TEAM CHARTER

605.601.81

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Morgan Bollich, Josh Gangl, Minh Hua, Jesse McKinzie, David Orona

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ABSTRACT

This team charter serves as a framework of how the team will work together to produce a successful software product. Roles and responsibilities of each team member will be discussed as well as important teamwork principles such as communication, commitment, decision making processes, and conflict resolution.

PURPOSE

Import teamName's (ItN) purpose is to deliver a software product that effectively communicates usage and enables users to accomplish key tasks that are within their wants and needs. ItN's team has been formed to address a growing problem within the software industry where certain features are not intuitive to users. This team ultimately envisions a final software product that will be absent of bugs and bring enjoyment to every user!

MEET OUR TEAM

Morgan Bollich

Morgan received her BS in Chemical Engineering from Louisiana Tech University in 2016. She currently lives in Lake Charles, LA where she works as a controls engineer for Westlake Chemical. Throughout her career, Morgan has held several process engineering and project management roles. She also has experience in Programmable Logic Controller design, programming, testing, and commissioning. She additionally uses VBA, Java, and C/C++ to build day-to-day troubleshooting tools for her department. In her free time, Morgan likes reading, playing piano, running, and going on hiking trips with her husband and mini Australian Shepherd, Kaia.

Josh Gangl

Josh is currently an IT and cybersecurity consultant primarily for the biotechnology / pharmaceutical, medical device, and healthcare industries, and resides in the Denver / Boulder Colorado metropolitan area. He has a BS in Chemical Engineering from the Colorado School of Mines, as well as several certifications from Scaled Agile Framework (SAFe) and (ISC)2. Josh is engaged in several consulting efforts in enterprise and solution architecture strategies ranging from industrial operations, cloud migrations, and securing a SaaS provider's remote workforce and application technologies. As a native to Colorado, he enjoys a variety of seasonal outdoor activities, and loves to travel and explore new cultures and geographies whenever possible.

Minh Hua

Minh Hua is currently in Florida working as an Operations Research Analyst for the United States Air Force Special Operations Command (AFSOC). He has a B.A. in English and a B.S. in Applied Math from the University of California, Santa Barbara. Minh's daily work activities involve working with Python, Lua, VBA, AFSIM, Java and Git on modeling and simulation projects such as building digital models of AFSOC's aircrafts and intelligent scripts that mimic real life pilot behavior. He also builds GUIs and uses Python for big data analytics. Although he is currently an Ops Research Analyst, he wants to transition into Software Engineering. He is currently going to school full-time. One unique thing about Minh is that he was originally born in Vietnam, and his father is Chinese while his mother is Vietnamese. In addition, he used to go to a lot of hackathons in college and would always sign up as an English major to surprise people.

Jesse McKinzie

Jesse received his BS in Mathematics from the University of Wyoming in 2020, focusing on computational math and real analysis. He has worked as a Researcher in the Chemical Engineering Department at the University of Wyoming studying computational fluid dynamics. In this position, he designed simulators for gas flow through porous media at a mesoscopic scale. The primary tools he utilized were Python, C++, MATLAB, OpenMP, and OpenMPI. He is now looking to transition into backend software engineering. In his free time, Jesse likes to run and mountain bike. His favorite place to bike is Trestle Bike Park in Winter Park, CO.

David Orona

During his first freshman programming class, David Orona always remembered believing one thing: *"I hate programming, and I'm never touching it again!".* It therefore only makes sense that he is now a full-fledged software engineer at John Deere Financial, where he works with financial assessors in building tools that assist in making credit management decisions.

But how exactly did he get here?

After receiving his Electrical Engineering degree from Iowa State, David was hired at John Deere in 2017, with the sole purpose of advancing his EE capabilities. He soon discovered, however, how intertwined electrical and software roles are within the industry. He likewise found that, despite the hesitancy attained from that first fateful class, he no longer held contempt for the field he once dreaded. Whether it was due to academic maturity or a new sense of life, he actually felt glee and exhilaration when an opportunity to program arose.

It is that feeling that inspired him to accept roles within the IT department. It inspired him to construct a VB.NET project that aided product safety in advancing regulations in other countries. It led him to spend three (3) years in the pursuit of testing and refining telematic hardware via Python. It motivated him to take a General Assembly class to build proficiencies in Node.js, React, PostgreSQL, and other web-related tools. It is also this feeling that stirred him to pursue a master's in computer science at Johns Hopkins. From hate to fate, software has certainly become a central role in David's life…and he couldn't be happier.

David currently resides in Des Moines, Iowa. In his free time, David enjoys bowling, running, and collecting retro video game consoles. He also loves partaking in excessive biographies.

TEAM ROLES AND RESPONSIBILITIES

Morgan Bollich – PROJECT MANAGEMENT

As project manager, Morgan will ultimately direct and manage the day-to-day activities throughout the duration of the project as well as define project success at each milestone. She will be responsible for planning and task-monitoring to ensure that project milestones are met before deadlines. Morgan's responsibilities will include:

Document Editing: Morgan will compile each team member's collaboration on the project and then merge into a single document that is ready for client presentation. She will ensure that the final rough draft is submitted in a timely manner to ensure each team member has adequate time to review the final draft before the milestone deadline.

Leading Meetings: Morgan will be responsible for leading each weekly meeting and deciding how the meeting proceedings will be documented.

Task Designation: Morgan will be responsible for ensuring that each team member is receiving weekly individual tasks that will contribute to the project's progression.

Resource Determination: Morgan will be closely monitoring each department to determine if additional resources need to be allocated to that department in order to ensure project success.

Scheduling: Morgan will create an initial project milestone schedule and update schedule progress each week.

Monitoring: Throughout the project, Morgan will facilitate and document task progression and completion for each team member. She will also determine realistic time estimates of tasks and frequently evaluate each team member's capabilities to meet task deadlines.

Leading Collaboration: At the beginning of each week, Morgan will create a project milestone collaboration document. This document will contain an outline of key points that must be included in the upcoming document submission. Each team member will use this document to collaborate on document production. Morgan will notify team members each week when the collaboration document is available for use.

Gauging Contribution: Morgan will also be responsible for gauging each team member's contribution to the overall project. She will use the collaboration document as a guide for participation and will also use weekly meetings to discuss what each team member has been working on individually since the last meeting, as well as tasks that will be worked on before the next meeting. She will also be prepared to have open discussions privately with team members that appear to be causing conflict within the team so that a quick solution can be reached.

Software Life Cycle Development: Morgan will lead software life cycle development efforts throughout the project.

Morgan is also qualified to support code development as an assistant programmer and/or quality assurance as a testing engineer. She will be used on an as-needed basis, which will be determined by herself, the lead programmer, and the lead software quality assurance engineer.

Josh Gangl – LEAD ARCHITECT

As the lead architect, Josh will primarily be responsible for the translation of functional and non-functional requirements into a high-level software design along with the rest of the team. The high-level design will include the top-level organization and structure of the software components, and along with the programming lead will be responsible for developing the conceptual model and any required diagrams and documentation of this content. Josh will also contribute to software development, code reviews, and testing as needed by the project team as well as any other efforts in which he can contribute to meeting the project outcomes.

Minh Hua – LEAD UI/UX DESIGNER

As lead user interaction/user experience (UI/UX) designer, Minh will be responsible for creating the optimal experience for users who will interact with itN's software products. He will be responsible for studying users, understanding their behavior, and designing a user journey that communicates product intent and usage clearly and efficiently. Minh will ensure the voice of the customer is present by incorporating customer feedback and usage metrics into the design. Some of Minh's responsibilities will include:

Conducting user research: Minh will survey and compile research on user goals, behaviors, motivations, and needs. He will compile reports and present regular findings to the team to guide development. As UI designer, Minh will also compile findings on how users interact with itN's software products and gather feedback for improvement.

Design the product's information architecture: Minh will contribute to the organization of content and presentation of information within the software product that optimally enables users to accomplish tasks. He will communicate his plans to the Lead Programmer and Architect to ensure a user experience that reflects itN's vision for the product.

Design user flows and mockups: Minh will create low fidelity representations of a user's journey as they interact with itN's software products. Minh will also draft user interfaces that consider business requirements, the voice of the customer, user journeys, and user feedback. He will communicate his plans to the Lead Programmer and Architect.

Design graphics: Minh will be responsible for designing graphical elements such as logos, images, icons, and videos and determining graphical elements such as font choices and color schemes that are required by itN's software products. He will work with the Lead Programmer and Lead Architect to integrate these elements within itN's software products.

Create and test prototypes: Minh will collaborate with the Lead Programmer to create interactive prototypes of itN's software products. He will also work with the Lead Test engineer to test products on

real or simulated users. Minh will then compile user feedback and report back to the team for product revisions and updates.

Presenting: Since Minh will be representing the user throughout the project, he will be primarily responsible for delivering the presentations to the user that detail project progression.

Jesse McKinzie – LEAD PROGRAMMER

As the lead programmer, Jesse will be responsible for choosing a tech stack that efficiently implements the plan that is designed by the lead architect. He will be responsible for researching different technology stacks and getting feedback from the team on which technologies they are most comfortable using. Jesse will then be responsible for delegating programming tasks to assistant programmers. He will ensure that all assistant programmers complete their tasks and will review their code for quality and proper formatting. Jesse's responsibilities will include:

Technology Stack Deciding: Jesse will research different technologies and frameworks to choose a tech stack that will optimally implement the program. He will talk with the team members to determine what technologies they know as well as what they are willing to learn. The final decision for technologies will be based on what the team wants to use and what is most efficient for the task at hand.

Collaborating with Lead Architect: Jesse will ensure the plan for the software is possible to implement. He will go over the tech stack with the lead architect to check if the technologies align with the plan.

Delegating Programming Tasks: Jesse will assign tasks to assistant programmers based on their strengths and weaknesses. He will help them when they are stuck on problems, as well as make sure their code is correct and adhering to proper guidelines before sending code to quality assurance.

Updating Project Manager: Jesse will regularly report to the project manager to keep tasks on track. He will provide timelines to the project manager regarding the completion of programming tasks.

David Orona – LEAD SOFTWARE QUALITY ASSURANCE

Based on his previous experience in the test automation sector, David will be responsible for coordinating the consistent and accurate output of the project as test lead. He will set up tests that not only verify correct functionality but maintain output stability. Since reliable tests are often associated with reliable quality, he will also oversee the quality assurance as well. David's responsibilities include:

Ensuring Code is Verifiable: David will be responsible for building tests that are consistently successful, even in non-viable path scenarios. This ensures that testing will still be accurate even with evolving projects.

Ensuring Code is Encapsulated: Inevitably, even with the use of accurate tests, errors are bound to occur. By segmenting the project, breaking the programming methods down into smaller and smaller components until each method serves a unilateral purpose, David's efforts in this area will not only increase the encapsulation properties of the project, but will also make it so errors can quickly be found and corrected. This can easily be implemented at any point within the project's lifespan, whether at the very start using team coordination or from some point in the middle using refactoring techniques.

Ensuring Code is Tested: David will set up an automated testing process from the beginning of the project, allowing the project to consistently and automatically be checked over and over. This process will ensure the quality of the code.

COMMUNICATION MEANS

The team has decided to use Microsoft Teams for instant messaging purposes. They will additionally utilize a shared Google Drive folder for asynchronous document collaboration. The team will also utilize Microsoft Teams for weekly meetings that will be tentatively held on Wednesdays at 7 PM EST for at least 30 minutes, but no longer than one hour. The purpose of weekly team meetings is to discuss upcoming deliverables, resolve any current issues, and plan courses of action. Meeting proceedings will be documented by individual note-taking, a note-taking rotation among team members, or recording the meetings on Microsoft Teams. The team will also utilize the team Blackboard group and team members' emails periodically as needed.

EXPECTATIONS

COMMUNICATION

Team members are expected to check team-related emails, instant messages, and other forms of communication at least once per day. Each member is responsible for informing the rest of the team of weekly schedules and/or general availability. This should include an estimate of how much time can be individually contributed to the project each week. Team members also recognize that different parts of the project will require different time commitments. If a team member is not available for team meetings, discussions, or generally unavailable for a few days at a time due to other commitments, that member should inform the team ahead of time. Weekly team meetings will only be rescheduled if at least 3 out of 5 team members agree.

Each week, at least one person from the team should monitor the office hours discussion forum in Blackboard for posts, office hours recordings, and/or attend office hours to ask questions about project deliverables. This team member will communicate office hours information with other team members. The team has decided that there will not be a single designated person for this throughout the project, meaning this role will alternate amongst members. Team members should also inform the rest of the team of any new ideas or issues that arise while working on individual tasks.

COLLABORATION

Each team member is expected to individually understand, explain, evaluate, and therefore participate in all technical aspects of the project. Overall, each member should contribute 20% to the project to ensure the project's success. In order to achieve this, team members are aware that they will have individual tasks assigned to them. Team members are expected to be prepared for meetings, show up on time, and contribute meaningfully to the discussion. They are also expected to contribute to collaboration documents and participate in any polls or votes that intend to determine key team decisions.

DEADLINES

Team members understand that their individual tasks must be completed by deadlines determined by the course and/or project manager. Therefore, they must ensure the project progresses consistently in a timely manner. If team members are going to be unavailable for a few days at a time, they are expected to work ahead so that they are not hindering the group's overall ability to meet a deadline. Team members will also discuss the timing for each deliverable submission in detail. Team members agree that document or presentation submission will be completed at least 24 hours ahead of the course deadline, unless 3 out of 5 members agree that a certain project submission be pushed back due to complexity and/or team member availability factors. This agreement will prevent documents and presentations from being thrown together at the last minute.

WORK QUALITY

Team members are expected to put forth their best efforts consistently in order to produce good documentation, presentations, and a high-quality final product.

OVERALL

Team members must carry themselves in a professional manner and will communicate respectfully among the team. Additionally, each member is recognized as a valued contributor to the project, which guarantees that all contributions are treated respectfully. In the instance that a member cannot communicate with professionalism and respect, the conflict resolution process will be used to move the team forward.

CONFLICT RESOLUTION

Team members agree that the most impactful way to prevent conflict is to ensure constant communication, especially the availability of each team member in a given week. However, if conflict arises at any time throughout the project, the team will refer to the team charter document as a refresher on the conflict resolution process that was agreed upon.

The team recognizes that conflict could arise from a team member's unexpected unresponsiveness to the group. If a team member is not responding through any of the team's communication platforms, other team members will attempt to reach out to that individual as a check-in, exhausting all available communication platforms if necessary.

The following additional sources of conflict resulting from an individual team member could include:

- Missing contribution deadlines
- Not meeting deliverables
- Not treating all other members of the team with respect
- Creating a hostile work environment
- Work performance is lacking in such a way that brings down the team's overall performance or causes another team member to gain more work

If any of these conflicts should arise, the project manager will approach that team member privately to determine the cause of conflict. Ideally, the cause should be determined and resolved at this step. The project manager will then prompt the team member to confront the rest of the group with an adequate explanation that still provides privacy to the team member, or the project manager will do so herself with permission from the team member. However, if the conflict continues with that team member, the rest of the team must come together and decide on notifying the professors and/or removing that person from the group. The team will then equally divide the removed member's responsibilities among the remaining team members. If an unanticipated conflict arises that is not included in the team charter document, then the team will come together to amend the existing conflict resolution process to include the new type of conflict encountered.

Another common source of conflict could be the lack of consensus on key team decisions. If the team decision is deemed by all members to be important, then the team should re-engage the debate, using the decision-making process, until a consensus is achieved. If the decision is deemed to be of medium importance, and a consensus cannot be reached, then respectful debate will occur, followed by the project manager's final decision. If the team decision is deemed to be of low importance, then the project manager will decide without further debate.

DECISION-MAKING PROCESS

The team will use a planning process, similar to that used by the United States military, to ensure that key team decisions are chosen in a smooth manner. At the beginning of each week, each team member will understand the deliverables required in upcoming document submission. The team will come together to analyze the deliverables in detail and note any questions or misunderstandings that arise.

Once the team understands the requirements, a course of action will be taken by the project manager or area lead assigning each team member with individual tasks to complete. Once all individual tasks are complete, the team will come together to review and provide feedback. If dissent arises at this stage in the process, the project manager will draft course of action documents that represent each possible path. The team can then "war-game" each action by building a prototype and simulating performance. This process of developing courses of action will provide concrete evidence to the team regarding which path is the most viable for project success. Additionally, while each team member will provide feedback for each part of the project, each area lead will have the final approval on decisions that fall under their department. Of course, not all decisions will require various course of action documentation. Some tasks can simply be completed and approved by using an informal decision-making process. The team will only select the course of action path for decision-making as necessary.

CONCLUSION

Submission of this team charter represents all team members' implicit agreement to adhere to the guidelines that have been formed by the team to create this document. Import teamName hopes that this document will serve as a roadmap to forming a high-quality team that produces high-quality software products. Of course, we aren't all work and no play; check out our awesome team song below! You won't regret it.

https://www.youtube.com/watch?v=291aihPFBPk