Individual Report

Kartik Gupta

# Statement of Work Done

As part of the Yang Physics Group, I had a lot to do and learn. My work involved most phases of the Software Development Life Cycle under the XP Methodology namely [Requirements Analysis](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday_9)**,** [Development](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday_8)**,** [Testing](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday)**,** [Deployment](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday_3)as well as planning out [Sprints](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday_9)**,** [conducting The Planning Game](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-thursday_9)and putting procedures in place that would need to be followed throughout the length of the project such as **QA, procedures on Bitbucket,** Issue [Escalation Plan](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-monday_6)**,** [Communication Plan](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-monday_8)**,** [Change Management Plan](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-tuesday)andensuring Client Satisfaction[. I was also actively involved in preparing documentation and giving presentations.](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-monday_6)

I also, at many instances throughout the semester had to ideate and come up with ways on how to [improve group spirit, improve cohesion between group members and create a sense of belonging to the team](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-week-7). This was done by creating numerous opportunities of continuous feedback from the team and addressing all issues, organising an informal dinner after the meeting so that everyone could see each other as a colleague and as a friend, and, inculcating a sense of joint ownership of the project when the team suffered lower marks on account of one person.

The weekly breakdown of the work done by me can be found on the [wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta).

# Extent of Work

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| Category | Work Done | Link |
| Requirements Analysis | Conducted the Planning Game to help the team determine which user stories they would like to go for first and at subsequent stages through introducing the concept of value and risk, Planned out Sprints,  | [User Stories](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/User%20Stories)[Wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-week-3) |
| Development | Completed 2 user stories and pair programmed numerous times with team members | [#28](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/28/sprint-1-as-a-student-i-want-to-be-shown) , [#58](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/58/us-as-an-admin-i-want-to-be-able-to-make)PP: #[57](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/57/us-as-an-admin-i-want-to-disable-the) , [#60](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/60/us-as-an-admin-i-want-email-notifications) , [#61](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/61/us-as-an-admin-i-want-to-type-up-emails-to), [#66](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/66/as-an-admin-i-want-students-to-book) |
| Testing | Did Integration testing after each user story, did user acceptance testing throughout the project | [#65](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/65/perform-usability-testing-on-current) |
| Deployment | Did client deployments in Week 9 and 11, met with the client numerous times to work out issues and misunderstandings | [Email](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Client%20Interaction#markdown-header-week-9-client-deployment) |
| QA | Was responsible for doing code review and accepting pull requests, and regression testing after each successful pull request | [#88](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/88/accept-decline-pull-requests) |
| Logistics | Set up Bitbucket repository, HipChat Group, Facebook Group, Gave an introduction on Mercurial, Set Branching/Merging/Pull Request procedures in place | [#5](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/5/group-communication-issues)[Commit](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/commits/6a5a2b3afbdb89a0082470673edd618c108a0539) |
| Documentation | Prepared the much liked slides for Assignment 1 Presentation, Prepared the Evaluation Plan. Prepared Assignment 2 Mid semester report. Prepared final presentation | [#37](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/37/sprint-1-document-quality-of-group) , [#44](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/44/mid-semester-report-compiling-the-report) , [#40](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/40/mid-semester-report-group-meetings), |
| Team Spirit | Organised an informal dinner within University premises so that the team can spend time away from meetings and be more informal. Allowed members to pick user stories on their own that enforce them | [Wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-week-7) |
| Installation  | Prepared materials on how to install the system on a bare bone Linux machine | [#67](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/67/test-system-installation-on-bare-bone) |
| Created Issues | Created issues on Bitbucket for all user stories | [Issues](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issues) |

# Quality of Work Done

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| Aspect | Work Done | Links |
| Developing User Stories efficiently  | Set procedures to ensure that each member makes a new branch from the latest revision in the repository before working on each new user story | [Commit](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/commits/2cd2e8895d4ee55eddcce848ad651e8d962910da)[#89](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/89/devise-a-plan-to-use-bitbucket-effeciently) |
| Quality of Code | All merges to the master branch were in the form of pull requests from a branch. The pull request was accepted or rejected by me if the quality of code was not good or unnecessary files were being merged creating a mess in the master branch | [#88](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/88/accept-decline-pull-requests) |
| Cleaning up the repository | Cleaned up the code received from client to remove all unnecessary files (like metadata files, .ide files, log files) and put the repository in a deployable state | [Commit](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/commits/55d1087a71872ce47a6104758135b6ef1cbae276) |
| Issue Escalation Plan | Made an issue escalation plan which defined how problems should escalated within the subject structure | [#90](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/issue/90/escalation-plan) |
| Change Management Plan | Motivated by the client requesting a priority 1 user story in the middle of the semester I made a change management plan to include such a user story within our current backlog | [Wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-tuesday) |
| Documentation prepared | Documentation prepared by me for the assignments throughout the semester were of high quality due to the various presentation techniques I learnt over the years. This can be shown by our group having one of the best presentations for Assignment 1 in the subject | [Wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-monday_5) |
| Regression Testing | Regression testing was done after each user story was completed and merged with the master branch | [Wiki](https://bitbucket.org/kartik7gupta/physics-lab-booking-project/wiki/Kartik%20Gupta#markdown-header-week-8) |

# Reflection

Being the Manager of the Yang Physics group, I learnt quite a lot. Some of the experiences were expected whereas others were not, however both were extremely valuable. The use of an actual project and a client by the Faculty was an extremely enriching and realistic experience that one can expect to encounter in the real world.

Having a keen interest in Agile Project Management I took up the role of Project Manager. According to the Agile Manifesto;

* Individuals and Interactions are preferred over Processes and Tools,
* Working Software over Comprehensive Documentation
* Customer Collaboration over Contract Negotiation
* Responding to change over following a plan

I followed this guide to the best of my ability. According to me, processes and tools such as Bitbucket, Mercurial, Hipchat are just things that help us achieve our goal of developing excellent software, they should not cause issues with the development process. If they are, they need to be addressed immediately. With this in mind, we moved from Hipchat to Facebook, simplified the branch, merge and commit process and any discrepancies that were made by team members while merging and pushing to the master branch were corrected by me.

Furthermore, during the middle of the semester the group members started becoming very frustrated with amount of documentation that was part of the subject and fingers were being raised at each other for marks being lost in certain assignments. This was quite unexpected for me and common sense told me that the group needed to bond better. So, I organised a dinner and drinks evening after the meeting on one Thursday and by the end of it, it was clear that people started relating to one another and subsequently in later weeks started working a lot better together. This was one the major outcomes for me. I believe that the manager and tracker roles exist to support the team members achieve their best rather than the other way around.

We had a lot of issues with the client in the latter half of the semester. These were also much unexpected. In Week 7 the client asked us to accommodate a top priority user story within our sprints, although it seemed impossible at the time, open communication with the group and a will to keep the client in focus enabled us to include the user story in our sprint and complete it successfully. In week 9, the client refused to sign any acceptance test documentation for the deployed user stories, we took this in our stride and asked the client just to provide us instead with any discrepancies in the deployed user stories.

I would summarise my takeaways from this project as becoming a people person, realising the importance of documentation, having a support from the teaching team in their expertise on dealing with difficult clients. I also learnt the importance of continuous testing, especially unit testing, regression testing, and user acceptance testing.

Areas for improvement were getting documentation done on time so that it does not eat into development time later as well. I also need to improve my people skills further to be able to enable fellow team mates to bring out the best in themselves, to avoid assigning work rather encourage them to pick their own user stories.