Plan:

**Flutter application to facilitate HTML parsing:**

To generate an HTTP request session for the client, we will use the built-in dart IO namespace: https://api.dart.dev/stable/3.2.6/dart-io/HttpClient-class.html.

* Parse session key from login page.
* Allow login through the http request.
* Get Moodle session key from the current connection cookies.
* Access API that allows us to view the course name.
* Parse the course offerings via the same API.
* Access the notifications API.

**Caching Plan for App:**

1. **Schedule:**

* First two weeks, keep refreshing to see if any courses dropped or added. If for some reason, the user dropped or added after let the user refresh manually.
* Get notifications from Iconnect and tag holidays to put in schedule.
* Cache schedule after two-week period to make accessing it fast.

1. **Notifications:**

* Refresh Moodle notifications every hour and cache.
* Add a global tagging system for notifications.
* Get notifications from Iconnect and tag holidays to put in schedule.
* Add push notifications to app.
* Remind users when HW or quiz is approaching deadline. (before 1 week and if they forget reminding them again before 1 day)

1. **Course Offering:**

* Add manual refresh for course offering in case new semester starts.
* Parse html and optimize search for your department.
* Search filters for closed CRNs for example.

Design Flutter App

Write code for the flutter app.

Polishing Phase