Overview

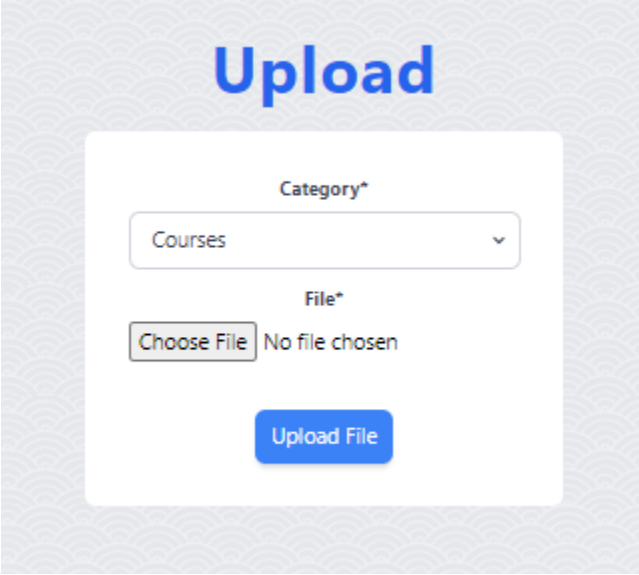
- The purpose of this tool is to assist Administrators in creating course schedules for future school semesters. The following documentation page will help Admins to navigate and maximize the tool's capabilities. Admins will be able to gather student, course, and teacher preference data. The collected data will be used to create a course schedule to mitigate preference and time constraints as well as conflicts. To get started, please review the following overview of the sections to determine where to start. Directions to navigate to required sections will start from the home page. The following sections will be displayed on the home screen for the Admin.
    - Data Sheets
        - Admin will be able to upload CSV files pertaining to 3 categories: Courses, Students, or Preferences. Uploading a preset CSV will prevent admin from having to manually input respective data one by one.
        - Admin will also be able to view previously created datasets within the tool
        - Refer to this section to get started on uploading CSV data
    - Data Base
        - Admin will be able to use data from uploaded CSVs or inputted data to create courses, course sections, teacher preferences, and input new students and teachers.
        - Admin will be able to create sets out of the section and preference data to create a schedule.
        - Refer to this section to get started on working with data for the schedule.
    - Schedules
        - Admin will be able to create a schedule view from uploaded CSVs or inputted data.
        - Admin will be able to check and edit schedules for constraint integrity.
        - Refer to this section to get started on creating the schedule.
    - Student Data Collection
        - Admin will be able to gather student data about the courses they are planning on taking for the respective semester.
        - Refer to this section to collect student data preferences to be considered in schedule creation.

Data Sheets

- Admin will be able to upload CSV files pertaining to 3 categories: Courses, Students, or Preferences. Uploading a preset CSV will prevent admin from having to manually input respective data one by one. If Admin does not have any CSV files to upload, please refer to the Database documentation [here] for next steps.

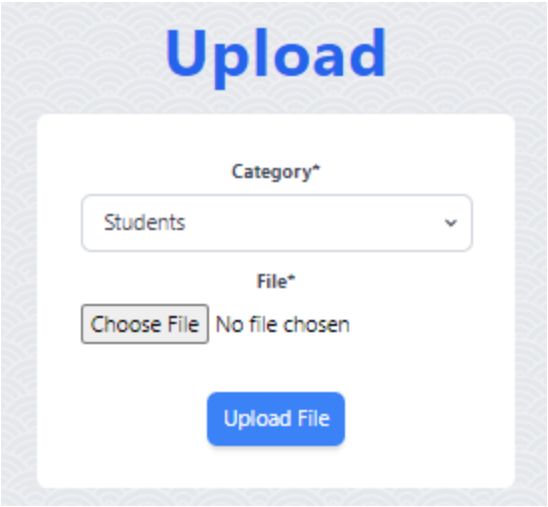
Step 1. Upload Courses CSV

- Admin will be able to upload a preset CSV of courses. This will prevent admin from having to manually input respective data one by one. Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its category



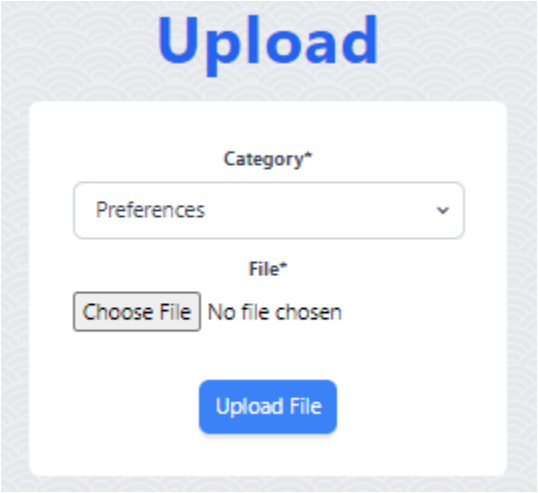
Step 2. Upload Students CSV

- Admin will be able to upload a preset CSV of students. This will prevent admin from having to manually input respective data one by one. Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its category

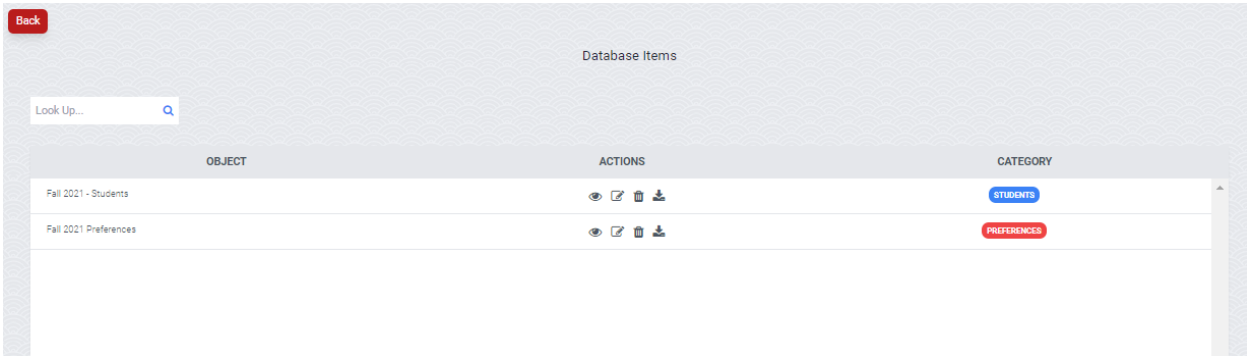


Step 3. Upload Preferences CSV

- Admin will be able to upload a preset CSV of preferences. This will prevent admin from having to manually input respective data one by one. Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its category



- Manage Data
    - Admin will be able to view uploaded or inputted data in the [Manage Data] section.
    - This section will also contain data created within the tool as well. The [Category] column will describe the nature of the data.
        - View data - click [eye]
        - Edit data - click [clipboard]
        - Delete data - click [trash can]
        - Download data as CSV - click [down arrow]
        - Search for a file, Admin may use the search bar in the top left hand corner or scroll through the table.
    - Note: Name course, teacher, student, and preference sets to be able to discern the sets. Most recently created datasets will appear at the bottom of the table.

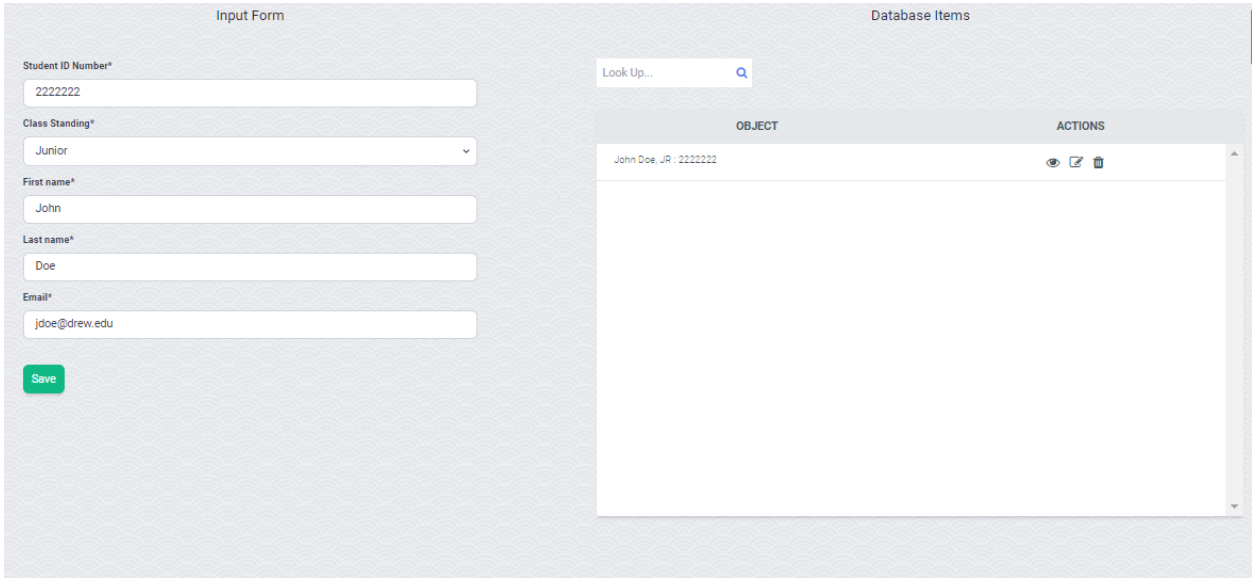


Database - Manually Create a Schedule

- Admin will be able to work with inputting data in these steps. There are 2 different tracts to take inputting data into the database. If Admin would prefer to manually input data one by one, follow these steps. If Admin would like to upload data through CSVs only and work with creating datasets, please refer to the Database documentation [here] for next steps.

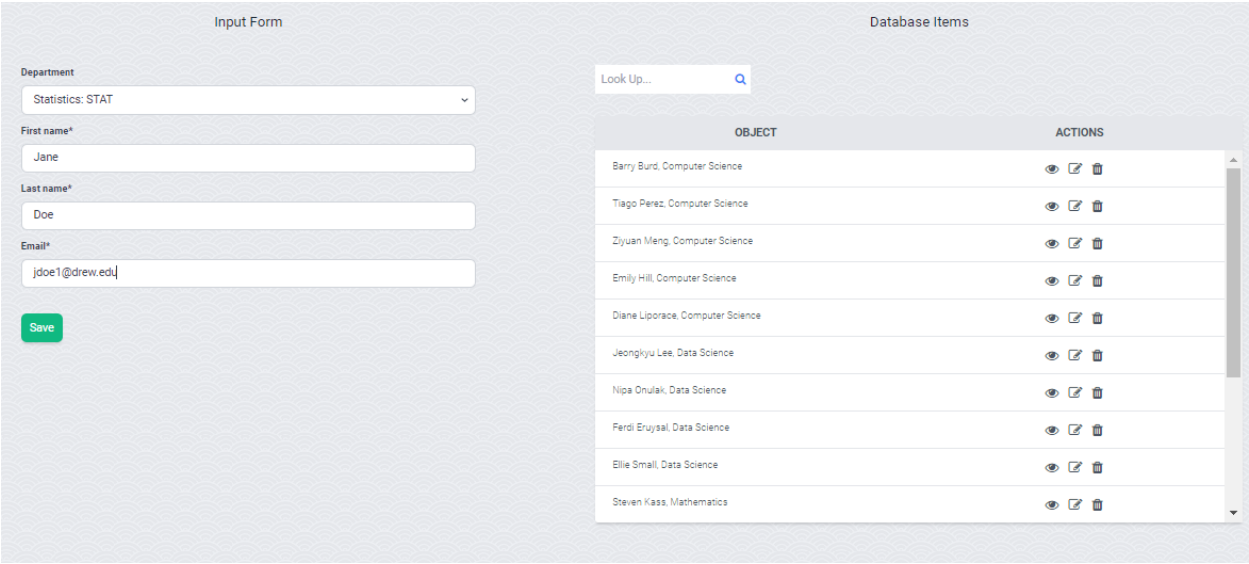
Step 1. Manually Add Students to Database

- Admin will be to manually add students to the database
- To add a student:
    - Click [Open Database Interface]
    - Hover over [Users] box
    - Click [Students].
- Input respective data in required fields
    - [Student ID Number] requires 7 digits
    - [Email] must refer to University delegated email
- Click [Save] to store data in the database - newly created student will appear in the table to the right
    - View student - click [eye]
    - Edit student - click [clipboard]
    - Delete student - click [trash can]
    - To search for a student, Admin may use the search bar above the table or scroll through the table



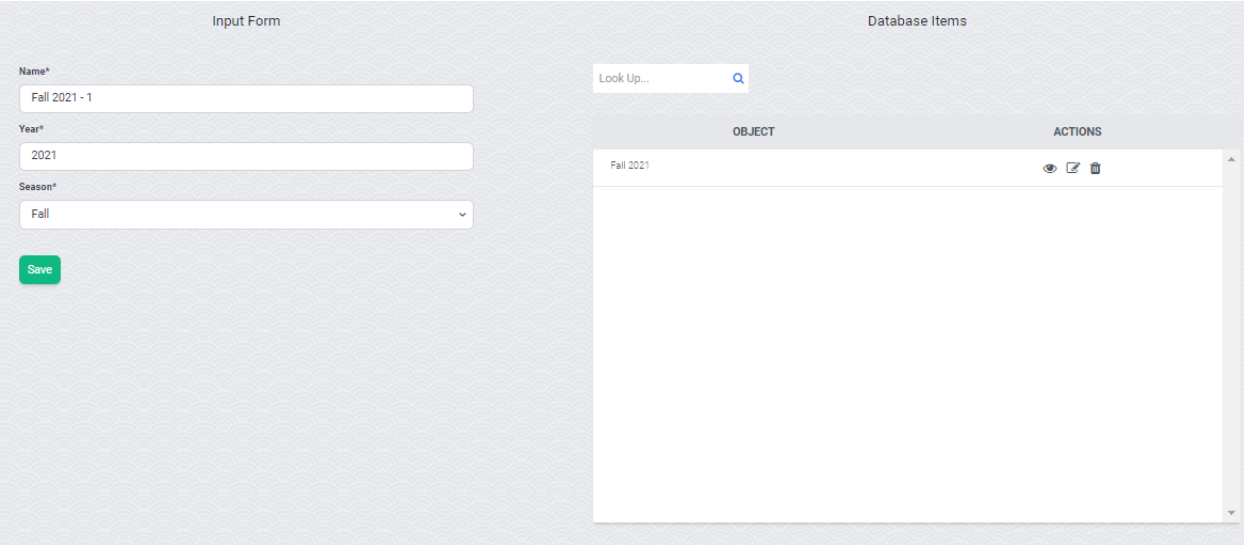
Step 2. Manually Add Teacher to Database

- Admin will be to manually add teachers to the database
- To add a teacher:
    - Click [Open Database Interface]
    - Hover over [users] box
    - Click [teachers].
- Input respective data in required fields.
    - [Department] may be left blank. Admin will be able to update this field at a later time
    - [Email] must refer to University delegated email.
- Click [Save] to store data in the database - newly created teacher will appear in the table to the right
    - View teacher - click [eye]
    - Edit teacher - click [clipboard]
    - Delete teacher - click [trash can]
    - To search for a teacher, Admin may use the search bar above the table or scroll through the table.



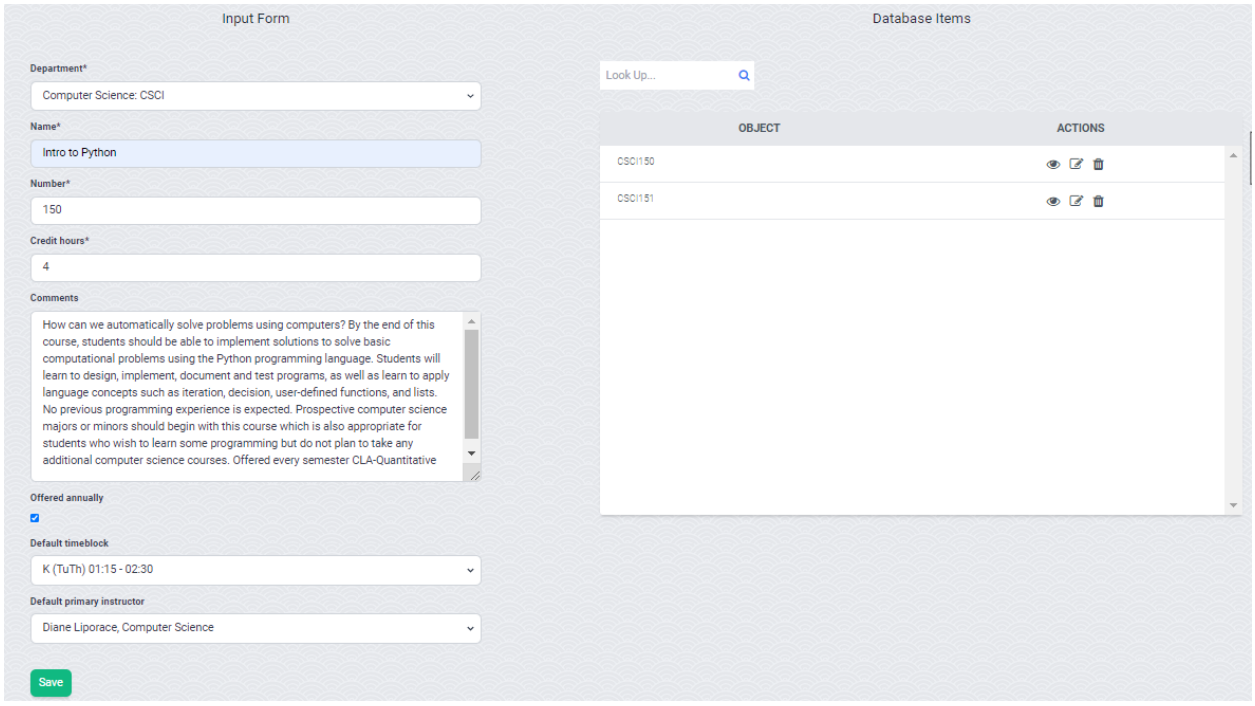
Step 3. Create a Schedule Name

- Admin will be able to create a schedule name that will be referenced in the final steps in the schedule making process.
- To create a schedule name:
    - Click [Open Database Interface]
    - Hover over [Scheduling] box
    - Click [Schedules].
- Create a unique schedule name for its respective semester
- Select [Year] and [Season] of the schedule
- Click [Save] to store the schedule name in the database - newly created schedule name will appear in the table to the right
    - View schedule name - click [eye]
    - Edit schedule name - click [clipboard]
    - Delete schedule name - click [trash can]
    - To search for a schedule name, Admin may use the search bar above the table or scroll through the table.



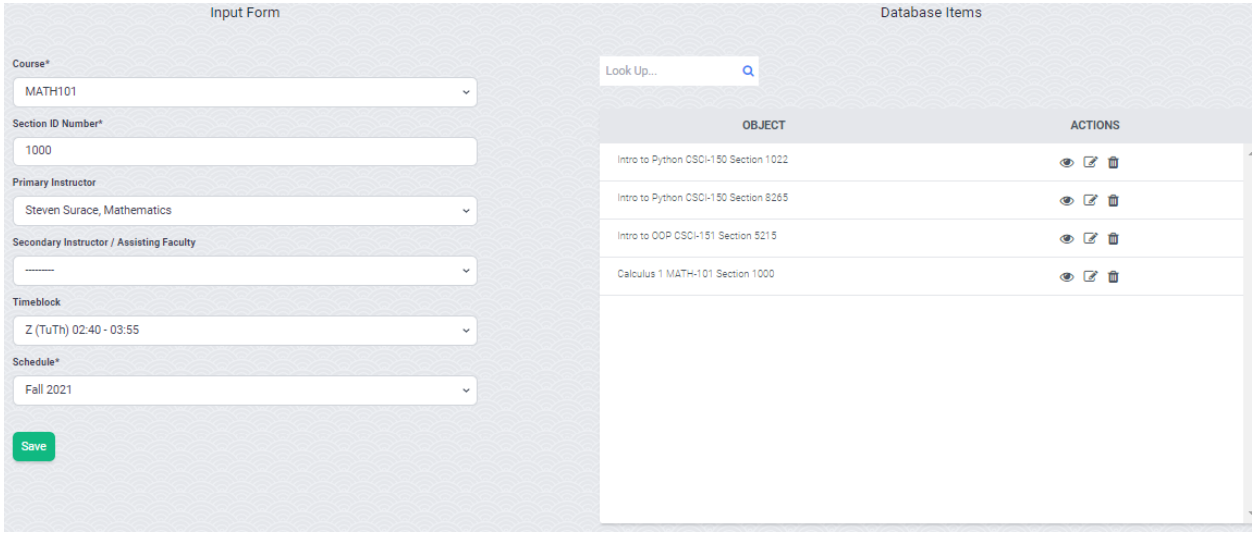
Step 4. Manually Create Courses

- Admin will be able to create courses
- To create a course:
    - Click [Open Database Interface]
    - Hover over [Scheduling] box
    - Click [Courses]
- Input information in required fields marked with (*)
- Choose timeblock of course under [Default Timeblock] field. Course times are shown in the dropdown menu.
- [Default Primary Instructor] field contains a list of teachers created in Step 2
- Click [Save] to store the course in the database - newly created courses will appear in the table to the right
    - View course - click [eye]
    - Edit course - click [clipboard]
    - Delete course - click [trash can]
    - To search for a course, Admin may use the search bar above the table or scroll through the table.



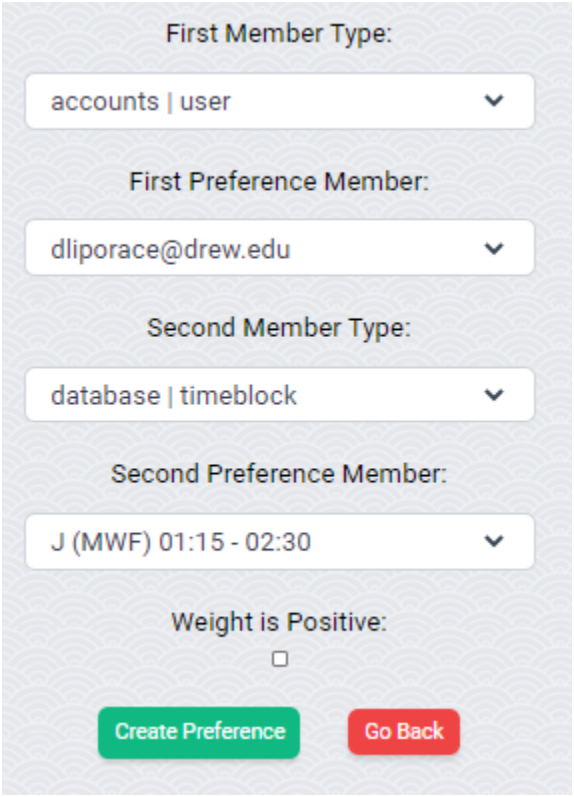
Step 5. Manually Create Sections

- Admin will be able to create sections for added courses in the database. Some classes have multiple sections per semester. This section will allow Admin to account for that and add respective teachers to courses.
- To create a section:
    - Click [Open Database Interface]
    - Hover over [Scheduling] box
    - Click [Sections]
- Note: Courses created in Step 4 are not considered for a schedule until a section has been created for them in this step.
- Input information in required fields marked with (*)
- [Course] field will contain a list of courses added to the database in Step 4.
- Choose timeblock of course under [Default Timeblock] field. Course times are shown in the dropdown menu.
- [Schedule] field will contain a list of schedule names created in Step 3. When a schedule name is selected, the course section will be added to the schedule's list of sections/courses
- Click [Save] to store the section in the database and assign it to the respective schedule - newly created sections will appear in the table to the right
    - View section - click [eye]
    - Edit section - click [clipboard]
    - Delete section - click [trash can]
    - To search for a section, Admin may use the search bar above the table or scroll through the table.

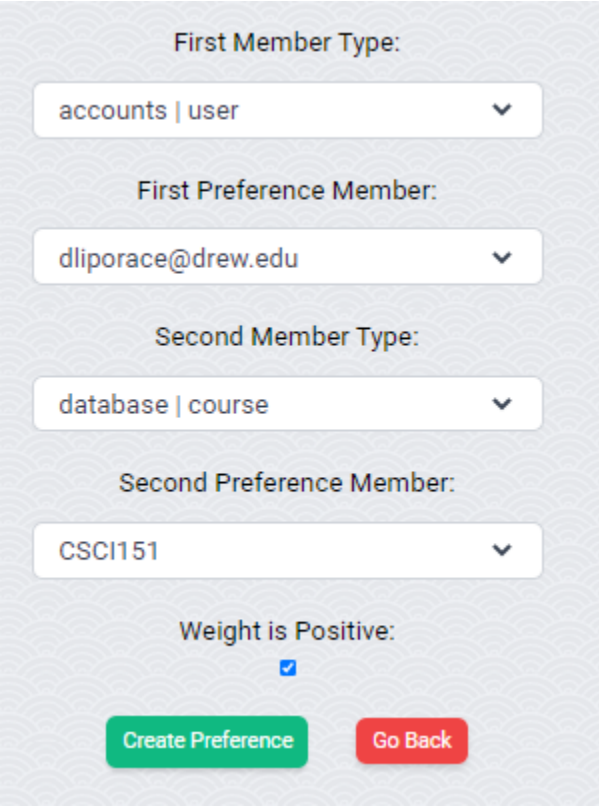


Step 6. Manually Create Preferences

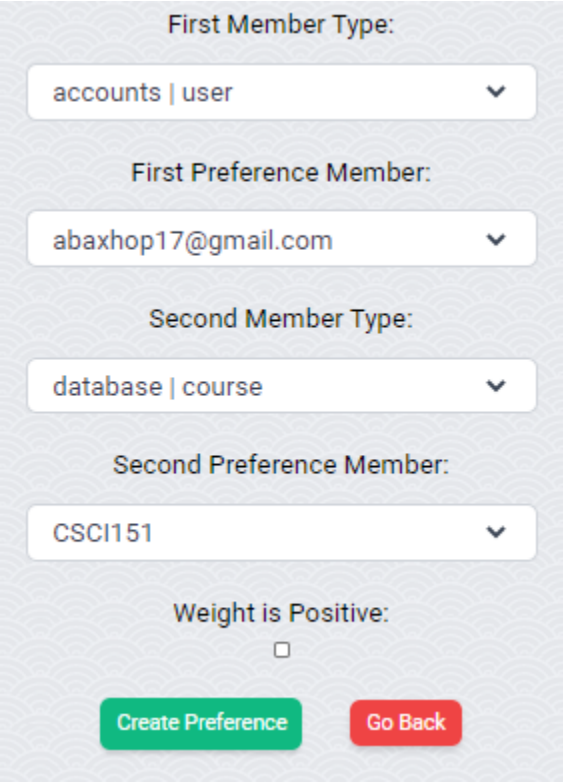
- Admin will be able to create user and course preferences to be tested against the created schedule to ensure the most optimal schedule and avoid conflicts.
- Teachers and students will submit their preferences to the Admin.
- The Admin will be able to log these preferences in this section
- To create a preference:
    - Click [Open Database Interface]
    - Hover over [Constraints] box
    - Click [Create Preference]
- Create a constraint for what time a teacher wants to teach their classes
    - Click [accounts | user] under [First Member Type]
    - Select a preference member under [First Preference Member]
        - List contains students and teachers. Select a teacher
    - Click [database | timeblock] under [Second Member Type]
    - Select timeblock teacher would prefer to teach under [Second Preference Member]
    - Click [Weight is Positive] checkbox if preference is desired
    - Click [Submit] to save preference in database



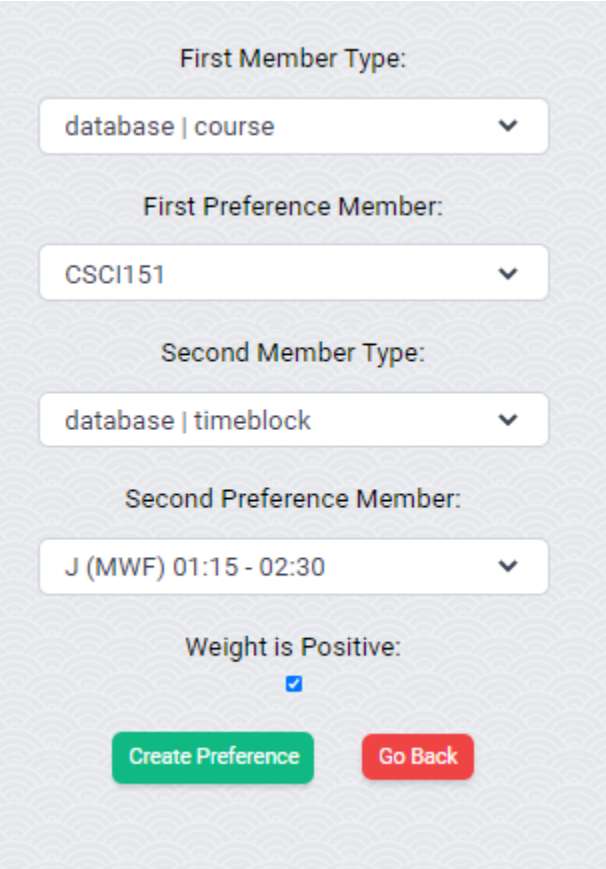
- Create a constraint for what courses a teacher wants to teach
    - Click [accounts | user] under [First Member Type]
    - Select a preference member under [First Preference Member]
        - List contains students and teachers. Select a teacher
    - Click [database | course] under [Second Member Type]
    - Select course teacher would prefer to teach under [Second Preference Member]
    - Click [Weight is Positive] checkbox if preference is desired
    - Click [Submit] to save preference in database



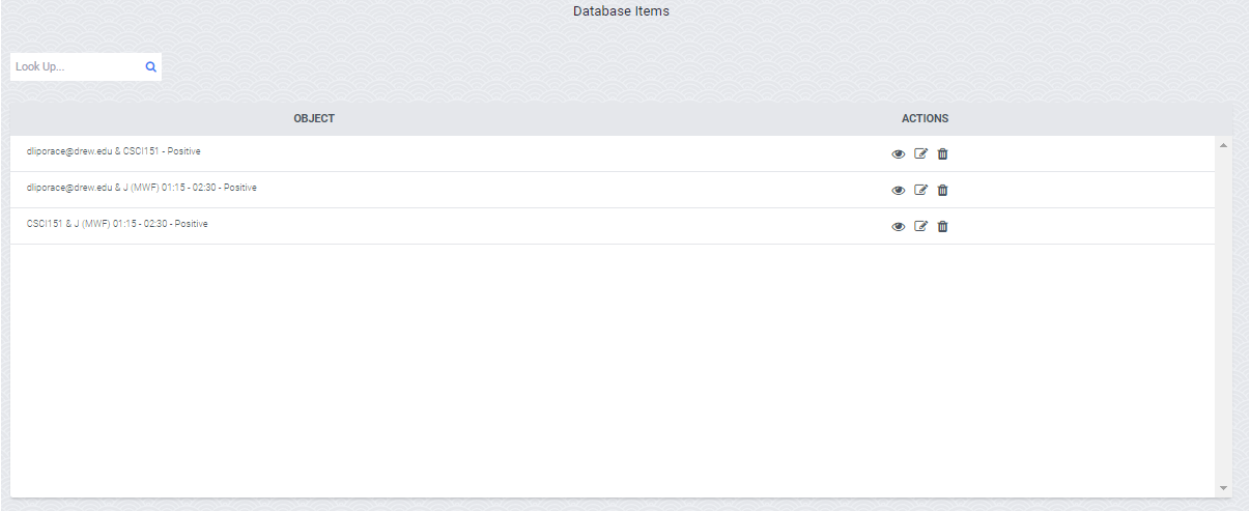
- Create a constraint for what class a student wants to take
    - Click [accounts | user] under [First Member Type]
    - Select a preference member under [First Preference Member]
        - List contains students and teachers. Select a student
    - Click [database | course] under [Second Member Type]
    - Select course student would prefer to take under [Second Preference Member]
    - Click [Weight is Positive] checkbox if preference is desired
    - Click [Submit] to save preference in database



- Create a constraint for what time a class would prefer to be held
    - Click [database | course] under [First Member Type]
    - Select course under [First Preference Member]
        - List will contain a list of added courses from Step 4
    - Click [database | timeblock] under [Second Member Type]
    - Select preferred course time under [Second Preference Member]
    - Click [Weight is Positive] checkbox if preference is desired
    - Click [Submit] to save preference in database

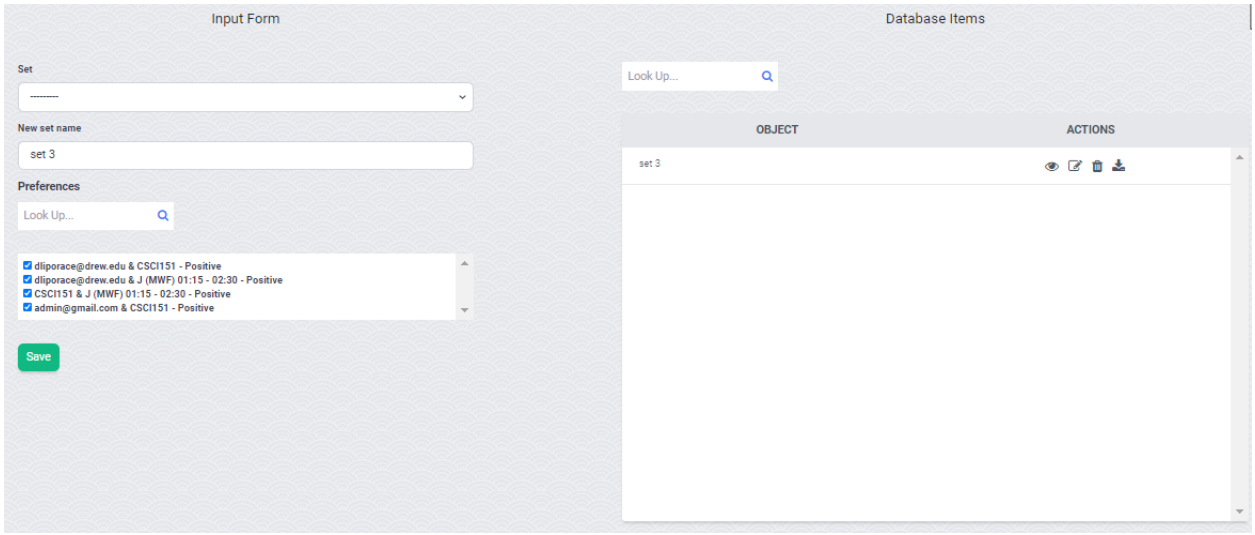


- To view saved preferences, from the Home view, click [Open Database Interface], hover over [Constraints] box, click [View Saved Preferences]
- Created preferences will appear in the table
    - View preference - click [eye]
    - Edit preference - click [clipboard]
    - Delete preference - click [trash can]
    - To search for a preference, Admin may use the search bar above the table or scroll through the table.



Step 7. Create Preference Sets

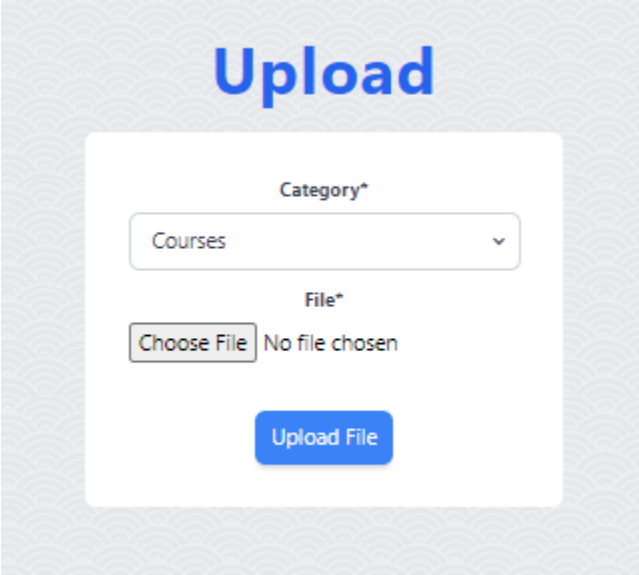
- Admin will be able to aggregate a list of preferences to be included in the creation of a schedule
- If the Admin does not include the list of preferences in the set, preferences will not be included in the checking the integrity of the schedule
- Create a unique set name under [New Set Name]
    - The unique preference set name will be referenced when creating a schedule in Step 8.
- Check off all relevant preferences to be added into the set
- Click [Save] to store the preference sets in the database - newly created sections will appear in the table to the right
    - View preference sets - click [eye]
    - Edit preference sets - click [clipboard]
    - Delete preference sets - click [trash can]
    - Download preference set - click [down arrow]
    - To search for a set, Admin may use the search bar above the table or scroll through the table



Database - Create Schedule using imported or existing Data

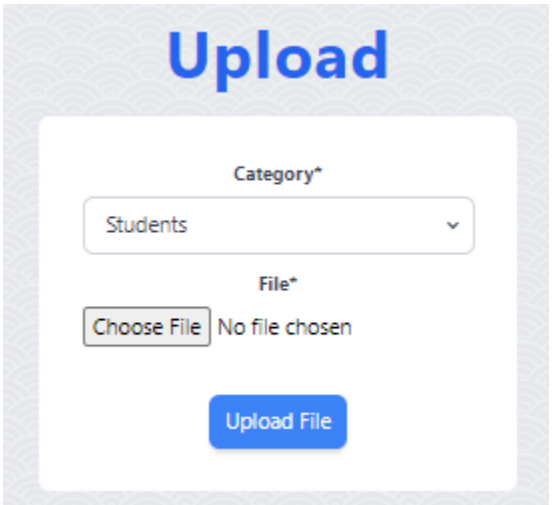
Step 1. Upload Courses CSV

- Admin will be able to upload a preset CSV of courses. This will prevent admin from having to manually input respective data one by one
    - Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file.
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its category



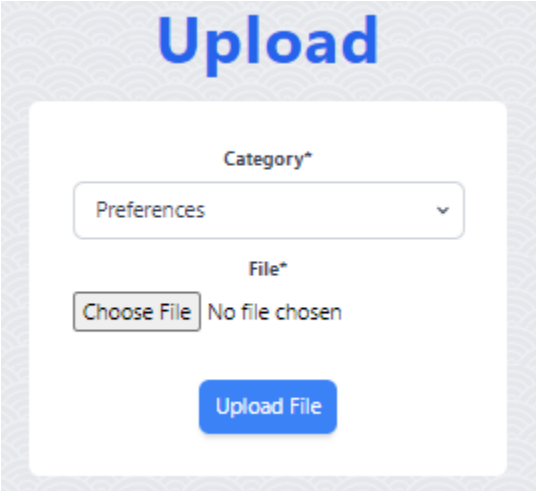
Step 2. Upload Students CSV

- Admin will be able to upload a preset CSV of students. This will prevent admin from having to manually input respective data one by one
    - Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its categor



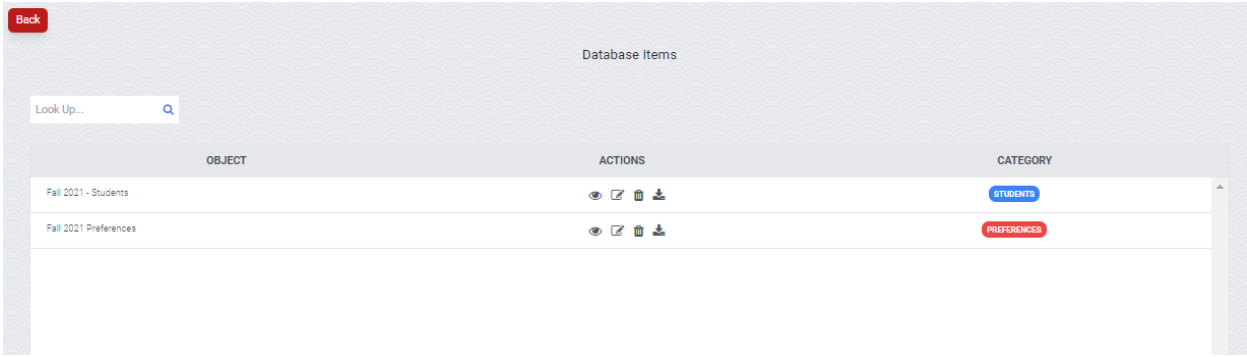
Step 3. Upload Preferences CSV

- Admin will be able to upload a preset CSV of preferences. This will prevent admin from having to manually input respective data one by one
    - Admin will see an error message if CSV is in the incorrect format. Follow the instructions given in the message and reupload file
- To upload a new file, click [Upload New File]
- Select corresponding category. Click on [Choose File] and select the corresponding file to its category



Step 4. Manage Data [crud/model-set/]

- Manage Data
    - Admin will be able to view uploaded or inputted data in the [Manage Data] section.
    - This section will also contain data created within the tool as well. The [Category] column will describe the nature of the data.
        - View data - click [eye]
        - Edit data - click [clipboard]
        - Delete data - click [trash can]
        - Download data as CSV - click [down arrow]
        - Search for a file, Admin may use the search bar in the top left hand corner or scroll through the table.
    - Note: Name course, teacher, student, and preference sets to be able to discern the sets. Most recently created datasets will appear at the bottom of the table.

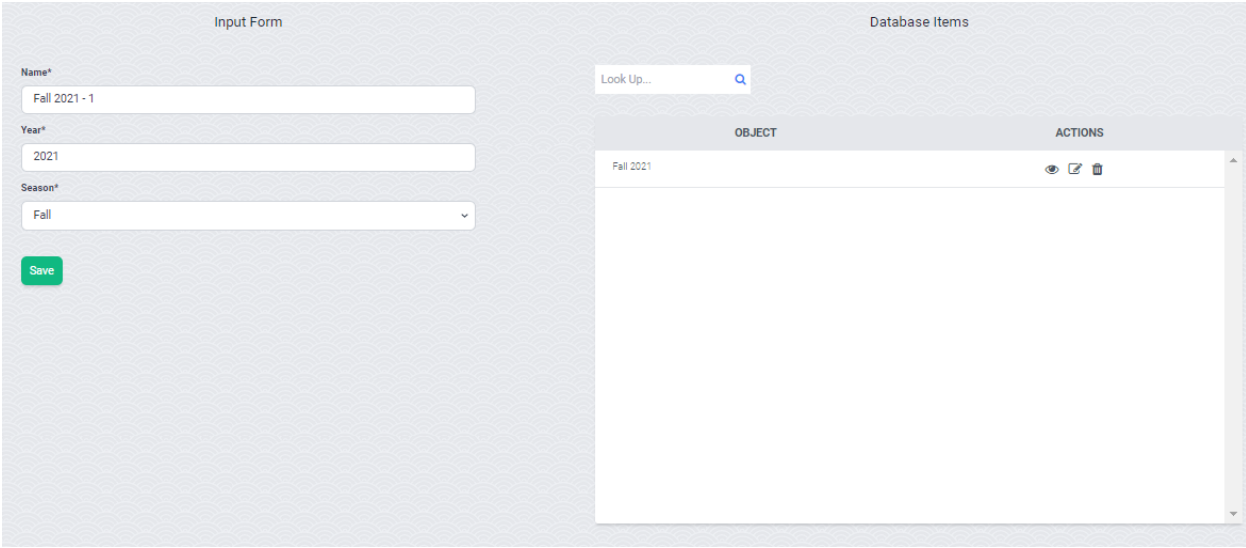


Step 5. Manually Input Course, Student, Preference Data

- Admin will be able to manually input data that is not recorded in respective CSV files or new updated data
- Steps to manually input courses [here] step 1
- Steps to manually input students [here] step 4
- Steps to manually input preferences [here] step 6

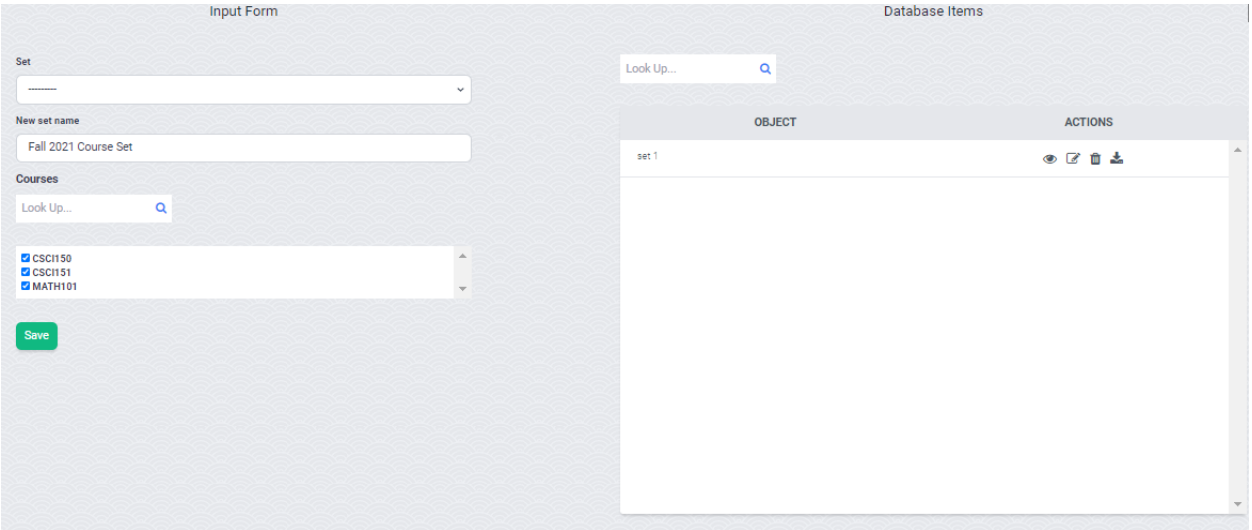
Step 6. Create a Schedule Name

- Admin will be able to create a schedule name that will be referenced in later steps in the schedule making process
- To create a schedule name:
    - Click [Open Database Interface]
    - Hover over [Scheduling] box
    - Click [Schedules]
- Create a unique schedule name for its respective semester
- Select [Year] and [Season] of the schedule
- Click [Save] to store the schedule name in the database - newly created schedule name will appear in the table to the right
    - View schedule name - click [eye]
    - Edit schedule name - click [clipboard]
    - Delete schedule name - click [trash can]
    - To search for a schedule name, Admin may use the search bar above the table or scroll through the table



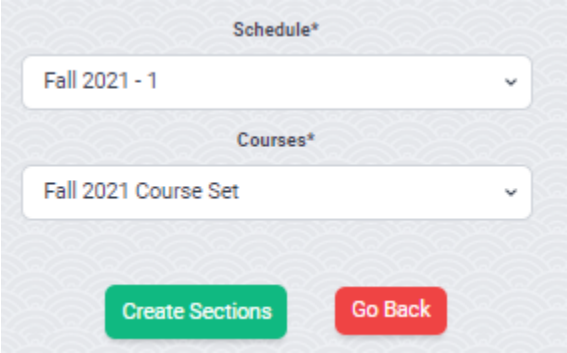
Step 7. Create Course Sets

- Admin will be able to add courses within the database to a set of courses. These sets will be used to create course sections in bulk to prevent having to manually enter each course section for the semester
- To create course sets:
    - Click [Open Database Interface]
    - Hover over [Sets] box
    - Select [Courses]
- Create a unique [New Set Name]
- Admin will be able to add courses to the set by checking off the corresponding courses
- If the list is too long or hard to search for respective course, admin will be able to search for the course using the search bar right above the list
- Click [Save] to store the course sets in the database - newly created course sets will appear in the table to the right
    - View course set - click [eye]
    - Edit course set - click [clipboard]
    - Delete course set - click [trash can]
    - Download course set - click [downward arrow]
    - To search for a course set, Admin may use the search bar above the table or scroll through the table



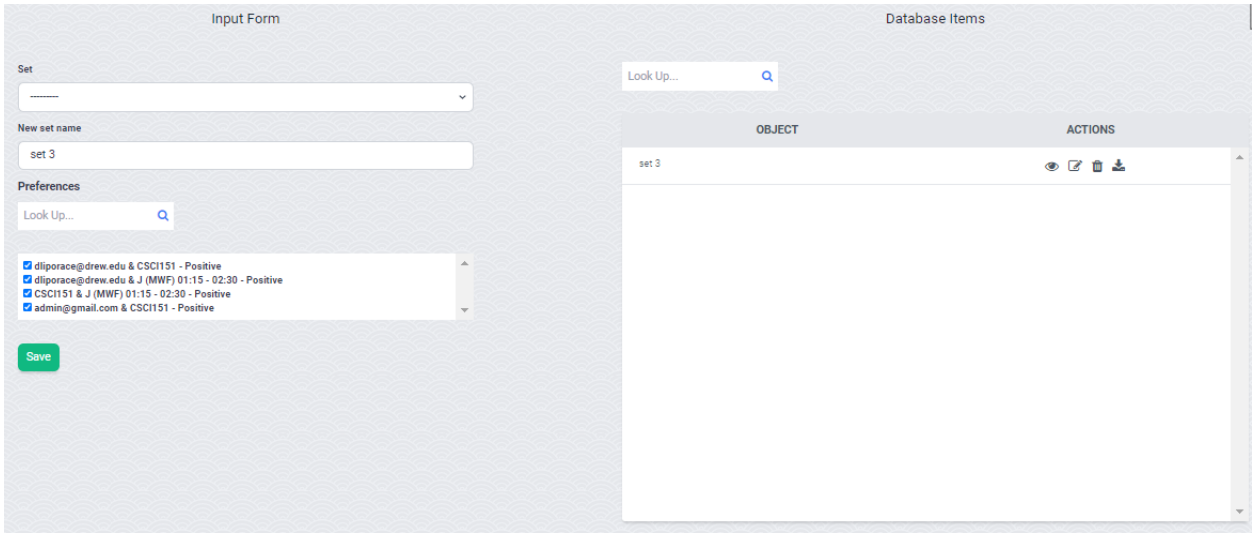
Step 8. Create Sections

- Admin will be able to create sections for added courses in the database in bulk. Some classes have multiple sections per semester. This section will allow Admin to account for that and add respective teachers to courses. Sections created in this form can be used when creating the schedule
- Steps to manually create sections [here] step 5
- Note - Admin will be able to manually create sections as well as create sections in bulk
- Otherwise - Create Sections in Bulk
    - Click [Open Database Interface]
    - Hover over [Scheduling] box
    - Select [Create Sections in Bulk]
- Choose respective schedule name created in Step 6
- Choose respective course set created in Step 7
- Save newly created sections in bulk by clicking the [Create Sections] Button



Step 9. Create Preference Sets

- Admin will be able to aggregate a list of preferences to be included in the creation of a schedule. If the Admin does not include the list of preferences in the set, preferences will not be included in the checking the integrity of the schedule
- For preference sets:
    - Click [Open Database Interface]
    - Hover over [Sets] box
    - Select [Preferences]
- Create a unique set name under [New Set Name]. The unique preference set name will be referenced when creating a schedule in Step 10
- Check off all relevant preferences to be added into the set
- Click [Save] to store the preference sets in the database - newly created sections will appear in the table to the right
    - View preference sets - click [eye]
    - Edit preference sets - click [clipboard]
    - Delete preference sets - click [trash can]
    - Download preference set - click [down arrow]
    - To search for a set, Admin may use the search bar above the table or scroll through the table

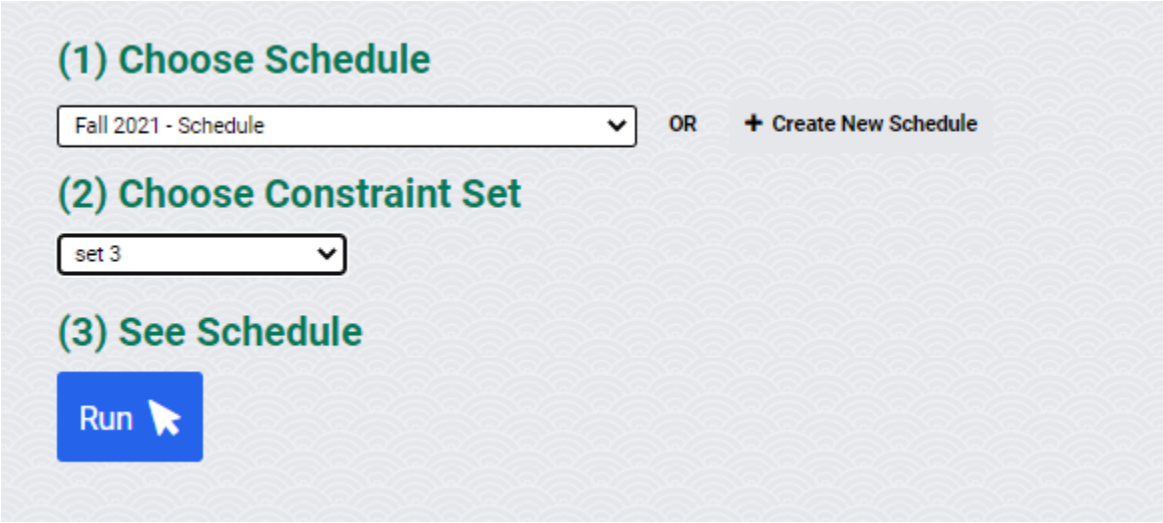


Scheduling

- Admin will be able to create a schedule view from uploaded CSVs or inputted data. Admin will be able to check and edit schedules for constraint integrity

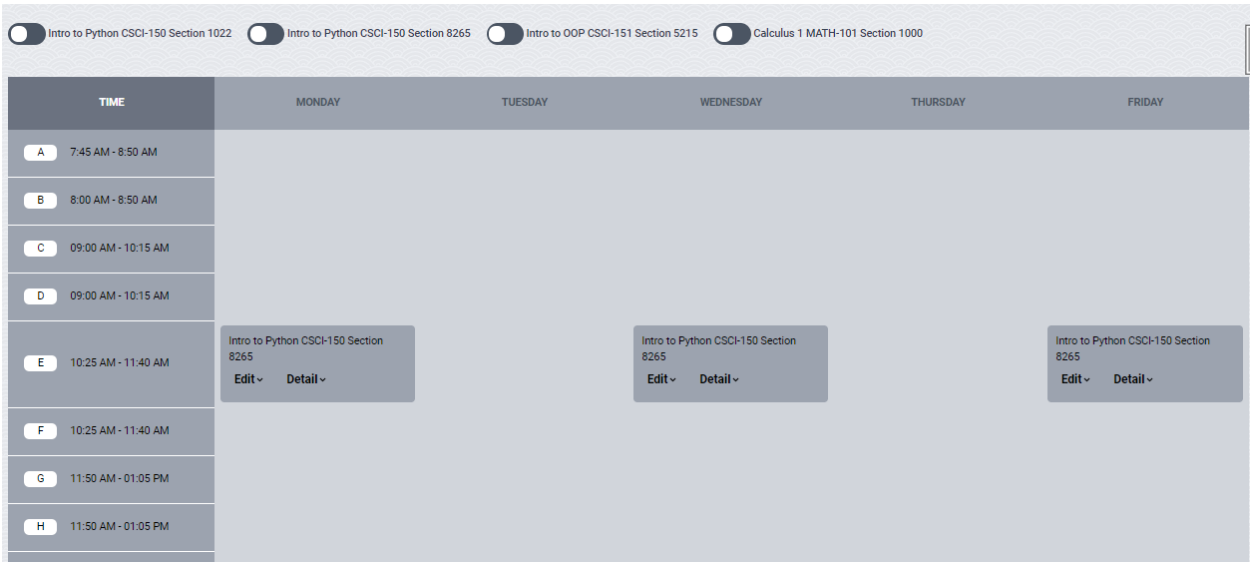
Step 1. Create Schedule

- Admin will be able to create schedules using created sections, preferences, and sets.
- To navigate to the schedule maker:
    - Click [Begin Scheduling Process]
    - Choose schedule from dropdown. These schedule names were created in Step 3 for manual input and Step 6 in using imported data
    - Choose the constraint set in dropdown
    - Click [Run]

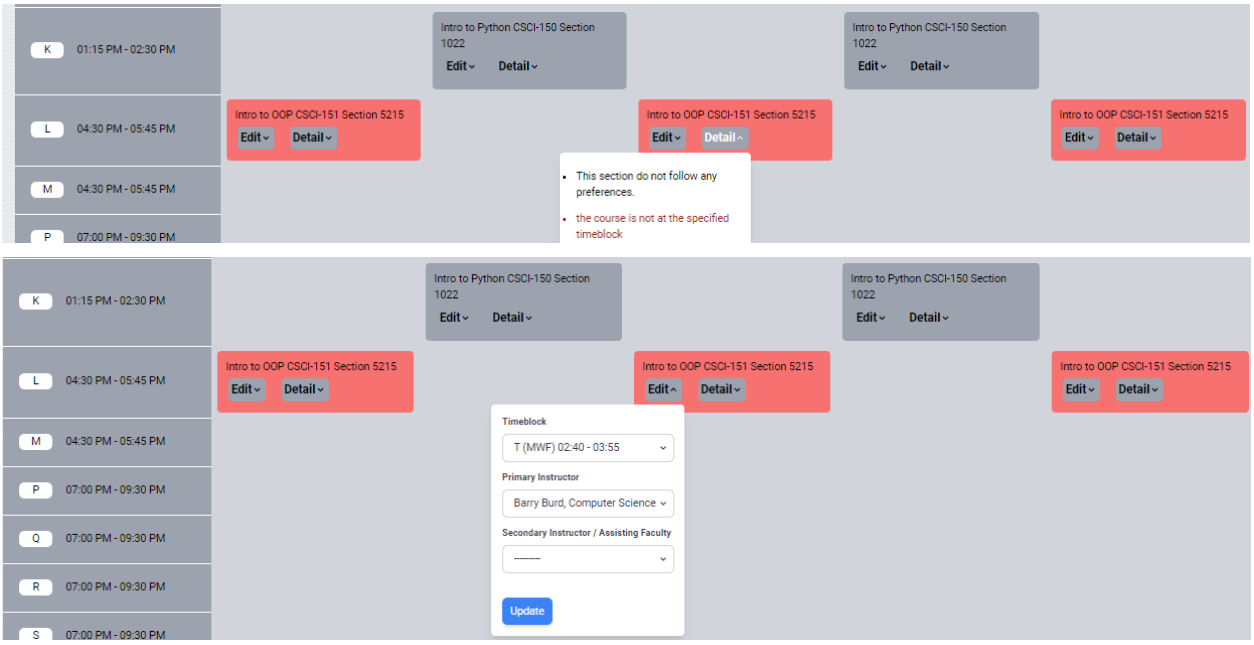


Step 2. View and Edit Schedule

- Admin will be able to view and edit schedule to account for constraint integrity. Admin will be able toggle classes on and off

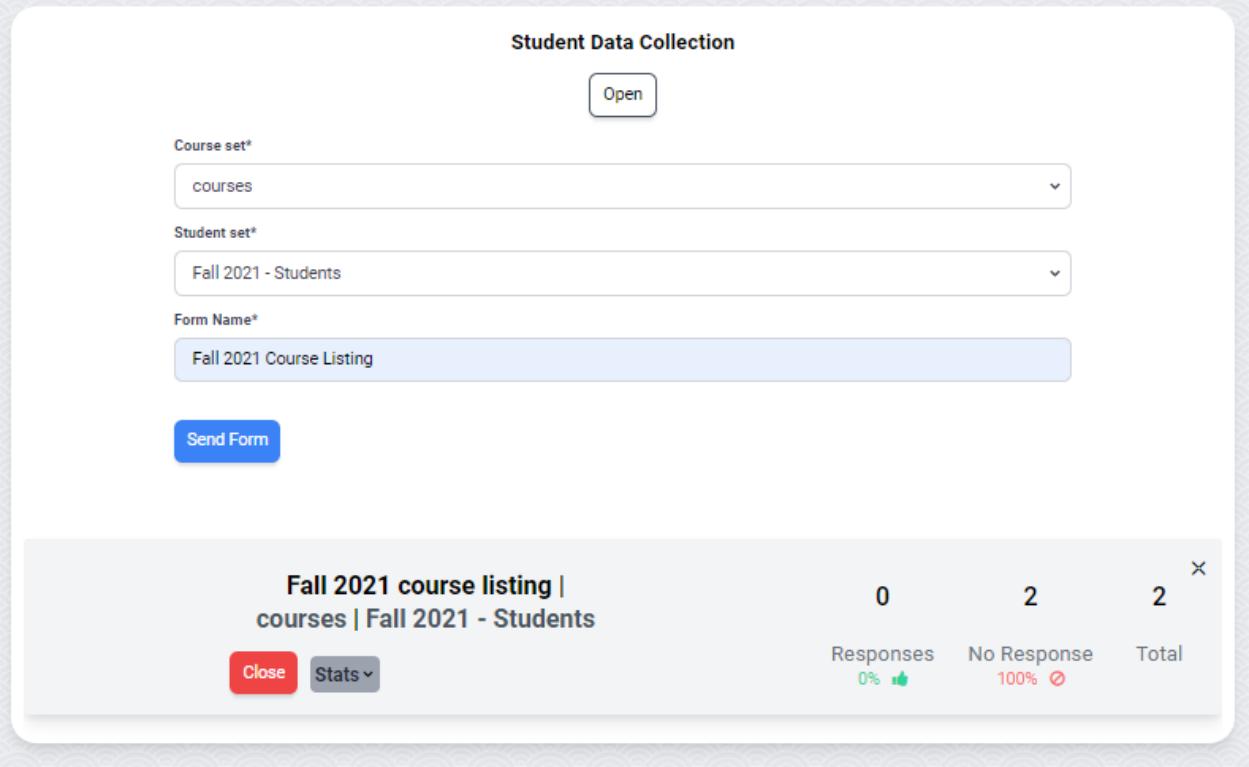


- If a class time is scheduled in which there exists a violation of a preference or constraint, the cell will be marked in red. Admin has the ability to edit the timing of the course and change the class settings as needed



- To save view as CSV, click the button at the bottom of the screen

Student Data Collection

- Admin will be able to gather student data about the courses they are planning on taking for the respective semester

- Refer to this section to collect student data preferences to be considered in schedule creation
- Data will be collected in the database once the students respond to the emailed form
- To create a course set, click [Open Database Interface], hover over [Sets] box, select[courses]. This will allow Admin to aggregate select courses that will be offered for the following semester
    - To add courses to the database, please refer to the documentation for creating a course [here]
- To create a student set, click [Open Database Interface], hover over [Sets] box, select [students]. This will allow Admin to aggregate select students that will be taking classes the following semester
    - To add students to the database, please refer to the documentation for creating a student [here]
- To send out the offered courses to selected students, click [Send Form]. An email with the form will be sent out to the students
- Admin will be able to view response rate of course preferences at the bottom of the field