Open-Source Report

Proof of knowing your stuff in CSE312

Flask (Python)

General Information & Licensing

| Code Repository | https://github.com/pallets/flask |
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Dispel the magic of this technology. Replace this text with some that answers the following questions for the above tech:

- How does this technology do what it does? Please explain this in detail, starting from after the TCP socket is created
- Where is the specific code that does what you use the tech for? You must provide
 a link to the specific file in the repository for your tech with a line number or number
 range.
 - o If there is more than one step in the chain of calls (hint: there will be), you must provide links for the entire chain of calls from your code, to the library code that actually accomplishes the task for you.
 - Example: If you use an object of type HttpRequest in your code which contains the headers of the request, you must show exactly how that object parsed the original headers from the TCP socket. This will often involve tracing through multiple libraries and you must show the entire trace through all these libraries with links to all the involved code.

*This section will likely grow beyond the page

 In class we discussed how to parse the http request into ints proper request type, and based on the requirement we would use for different task. In our group project we used the flask header parser to make it easy on us for parsing and getting the header.

class Flask(Scaffold):

• This object is created and it acts as a central registry that stores the url rules, templates, configuration. The "Scaffold" is the parameter that is the package, which would be resolved based on the python code for the package.

• This calls flask folder then the package folder inside that we specific function. Within the route function we specide the "rules" which is how we will implement the url.

```
@setupmethod
def route(self, rule: str, **options: t.Any) -> t.Callable[[T_route], T_route]:
```

 The route() function within the scaffold class in flask/src/flask/scaffold.py, line 423 takes in the added URL as an input. An extra method can be added to the function to be executed once the URL is received.

@app.route("/")

• The app.route

https://github.com/pallets/flask/blob/main/src/flask/wrappers.py

- Flask creates a request instance. Request class in Flask is a wrapper around request class in werkzeug (15-133)

https://github.com/pallets/werkzeug/blob/3115aa6a6276939f5fd6efa46282e0256ff21f1a/src/werkzeug/wrappers/request.py

- Defines request class in wekzeug

https://github.com/pallets/werkzeug/blob/3115aa6a6276939f5fd6efa46282e0256ff21f1a/src/werkzeug/datastructures.py#L1354

- Starting at 1354, data structure of headers environment is defined

Final Destination:

https://github.com/pallets/werkzeug/blob/3115aa6a6276939f5fd6efa46282e0256ff21f1a/src/werkzeug/http.py

Code parses headers based on format set by environment