**Team 22 - BoilerTime**

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**Sprint Overview**

Login System, Basic Calendar and Schedule with only required classes and no preference, Collecting BoilerGrades and Rate My Professor Data, Rating System

**Scrum Master:** Henry Mayer

**Meeting Plan:** Monday and Thursday @ 6pm, LSWN

**Risks and Challenges:**

* Many of the tools are unfamiliar to the team, meaning there will be a significant learning-curve before the actual products can be created.
* We will also most likely run into merge conflicts which take time to solve when we initially start the project since not everything is separated into individual parts yet.
* Our schedule algorithm is high risk because it is not a deterministic algorithm and is NP-Hard. It is the most theoretically and technically difficult out of all our features.
* All tasks rely on the successful organization and execution of the database and basic back-end set up in Node.js

**Current Sprint Detail**

**User Story 1 (Due Feb 17)**

As a student, I would like to register for a BoilerTime account using my @purdue.edu email.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create a welcome page that prompts the user for their name, Purdue email address, and a password (two times to confirm). | **5 hr** | **Nicholas** |
| The password input from the user is hashed on the client-side, then the data is passed to to the back-end | **1 hr each** | **Henry, Nicholas** |
| Parse the incoming form contents from the front-end, the password (hashed on the client-side), check for duplicate accounts, and enter the record into the database. | **5 hr** | **Henry** |
| Testing | **2 hr each** | **Henry, Nicholas** |

**Acceptance Criteria:**

* Given that a user wishes to create an account, they are navigated to a webpage that presents them with instructions to create an account
* Given that the user is present on the webpage that allows them to create an account, they are presented with a functional form that allows them to
* Given that the user enters their information into the sign-up box and submits it, the password is hashed and is sent to the backend
* Given that the user account information is received by the back end via a POST request, it is parsed, verified, and entered into the database

**User Story 2 (Due Feb 21)**

As a user, I would like to ensure my email address is verified before using the website.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create a webpage that informs the user that their email has been confirmed. | **2 hr** | **Nicholas** |
| Send verification email to the @purdue.edu address provided. | **2 hr** | **Henry** |
| Verify the confirmation and update the database with the result | **2 hr** | **Henry** |
| Testing | **2 hr each** | **Henry, Nicholas** |

**Acceptance Criteria:**

* Given the has created an account, they receive an automated email welcoming them to BoilerTime and containing a link to verify their email address
* Given the user clicks on the email, they will be navigated to a page that POSts the authentication token in the URL to the server for review
* Given the server receives the request, it validates the email as pending verification and updates the status to verified
* Given the status is updated to verified, it responds updates the front end which displays a “success” message to the user
* Given the email address requested cannot be verified, it updates the front-end with a message informing the user their account could not be verified and the reason for the failure

**User Story 3 (Due Feb 21)**

As a student, I would like to be able to reset my password if I forget my login details.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create page that takes in email to set reset to | **2 hr** | **Nicholas** |
| Create reset password page | **2 hr** | **Nicholas** |
| Send reset password email with a link to the reset password page | **2 hr** | **Josh** |
| Create algorithm to rehash password and update database | **3 hr** | **Josh** |
| Debug and test algorithm | **2 hr** | **Josh** |

**Acceptance Criteria:**

* Given the user is on the login page When they click on the reset password button Then a page with an input email will appear
* Given the user inputs and email that has an account When they submit their email Then an email with a link will be sent
* Given the user inputs an email that does not have an account When they submit their email Then the page will ask the user to try again
* Given the user has received an email to reset their password When they submit their new password on the site Then their password will be updated in the database
* Given the user has reset their password When they try to login Then they will be required to enter their new password

**User Story 4 (Due Feb 22)**

As a student, I would like to be able to create a profile that contains my name, year at Purdue, and other information about me

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Page to collect user information: classification, pronouns to be added, display the rest of the information | **3 hr** | **Justin** |
| Area for user to access user profile | **1 hr** | **Justin** |
| Write and store user information to JSON | **3 hr** | **Mahad** |
| Testing and Debugging | **2 hr Justin, 1 hr Mahad** | **Justin, Mahad** |

**Acceptance Criteria:**

* Given that the user is on the main schedule screen and the user is logged in or registered, when they click on the user profile button, they will be taken to the page where they can update their profile
* Given that the user has been able to click on the user profile button, they will be taken to a page where their info is displayed, and they can update that information as necessary
* Given that the user is able to access their user profile, they will have the option to update their profile with their desired information and that will be sent to the server to be updated properly
* Given that the user has requested to view their profile, the server sends information to the front end to display the page with the correct information
* Given that the user has requested to edit their profile, the server will receive the information and update it in the database correctly
* Given that the user has updated their profile, the new information should be displayed once the page is refreshed

**User Story 5 (Due Feb 16)**

As a student, I would like to be able to log in as a user with the credentials I registered with.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create page to log in | **2 hr** | **Nicholas** |
| Write client method to send login information | **2 hr** | **Zak** |
| Build server-side API route protection and session generation with JWT | **5 hr** | **Mahad** |
| Build client-side JWT handler to protect unauthorized access to pages | **4 hr** | **Zak** |
| Debugging and Testing | **2 hr each** | **Mahad, Nicholas, Zak** |

**Acceptance Criteria:**

* Given that the user wants to login they should be able to visit a functional webpage with the instructions to log-in.
* Given that the user is on the login page, an interactive form is present that allows the user to input their email address and password.
* Given that the user has entered an email and password that does not match with any of the email/passwords in the database, a message will state that the email/password combination does not exist.
* Given that the user has entered an incorrect email/password combination, it will save the email on the input of the website, but not the password.

**User Story 6 (Due Feb 22)**

As a student, I would like to input my class choices and categorize them into required/major and elective/flex/interest classes.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Page with a form to collect input | **3 hr** | **Justin** |
| Send input from form to the server | **2 hr** | **Justin** |
| UI for loading page | **2 hr** | **Justin** |
| Write composable Vue lifecycle management methods | **3 hr** | **Zak** |
| Create algorithm to save classes to database | **2 hr** | **Joshua** |
| Run executable to generate schedule | **1 hr** | **Joshua** |
| Debugging and Testing | **2 hr** | **Joshua** |
| Debug and Test form to ensure proper categories | **2 hr** | **Justin** |

**Acceptance Criteria:**

* Given the user is logged in or registered when they click the create schedule button then a page with a form input classes appears.
* Given the user is on the create schedule page when they submit the form then the input will be saved to the database.
* Given the user is on the create schedule page when they submit the form then an executable will be run to generate a schedule.
* Given the user has submitted their classes when the user is waiting for the schedule to generate then a loading page will appear.

**User Story 7 (Due Feb 22)**

As a student, I would like to be presented with a live search by keywords feature for the classes.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Display a text box where the user can input their preferences. | **2 hrs** | **Justin** |
| Get list of classes from Purdue.io and add to the database | **3 hrs each** | **Joshua, Henry** |
| Send classes to front end | **2 hrs each** | **Joshua, Justin** |
| Parse response into front end classes with autocomplete tool | **5 hr** | **Justin** |
| Testing | **2 hrs each** | **Henry, Joshua, Justin** |

**Acceptance Criteria:**

* Given the user has started to type their keywords, a list of classes will appear that fit the criteria
* Given the user has some keywords and begins to add more, the list will dynamically update on the display
* Given a set of data from Purdue.io, the server will parse the input and store it into the database in the appropriate format
* Given valid data existing in the database for a class, it is sent to the front end where it is displayed. If no such valid data exists, then a “no matches found” error message is sent to the front-end

**User Story 8 (Due Feb 28)**

As a student, I would like my schedule to contain all of my required class choices.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Write client-based methods to parse and manipulate JSON response into global data | **3 hr** | **Zak** |
| Fetch all classes for a user in the current term and send it to the front-end as a JSON file. | **3 hr** | **Henry** |
| Testing | **2 hr each** | **Henry, Zak** |

**Acceptance Criteria:**

* Given the user requesting to see a list of their required classes, the front-end sends a request to the server
* Given that the server receives a request to see a student’s schedule, it compiles the data into a JSON file that it sends to the front-end
* Given the receipt of the JSON data by the front-end, the list is painted on the user’s display, and given no data being found a prompt is displayed to create a new schedule

**User Story 9 (Due March 2)**

As a student, I would like to see a list view of my schedule.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Build list component to display data | **3 hr** | **Zak** |
| Testing | **1 hr** | **Zak** |

**Acceptance Criteria:**

* Given the user has gone through the onboarding process (and has a saved entry of their preferences), a list of optimized classes should be viewable.
* Given a valid return response from the back end, the optimized class location should be viewable.
* Given an existing entry of the class in the database, the teaching staff should be viewable.
* Given an existing entry of the optimized class’ location in the database, a map.

**User Story 10 (Due March 2)**

As a student, I would like to see the past average GPAs of classes based on professors.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Build out popup view for displaying all class details | **3 hr** | **Zak** |
| Write Vue methods to pass parsed data into front end component | **1 hr** | **Zak** |
| Parse the database to find the professor’s history, compile it, and send it to the front-end as in JSON format | **5 hr** | **Mahad** |
| Testing | **2 hr each** | **Mahad, Zak** |

**Acceptance Criteria:**

* Given the user has created their schedule, when they click on a class in the calendar view, they will receive a professor average GPA as part of the class details
* Given the user has created their schedule, when they view their schedule list, they will receive a professor average GPA as part of the class details
* Given the user has created their schedule, when they click on the professor GPA, a popup will appear with the average GPA in that specific class as well as overall.

**User Story 11 (Due March 2)**

As a student, I would like to see the peer ratings of each of my professors.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Display rating on class details pop up | **2 hr** | **Justin** |
| Collect Ratings from RMP using API | **4 hr** | **Josh** |
| Debug and test algorithm | **2 hr** | **Josh** |
| Debug rating for correctness | **1 hr** | **Justin** |

**Acceptance Criteria:**

* Given the user has created their schedule, when they click on a class in the calendar view, they will receive a professor rating as part of the class details
* Given the user has created their schedule, when they view their schedule list, they will receive a professor rating as part of the class details
* Given the user has created their schedule, when the click on the professor rating, a popup will appear with more details on the rating

**User Story 12 (Due Feb 27)**

As a student, I would like to bookmark certain classes.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Bookmark tab to appear on hover for class of interest for user | **1 hr** | **Justin** |
| Page listing bookmarked classes | **3 hr** | **Justin** |
| Create algorithm to add bookmarked class to database | **2 hr** | **Josh** |
| Create API to return list of bookmarked classes for user | **2 hr** | **Josh** |
| Debug and test algorithm | **2 hr** | **Josh** |
| Debug and test class display proper | **3 hr** | **Justin** |

**Acceptance Criteria:**

* Given the user has input a schedule and the class is not bookmarked, when they click the bookmark button, the class will be saved as a bookmarked class
* Given the user has input a schedule and the class is bookmarked, when they click the bookmark button, the class will be removed from the list of bookmarks
* Given the user is signed in and they are in the main schedule screen, when they click a button to see bookmarked classes, they will receive a list of the classes that they have bookmarked
* Given the user is in the live search function for classes, any classes that stand out to the user can be bookmarked

**User Story 13 (Due March 3)**

As a student, I would like to see a calendar view of my schedule.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Creating a visual representation of a calendar based off of the algorithm’s output | **7 hr** | **Nicholas** |
| Creates a schedule that has no time-conflicts | **10 hr** | **Henry** |
| Testing | **3 hr each** | **Henry, Nicholas** |

**Acceptance Criteria:**

* Given the user wanting to see a schedule that includes all of their required classes without conflict, a request is sent to the server
* Given that the request is received by the API server, it is forwarded to the Java algorithm that downloads all of the time slots and implements a mechanism to create a schedule with no time conflicts, but no other forms of optimization
* Given a time-conflict free schedule is available, it is sent to the front-end where it is displayed
* Given a time schedule with conflicts, an error message that indicates the time-conflicts is sent to the front-end where it is displayed
* Note: for purposes of this user story, even if a class has no open seats, it is still considered valid for the purpose of time-based optimization

**User Story 14 (Due Feb 22)**

As a user, I would like to be able to rate a class, based on the strictness of prerequisite requirements, the pace of materials covered, the depth of the materials covered,

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create text and numerical component to receive text from user | **3 hr** | **Zak** |
| Write Vue method to create a JSON string from text and numerical data | **2 hr** | **Zak** |
| Pass JSON to the matching class in the database | **3 hr** | **Mahad** |
| Testing and Debugging | **2 hr each** | **Mahad, Zak** |

**Acceptance Criteria:**

* Given that the user clicks rate class, the user should be able to provide their input.
* Given that the user submits their rating it should save to the database and show on the website.
* Given that the user submits a report, they should fill a CAPTCHA to prevent abuse of the reporting system.
* Given that the user already submitted a rating on the class, they should not be able to submit another one.

**User Story 15 (Due Feb 23)**

As a student, I would like to be able to write ratings of teaching assistants based on helpfulness of answering questions, responsiveness, and fairness of grading.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create text and numerical component to receive text from user | **2 hr** | **Zak** |
| Write Vue method to create a JSON string from text and numerical data | **2 hr** | **Zak** |
| Pass JSON to the matching TA ID in the database | **2 hr** | **Mahad** |
| Testing and Debugging | **2 hr each** | **Mahad, Zak** |

**Acceptance Criteria:**

* Given that the user clicks rate teaching assistant, the user should be able to provide their input.
* Given that the user submits their rating it should save to the database and show on the website.
* Given that the user submits a report, they should fill a CAPTCHA to prevent abuse of the reporting system.
* Given that the user already submitted a rating on the teaching assistant, they should not be able to submit another one.

**User Story 16 (Due Feb 23)**

As a student, I would like to be able to write classroom ratings based on the convenience of access, quality of seating, and availability of technology in the classroom

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create text and numerical component to receive text from user | **2 hr** | **Zak** |
| Write Vue method to create a JSON string from text and numerical data | **2 hr** | **Zak** |
| Pass JSON to the matching classroom ID in the database | **2 hr** | **Mahad** |
| Testing and Debugging | **2 hr each** | **Mahad, Zak** |

**Acceptance Criteria:**

* Given that the user clicks rate in the classroom, the user should be able to provide their input.
* Given that the user submits their rating it should save to the database and show on the website.
* Given that the user submits a report, they should fill a CAPTCHA to prevent abuse of the reporting system.
* Given that the user already submitted a rating on the classroom, they should not be able to submit another one.

**User Story 17 (Due March 1)**

As a student, I would like to be able to edit and delete my past ratings.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Selection options to edit or delete previous ratings | **1 hr** | **Justin** |
| Create a page to gather information from update requests of users and send to database | **3 hr** | **Justin** |
| Create algorithm to delete rating from database | **2 hr** | **Josh** |
| Create algorithm to update rating in database | **2 hr** | **Josh** |
| Debug and test algorithm | **2 hr** | **Josh** |
| Debug and test front-end | **2 hr** | **Justin** |

**Acceptance Criteria:**

* Given the user has accessed the class details page, the user will be able to click to edit their past rating where an update information page will appear
* Given the user has accessed the class details page, the user will be able to click to delete their past rating, and upon clicking, a confirmation will appear and then appropriate request will be sent to backend
* Given the user has clicked the edit rating button, a page will appear where the user can edit their rating, and the updated information will be sent to backend
* Given the user has deleted a rating, it will no longer show in their “my ratings”
* Given the user has edit a rating, it will be updated in their “my ratings”

**User Story 18 (Due March 1)**

As a student, I would like to be able to flag and report malicious ratings.

| **Description** | **Estimated Time** | **Owner** |
| --- | --- | --- |
| Create front end component and pop up | **2 hr** | **Zak** |
| Send an email to stakeholders that a report was flagged | **2 hr** | **Mahad** |
| If flag count is greater than 3, mark the rating as harmful | **2 hr** | **Mahad** |
| Testing and Debugging | **2 hr each** | **Mahad, Zak** |

**Acceptance Criteria:**

* Given that the user flags a report, the user should respond to a quick survey of why and should be able to see the flag button marked or illuminated
* Given that the rating has 3 or more flags, it should be marked as harmful and ask users whether they would like to see it or not
* Given that the user flags a report, an email should be sent out to stakeholders to review the report further
* Given that the user flags a report, they should fill a CAPTCHA to prevent abuse of the flagging system

**Backlog**

1. ~~As a student, I would like to register for a BoilerTime account using my @purdue.edu email.~~
2. ~~As a student, I would like to be able to log in as a user with the credentials I registered with.~~
3. As a guest, I would like to be able to use limited features without providing my @purdue.edu email.
4. ~~As a user, I would like to ensure my email address is verified before using the website.~~
5. ~~As a student, I would like to be able to reset my password if I forget my login details.~~
6. ~~As a student, I would like to be able to create a profile that contains my name, profile picture, year at Purdue, and other information about me~~
7. ~~As a student, I would like to input my class choices and categorize them into required/major and elective/flex/interest classes.~~
8. As a student, I would like my class choices input to be saved if I want to modify and resubmit them.
9. As a student, I would like to be presented with a filtering by tags or categories feature for the classes.
10. ~~As a student, I would like to be presented with a live search by keywords feature for the classes.~~
11. As a student, I would like to be notified if my required/major classes outright do not work together.
12. ~~As a student, I would like my schedule to contain all of my required class choices.~~
13. As a student, I would like classes that are not already full.
14. ~~As a student, I would like to bookmark certain classes.~~
15. As a student, I would like to be notified through email if a slot opens in one of the classes I hoped to take.
16. ~~As a student, I would like to see a calendar view of my schedule.~~
17. ~~As a student, I would like to see a list view of my schedule.~~
18. As a student, I would like to be able to find a schedule that considers all of my preferences in one.
19. As a student, I would like to be able to prioritize my classes based on the time of day.
20. ~~As a student, I would like to see the past average GPAs of classes based professors.~~
21. ~~As a student, I would like to see the peer ratings of each of my professors.~~
22. As a student, I would like to see the route between each of my classes.
23. As a student, I would like to create a schedule that prioritizes minimum walking distance.
24. As a student, I would like to create a schedule that prioritizes overall professor rating.
25. As a student, I would like to be able to specify my residence hall or bus route.
26. As a student, I would like to plan around other meetings, or TA sessions outside of my Purdue class schedule.
27. As a student, I would like to be able to see rankings of different schedule options.

##### As a student, I would like to export my schedule to external calendar apps.

##### As a student, I would like to be able to export my schedule as a photo or PDF.

1. As a student, I would like to be able to interact with my schedule on the calendar.
2. As a student, I would like to see the class distances visually through a map with locations of classes marked.
3. As a student, I would like to be able to view classroom ratings and teaching assistants.
4. ~~As a student, I would like to be able to write classroom ratings based on the convenience of access, quality of seating, and availability of technology in the classroom~~
5. ~~As a user, I would like to be able to rate a class, based on the strictness of prerequisite requirements, the pace of materials covered, the depth of the materials covered,~~
6. ~~As a student, I would like to be able to edit and delete my past ratings.~~
7. ~~As a student, I would like to be able to flag and report malicious ratings.~~
8. ~~As a student, I would like to be able to write ratings of teaching assistants based on helpfulness of answering questions, responsiveness, and fairness of grading.~~
9. As a friend, I would like to join a group so that I can have classes with friends.
10. As a user, I would like an easy way to create a group for my friends through unique links.
11. As a friend, I would like my group’s schedule to match with mine for certain classes.
12. As a friend, I would like to be able to see all of my friend’s schedules on one screen.
13. As a user, I would like to be able to share a created BoilerTime group .
14. As a guest, I would like to have my schedule saved on my browser, even if I am not logged in.
15. As a user, I would like to be able to find other BoilerTime users in my classes if they consent (i.e. the “discover” functionality on social media platforms).
16. As a user, I would like to see an introduction page to the website so that I can learn about the special functionalities of the website.
17. As a user, I would like to be able to access my collected data so that I can track my digital footprint.
18. As a user, I would like to be able to change my password from my account settings.
19. As a user, I would like to be able to customize the accent and themes of the website.
20. As a user, I would like to be able to have two-factor authentication on my account.
21. As a user, I would like to be able to create unique links to share my BoilerTime schedule.
22. As a professor, I would like to be able to see feedback from my students.
23. As a user, I would like to be able to provide feedback on my generated schedule and errors that I see in it.
24. As a student at another university, I would like to be able to port the BoilerTime service to my university and host it on my own infrastructure.
25. As a user, I would like to see recommended classes that people have taken together.
26. As a user, I would like to see a list of trending and popular classes.
27. As a user, I would like to import and view my previous schedules in my profile.
28. As a user, I would like a limited functionality version of the platform for use on a mobile or smaller-screen device.
29. As a user, I would like to be able to set preconditions of times that I need to reserve, like religious prayers (ex. Friday Prayers for Muslims has two times on Friday).