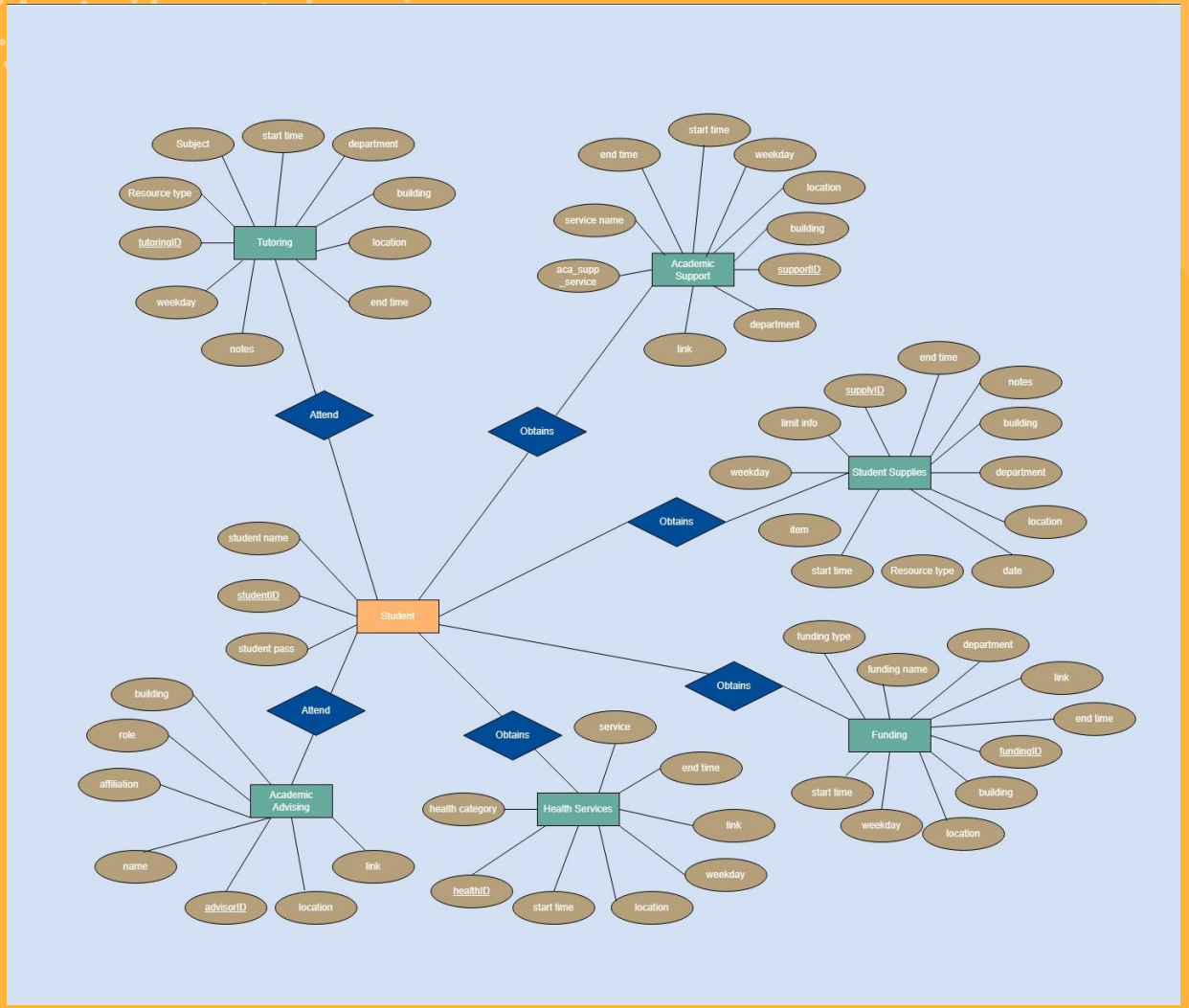
E/R Diagram

Entities:

- Most entities are connected to the Student
  - Student
  - Tutoring
  - Academic Support
  - Academic Advising
  - Student Supplies
  - Funding
  - Health Services

Relationship:

- Most entities contain a many-to-many relationship with the student entity.
  - (Logic: A student can attend many tutoring sessions. A tutoring session can have many students)



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Schema: Entities for Student Resources

Health Services

HealthID
Health_category
Service
Location
Weekday
Start_time
End_time
Link

Academic Support

SupportID
Aca_supp_service
Service_name
Department
Building
Location
Weekday
Start_time
End_time
Link

Funding

FundingID
Funding_type
Funding_name
Department
Building
Location
Weekday
Start_time
End_time
Link

Tutoring

TutoringID
Resource_type
Subject
Department
Building
Location
Weekday
Start_time
End_time
Notes

Student Supplies

SupplyID
Resource_type
Item
Department
Building
Location
Limit_info
Weekday
Start_time
End_time
Notes

Academic Advising

AdvisorID
Name
Affiliation
Role
Building
Location
Link

Student

StudentID
StudentName
StudentPass

Schema: Relationships of Student Resources (Records)

Academic Support Record

StudentID
StudentName
Support_id

Advisor Record

StudentID
StudentName
Advisor_id

Funding Record

StudentID
StudentName
Funding_id

Health Record

StudentID
StudentName
Health_id

Student Supplies Record

StudentID
StudentName
Supply_id

Tutoring Record

StudentID
StudentName
Tutoring_id

Full Stack

Frontend (Client-Side):

HTML5, CSS3, Jinja2 Templating

What the user sees and interacts with. It structures the page, applies styling, and sends user input (credentials) to the backend.

Main Libraries/Technologies:

HTML5: Provides the structure and content of the login form and page.

CSS3: Handles the presentation and styling, including the background image and layout.

Backend (Server-Side):

Python with the Flask web framework.

Flask (Routing/Request Handling)

Stores user login credentials (hashed passwords) and structured resource tracking data (Student, Tutoring, Funding, etc.).

The server-side logic that handles the HTTP request, validates the form data, performs user authentication, and coordinates database operations.

Main Libraries/Technologies:

Flask: The micro-framework that handles routing

Jinja2: The template engine responsible for injecting dynamic content

Front Stack

Library / Technology	Layer	Purpose
HTML5	Presentation	Provides the structure and content for all three pages (Login, Register, Join Session).
CSS3	Presentation	Handles the styling, layout, responsiveness, and visual presentation of the forms and page elements.
Jinja2	Presentation/Templating	The templating engine used by Flask to render dynamic data into the static HTML structure.

Back End

Library / Technology	Layer	Purpose
Flask	Application/Backend	The main web framework that handles URL routing, request processing, and serving the Jinja2 templates.
SQLite	Database	SQLite operates as the main database engine, providing table creation and modification.
Sqlite3 (Python module)	Database Interface	Acts as the Python interface to the SQLite engine, enabling database connections, executing SQL queries, and handling results directly from Python code.

Bonus Feature: Google Map

- Developing Google Map with Icons
  - Students can check out and then have a google map direction generated
  - Increases Accessibility
    - To find resources with locations alongside estimated time