SPRINT-4 Schedule :

Sprint 4 Planning : 4th Nov to 8th Nov
Sprint 4 : 11th Nov to 15th Nov

SPRINT-4 Goal :

The goal of Sprint 4 is to complete the backend development with thorough testing and finalize the UI for all pages, ensuring a seamless and robust application. Comprehensive testing will be conducted to validate all workflows, ensuring reliability and consistency across both the backend and frontend. On the UI side, this sprint will focus on finalizing the CSS for the entire site, moving beyond basic styling such as headers to enhance the overall design and achieve visual consistency across all pages. For the backend, the team aims to address challenges, such as introducing randomness in team creation whenever the "Create Team" function is triggered. After aligning on an approach to tackle this requirement, the team will implement it as part of this sprint. Additionally, all remaining minor tasks will be addressed to achieve the end-to-end development of the project.

Team and Member Contributions :
"Team formation" team consists of 8 members. The tabular representation shows the roles, efforts and fair share effort (%).

Team Member	Role	Tasks Completed	Story points (Effort)	Total no. of hours worked	Fair share percentage(%)
Uday M	Product Owner	1	1	15	12.5%
Raja Karthik V	Scrum Master	5	14	20	12.5%
Ramya G	Developer	3	12	12	12.5%
Hitha MV	Developer	3	10	16	12.5%
Sai Jaideep Reddy Mure	Developer	4	9	16	12.5%

Phani Jyothi K	Developer	5	16	20	12.5%
Rithika S	Developer	5	13	20	12.5%
Sahithi Duppati	Developer	5	16	20	12.5%

Name	Total points solved in all sprints
Raja Karthik V	31
Sai Jaideep Reddy Mure	30
Uday M	33
Ramya G	30
Hitha MV	30
Phani Jyothi K	30
Rithika S	30
Sahithi Duppati	30
Total points solved by team	**244**

SPRINT-4 Achievements :

Backend Development:

• Successfully implemented the logic to introduce randomness in team creation, ensuring variability each time the "create team" function is triggered.

• Completed the end-to-end backend development, addressing all remaining minor tasks and scenarios for project completion.

• Robust testing of backend workflows ensured the reliability and robustness of all functionalities.

UI Development:

• Finalized CSS styling across all pages, achieving visual consistency and enhancing the overall UI/UX design.

• Enhanced specific UI components such as:

  • **"Upload Students"**: Added clear guidelines, a sample sheet, and improved navigation for better user experience.

  • **"Preview Form"**: Improved formatting and corrected button routes.

• Completed all UI additions and improvements, ensuring alignment with functional requirements and project standards.

Specific Features Delivered:

• **Populating Teams**:

  • Completed team population logic based on programming proficiency, gender, and ethnicity.

  • Made gender and ethnicity information mandatory to ensure accurate team assignments.

• **Form Access and Submission Enhancements**:

  • Restricted ineligible students from accessing forms with proper error notifications.

  • Allowed draft saving without completion, updated response submission redirection, and added a navigation button.

  • Ensured correct navigation and naming for the "Duplicate Form" action.

  • Checked access for students before displaying forms, preventing unauthorized viewing.

• **Error Handling and Navigation**:

  • Fixed unique index errors for UIN during bulk inserts.

  • Updated redirection logic and step definitions for error handling and view page access.

- **Response Page Updates**:

    - Limited "View Responses" to display only submitted student responses.

    - Enhanced the form response page for students to improve usability and clarity.

Team Contributions:

- All team members successfully completed their assigned user stories within the sprint timeline.

- Collaboratively addressed challenges and aligned on solutions, particularly for the randomness in team creation logic.

Outcome:
The sprint delivered a fully functional and thoroughly tested backend, finalized UI design, and comprehensive implementation of all features and stories. These accomplishments mark the successful completion of Sprint4, leaving the project ready for client review and final deployment.

SPRINT-4 Backlog Items and Status:

Sprint-4 Backlog Items	Status
UI Improvements	+
Backend logic for filling teams based on gender	+
Backend logic for filling teams based on ethnicity	+
Backend logic for filling teams based on skill level	+
Web pages flow adjustment	+
Restricting students from accessing forms they are not allowed to	+

Design Diagrams for SPRINT-4 :

Student Details Form Submission

Edit Submission

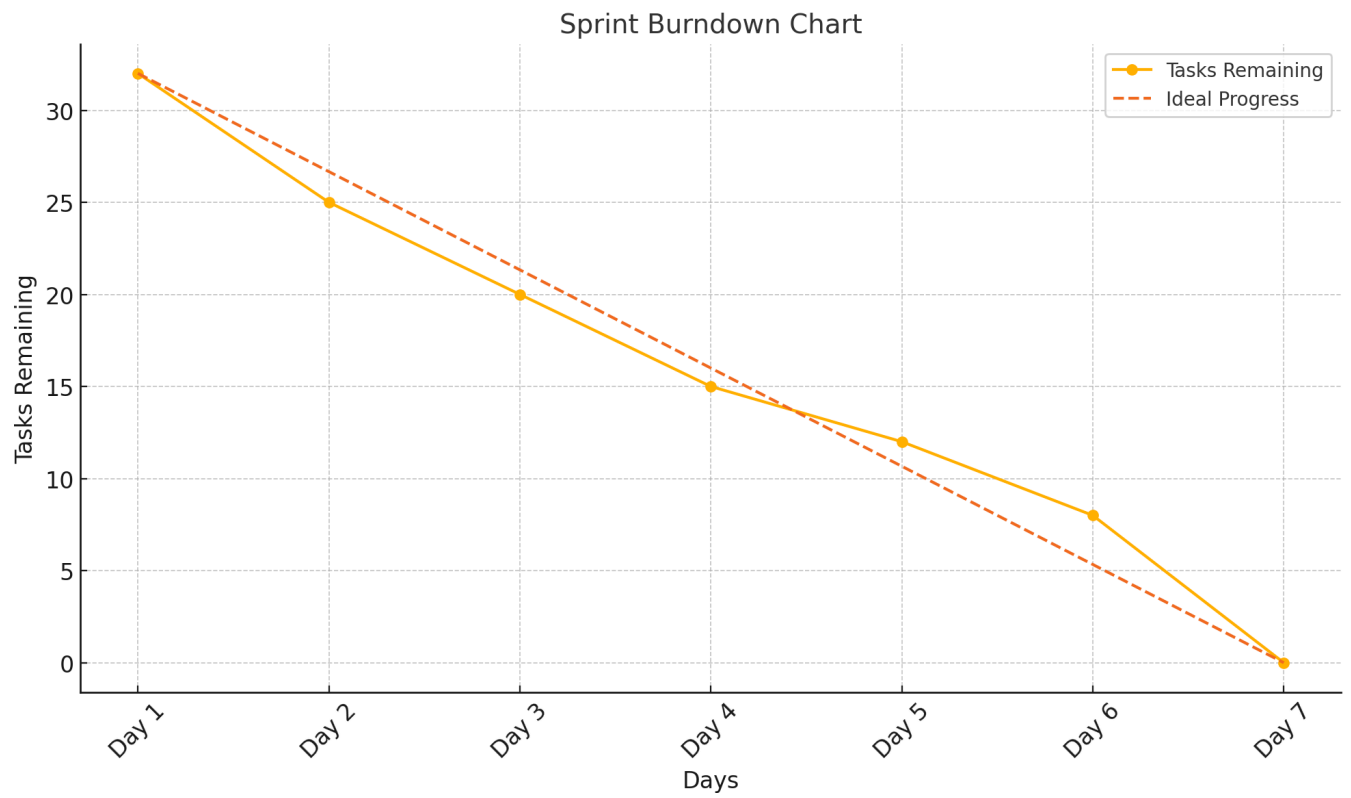First name :

Middle name:

Last name:

UIN :

Email:

list of pref.

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Submit

Burndown Chart :

Sprint Burndown Chart

Evaluations of Code & Test Quality :

All Files (98.76%)   Generated 8 minutes ago

All Files (98.76% covered at 168.85 hits/line)

28 files in total.
886 relevant lines, 875 lines covered and 11 lines missed. (98.76%)

Search: [   ]

File	% covered	Lines	Relevant Lines	Lines covered	Lines missed	Avg. Hits / Line
app/services/forms/duplication_service.rb	92.31 %	48	26	24	2	3.15
app/controllers/concerns/form_uploading.rb	93.85 %	113	65	61	4	6.42
app/controllers/form_responses_controller.rb	96.61 %	140	59	57	2	3.66
app/controllers/forms_controller.rb	97.06 %	163	68	66	2	5.40
app/controllers/concerns/team_gender_balance.rb	98.88 %	197	89	88	1	62.04
app/controllers/application_controller.rb	100.00 %	37	13	13	0	80.38
app/controllers/attributes_controller.rb	100.00 %	127	58	58	0	8.48
app/controllers/concerns/attribute_helpers.rb	100.00 %	24	13	13	0	6.00
app/controllers/concerns/export_teams.rb	100.00 %	45	25	25	0	2.28
app/controllers/concerns/form_publishing.rb	100.00 %	46	22	22	0	4.82
app/controllers/concerns/generate_teams.rb	100.00 %	58	33	33	0	6.58
app/controllers/concerns/team_calculation.rb	100.00 %	198	95	95	0	300.24
app/controllers/concerns/team_distribution_helpers.rb	100.00 %	106	54	54	0	1813.93
app/controllers/concerns/team_ethnicity_balance.rb	100.00 %	208	80	80	0	126.03
app/controllers/concerns/team_skill_balance.rb	100.00 %	122	53	53	0	54.17
app/controllers/sessions_controller.rb	100.00 %	27	16	16	0	5.38
app/controllers/students_controller.rb	100.00 %	47	26	26	0	3.65
app/controllers/users_controller.rb	100.00 %	12	3	3	0	10.67
app/controllers/welcome_controller.rb	100.00 %	16	9	9	0	7.44

Code Cimate:https://codeclimate.com/github/phanijyothi11-tamu/team-formation

Rubocop:


```
Inspecting 135 files
.........................................................................
....
135 files inspected, no offenses detected
rajakarthikvobugari@Rajas-MacBook-Pro team-formation %
```

bdd & tdd

cucumber scenarios and rspec examples cover all features developed in this iteration.

Rspec:

```
Finished in 3.53 seconds (files took 1.69 seconds to load)
247 examples, 0 failures

Coverage report generated for Cucumber, RSpec to /Users/rajakarthikvobugari/Documents/softwareeng/tf/team-formation/coverage.
Line Coverage: 98.76% (875 / 886)
○ rajakarthikvobugari@Rajas-MacBook-Pro team-formation %
```

cucumber:

```
    Background:                                    # features/weight_adjustment.feature:5
      Given I am logged in as a professor    # features/step_definitions/createform_steps.rb:2
      And I have created a form              # features/step_definitions/form_attribute_steps.rb:2
      And I visit the edit page for the form # features/step_definitions/form_attribute_steps.rb:7

    Scenario: Adding gender attribute without weightage                      # features/weight_adjustment.feature:10
      When I enter "Gender" as the attribute name                           # features/step_definitions/form_attribute_steps.rb:17
      And I select "Text" as the attribute type                             # features/step_definitions/form_attribute_steps.rb:22
      And I submit the new attribute                                        # features/step_definitions/form_attribute_steps.rb:41
      Then I should see "Gender" listed as an attribute on the form         # features/step_definitions/form_attribute_steps.rb:46
      And I should not see a weightage input field for the "Gender" attribute # features/step_definitions/form_attribute_steps.rb:115
      And the "Gender" attribute should be saved without a weightage value    # features/step_definitions/form_attribute_steps.rb:119

    Scenario: Adding ethnicity attribute without weightage                   # features/weight_adjustment.feature:18
      When I enter "Ethnicity" as the attribute name                        # features/step_definitions/form_attribute_steps.rb:17
      And I select "Text" as the attribute type                             # features/step_definitions/form_attribute_steps.rb:22
      And I submit the new attribute                                        # features/step_definitions/form_attribute_steps.rb:41
      Then I should see "Ethnicity" listed as an attribute on the form      # features/step_definitions/form_attribute_steps.rb:46
      And I should not see a weightage input field for the "Ethnicity" attribute # features/step_definitions/form_attribute_steps.rb:115

Undefined Scenarios:
cucumber features/form_responses_database.feature:6 # Scenario: Store student responses in the database table

55 scenarios (1 undefined, 54 passed)
380 steps (2 skipped, 2 undefined, 376 passed)
0m1.181s

You can implement step definitions for undefined steps with these snippets:

Given('I have uploaded a list of eligible students for the form') do
  pending # Write code here that turns the phrase above into concrete actions
end

When('an eligible student submits their responses') do |table|
  # table is a Cucumber::MultilineArgument::DataTable
  pending # Write code here that turns the phrase above into concrete actions
end

  ┌─────────────────────────────────────────────────────────────────────────┐
  │ Share your Cucumber Report with your team at https://reports.cucumber.io │
  │                                                                           │
  │ Command line option:    --publish                                         │
  │ Environment variable:   CUCUMBER_PUBLISH_ENABLED=true                     │
  │ cucumber.yml:           default: --publish                                │
  │                                                                           │
  │ More information at https://cucumber.io/docs/cucumber/environment-variables/ │
  │                                                                           │
  │ To disable this message, specify CUCUMBER_PUBLISH_QUIET=true or use the    │
  │ --publish-quiet option. You can also add this to your cucumber.yml:        │
  │ default: --publish-quiet                                                   │
  └─────────────────────────────────────────────────────────────────────────┘

Coverage report generated for Cucumber, RSpec to /Users/rajakarthikvobugari/Documents/softwareeng/tf/team-formation/coverage.
Line Coverage: 98.76% (875 / 886)
Stopped processing SimpleCov as a previous error not related to SimpleCov has been detected
rajakarthikvobugari@Rajas-MacBook-Pro team-formation %
```

Documentation of changes :

The application is deployed in heroku and can be accessed using this link:
https://teamformation-c5eaebc1d53b.herokuapp.com/
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SPRINT-4 Final MVP Demo Summary

Date: November 25, 2024
Time: 1:00 PM
Location: ZACH 424

Feature Demonstrations

1. **Team Formation Logic**
   - Demoed the **end-to-end flow** from logging in to downloading the generated teams' information.
   - Showcased outputs for each functionality within the team formation logic, including:
     - Group by Gender
     - Group by Ethnicity
     - Skill Balance
     - Team Calculation

2. **UI Improvements and Updates**
   - Demoed all the changes made to the UI, highlighting improved usability and accessibility.

Client Feedback
The client expressed satisfaction with the demonstrated features and results, confirming alignment with project goals and expectations.

Next Steps

1. **Comprehensive Documentation:**
   - Develop detailed documentation for the entire application, including workflows, team formation logic, UI changes, and technical implementation.
   - Ensure documentation clearly explains the end-to-end functionality for maintainability and scalability.
   - Initiate planning for a Software Requirements Specification (SRS) document to formally capture all functional and non-functional requirements.

2. **Next Meeting**: Scheduled for Monday at 4:15 PM in ZACH 424.
3. **Meeting Link**: https://meet.google.com/rue-uyno-swr

Project Resources :

Heroku : https://teamformation-c5eaebc1d53b.herokuapp.com/
GitHub Repo : https://github.com/phanijyothi11-tamu/team-formation
Project Management page : https://github.com/users/phanijyothi11-tamu/projects/1
Slack workspace : https://app.slack.com/client/T07PN8XD8D7/C07P6NWELCD