

## Project Milestone 4

### Process Deliverable III

#### Agile Process Model

| Name                                  | Jake   | Ethan  | Neha   | Vrishank   |
|---------------------------------------|--|--|--|--|
| <b>What went well?</b>                | Tests were applicable.   | Started early and finished with much time to spare | Tests were easy to determine based on previous assignments.                            | Making the tests was straightforward.  |
| <b>What didn't go well?</b>           | Creating the ideas for the tests was difficult.                              | Thinking of enough different tests                 | Determining the test types for some was difficult.                                     | Sometimes the inputs and outputs would be confusing to make.                     |
| <b>What will we change next time?</b> | Think about how to approach testing of the system from a user point of view. | Not much. This time went pretty well.              | Think about potential edge cases in the system more to come up with more robust cases. | Think through the app idea more thoroughly so the inputs/outputs are more clear. |

#### Prioritized Task List for PM5

1. Create final presentation
  - a. Explain the problem we are addressing
  - b. Describe how our solution will solve this problem
  - c. Compile related works
  - d. List 3 or more related concepts from class that we used in this project
  - e. Brainstorm future additions that could improve our solution even more down the line
  - f. Compile the above info into a neat and organized presentation
  - g. Practice presentation and assign speaking roles
2. Develop final report
  - a. Update original abstract to address feedback given
  - b. Update the proposal's introduction using feedback
  - c. Develop a motivating example to demonstrate how and why our solution would be used
  - d. Explain our solution's relevance to software engineering

- e. Determine if we need to include a background section to define terms and concepts and develop one if needed
  - f. Write a section utilizing the related works compiled for the presentation
  - g. Create a section to explain our design processes and decisions throughout the development of this project
  - h. Develop and a deployment plan for our solution
  - i. Discuss the possible future additions brainstormed previously
  - j. Finish the report with a conclusion and a works cited section
  - k. Revise and edit full report to perfect grammar, spelling, and cohesion
3. Individually complete retrospective surveys about the project

**Black Box Tests:**

| Test ID   | Description  | Expected Results   | Actual Results |
|---|--|--|----------------|
| <b>Test Name:</b><br>TestEvenDistribution<br><br><b>Test Author:</b><br>Ethan Werner<br><br><b>Test Type:</b><br>Functional | <b>Preconditions:</b> <ul style="list-style-type: none"><li>● A list exists of tasks and meetings for the upcoming week</li></ul> <b>Steps:</b> <ul style="list-style-type: none"><li>● Select to create a new schedule</li><li>● Enter each meeting scheduled for the week including g a title, day, time, and length of each meeting</li><li>● Enter each task that must be completed for the week including a title and estimated length of each task</li><li>● Submit all items and get optimized schedule</li><li>● Calculate the total time allocated for work each each day and check if the distribution is even</li></ul> | <b>Test Outputs:</b> <ul style="list-style-type: none"><li>● The distribution of work across each day is within a hour range of each other</li></ul> | N/A            |

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|  | <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• A list of all weekly tasks and meetings for the week</li> </ul>   |  |     |
| <b>Test Name:</b> Schedule Task at Specific Time<br><br><b>Test Author:</b> Vrishank Bangari<br><br><b>Test Type:</b> Functional | <b>Preconditions:</b> <ul style="list-style-type: none"> <li>• Task scheduler application is running.</li> <li>• No tasks are currently scheduled.</li> </ul> <b>Steps:</b> <ul style="list-style-type: none"> <li>• Open the task scheduler interface.</li> <li>• Input task name as "Send Email."</li> <li>• Set the execution time to 10:00 AM.</li> <li>• Save the task.</li> </ul> <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• Task name: "Send Email"</li> <li>• Execution time: 10:00 AM</li> </ul>  | <b>Test Outputs:</b> <ul style="list-style-type: none"> <li>• Task "Send Email" is successfully scheduled for 10:00 AM.</li> <li>• Task execution log confirms the task runs at 10:00 AM.</li> </ul> | N/A |
| <b>Test Name:</b> Handle Overlapping Tasks<br><br><b>Test Author:</b> Vrishank Bangari<br><br><b>Test Type:</b> Stress           | <b>Preconditions:</b> <ul style="list-style-type: none"> <li>• Task scheduler has a task already scheduled at 10:00 AM.</li> <li>• The system allows multiple tasks to overlap.</li> </ul> <b>Steps:</b> <ul style="list-style-type: none"> <li>• Schedule Task 1 named "Send Email" at 10:00 AM.</li> <li>• Schedule Task 2 named "Backup Database" also at 10:00 AM.</li> </ul> <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• Task 1 name: "Send Email"</li> <li>• Task 2 name: "Backup Database"</li> <li>• Execution time for both: 10:00 AM</li> </ul> | <b>Test Outputs:</b> <ul style="list-style-type: none"> <li>• Both tasks are scheduled for 10:00 AM.</li> <li>• Task execution log shows both tasks run without errors.</li> </ul>                   | N/A |

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| <p><b>Test Name:</b> Task Cancellation</p> <p><b>Test Author:</b> Vrishank Bangari</p> <p><b>Test Type:</b> Functional</p> | <p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>Task scheduler has a task named "Send Email" scheduled for 10:00 AM.</li> </ul> <p><b>Steps:</b></p> <ul style="list-style-type: none"> <li>Open the task scheduler interface.</li> <li>Locate the "Send Email" task in the list.</li> <li>Select the task and choose the "Cancel" option.</li> </ul> <p><b>Test Inputs:</b></p> <ul style="list-style-type: none"> <li>Task to cancel: "Send Email"</li> </ul>   | <p><b>Test Outputs:</b></p> <ul style="list-style-type: none"> <li>Task "Send Email" is removed from the schedule.</li> <li>Task execution log confirms the task does not run at 10:00 AM.</li> </ul>  | N/A |
| <p><b>Test Name:</b> TestInsufficientTime</p> <p><b>Test Author:</b> Neha Bangari</p> <p><b>Test Type:</b> Functional</p>  | <p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>The total estimated time for a given task or set of tasks exceeds the available time in a week.</li> </ul> <p><b>Steps:</b></p> <ul style="list-style-type: none"> <li>Select to create a new schedule</li> <li>Add tasks to the schedule where the total estimated completion time exceeds available work hours for the week</li> <li>Submit the schedule, to be optimized.</li> </ul> <p><b>Test Inputs:</b></p> <ul style="list-style-type: none"> <li>All weekly tasks for the current iteration of a project, where total hours exceed allocated hours for the week</li> </ul> | <p><b>Test Outputs:</b></p> <ul style="list-style-type: none"> <li>System notifies the user that the total workload of all tasks exceeds the available time</li> <li>The scheduler system provides suggestions for prioritizing or reallocating tasks</li> </ul> | N/A |
| <p><b>Test Name:</b> TestConfigureWorkHours</p> <p><b>Test Author:</b> Neha Bangari</p>                                    | <p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>The user can configure daily working hours.</li> </ul> <p><b>Steps:</b></p> <ul style="list-style-type: none"> <li>Set custom work hours for a given week</li> </ul>  | <p><b>Test Outputs:</b></p> <ul style="list-style-type: none"> <li>The schedule keeps the user's daily hours in mind when</li> </ul>   | N/A |

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| <b>Test Type:</b><br>Functional  | <ul style="list-style-type: none"> <li>• Submit hours for approval by higher-ups</li> <li>• After approval, add tasks to be configured based on daily hours</li> </ul> <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• User's work hours for a week</li> <li>• Tasks for the week</li> </ul>  | allocating tasks   |     |
| <b>Test Name:</b><br>TestTaskRescheduling<br><br><b>Test Author:</b> Neha Bangari<br><br><b>Test Type:</b><br>Functional | <b>Preconditions:</b> <ul style="list-style-type: none"> <li>• A previously created schedule exists</li> </ul> <b>Steps:</b> <ul style="list-style-type: none"> <li>• Load an existing schedule</li> <li>• Modify a task's estimated duration, priority level, or specifications</li> <li>• Resubmit the schedule to be optimized again</li> <li>• Seek approval based on pending deadlines or requirements</li> </ul> <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• Existing schedule</li> <li>• Task with updated duration or specifications</li> </ul> | <b>Test Outputs:</b> <ul style="list-style-type: none"> <li>• The system adjusts the schedule accordingly, while still maintaining an even distribution of work, if the task change is approved</li> </ul> | N/A |
| <b>Test Name:</b><br>TestTaskEdit<br><br><b>Test Author:</b><br>Ethan Werner<br><br><b>Test Type:</b><br>Functional      | <b>Preconditions:</b> <ul style="list-style-type: none"> <li>• A previously created schedule exists</li> </ul> <b>Steps:</b> <ul style="list-style-type: none"> <li>• Load the existing schedule</li> <li>• Choose a task to edit</li> <li>• Select edit</li> <li>• Change the name and description of the task</li> </ul> <b>Test Inputs:</b> <ul style="list-style-type: none"> <li>• Task to edit</li> <li>• New name and description</li> </ul>  | <b>Test Outputs:</b> <ul style="list-style-type: none"> <li>• Updated task with updated information</li> </ul>   | N/A |

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| <p><b>Test Name:</b><br/>TestUpdateTask</p> <p><b>Test Author:</b> Jake Frohlich</p> <p><b>Test Type:</b><br/>Functional</p>   | <p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• A previously created schedule exists and tasks are loaded into the system</li> <li>• User has access and can edit a user edit button</li> </ul> <p><b>Steps:</b></p> <ul style="list-style-type: none"> <li>• Load the schedule</li> <li>• Click on the “make an update tab”</li> <li>• Modify a task (delete, reallocate estimated times it would take to complete)</li> <li>• Reload UI to see if modifications were made appropriately</li> </ul> <p><b>Test Inputs:</b></p> <ul style="list-style-type: none"> <li>• Current tasks in the schedule as a list</li> <li>• A flag to indicate deletion or reallocation of estimated time for a given task</li> <li>• The task to modify</li> </ul> | <p><b>Test Outputs:</b></p> <ul style="list-style-type: none"> <li>• Updated UI to reflect changes. List of schedule should show a deletion or a new allocation of estimated time</li> </ul> | <p>N/A</p> |
| <p><b>Test Name:</b><br/>TestModifyColors</p> <p><b>Test Author:</b> Jake Frohlich</p> <p><b>Test Type:</b><br/>Functional</p> | <p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>• UI object instantiated</li> <li>• UI is defaulted to white background color</li> </ul> <p><b>Steps:</b></p> <ul style="list-style-type: none"> <li>• Load the task scheduler</li> <li>• Click the button on the main screen which swaps from light to dark mode</li> </ul> <p><b>Test Inputs:</b></p> <ul style="list-style-type: none"> <li>• Color mode button</li> </ul>   | <p><b>Test Outputs:</b></p> <ul style="list-style-type: none"> <li>• Correct assertion if the background color RGB is (0,0,0), false otherwise.</li> </ul>                                   | <p>N/A</p> |