

Effective Self-Managed Teams

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Importance of Teamwork Skills

Many graduates with a Bachelor of Science in Computer Science can expect to be a member of a team over the course of his or her career. Gaining teamwork skills is a “soft skill” that is valued by many employers just as much as technical skills. Recent companies recruiting for entry-level graduates at UGA have indicated that the ability to work well with others and as part of a team are desirable skills they seek in new hires.

The Department of Computer Science at UGA instituted a teamwork requirement in the BS-CS degree. All students must take one course that involves working in a group of size greater than 2. This document outlines strategies for success in organizing your team and project as well as proven techniques to help your team function well.

Self-Managed Teams

Self-managed teams, such as your project team, have several characteristics that distinguish them from other types of groups and teams. These are discussed below.

Superordinate goals: Teams are formed in order to accomplish some set of goals. In the case of your project team, the overriding, or superordinate, goal is to complete the project requirements in a manner acceptable to the instructor. This goal needs to be in the forefront of all team members’ minds at all times. Individual goals are discussed later.

Complementary knowledge, skills and attributes: Recognize that your team represents a unique set of individuals with different knowledge, skills and attributes (KSA). Understanding that everyone on your team is different is an important step toward building an effective team. Just as a basketball team has players who are good outside shooters and players who are good at rebounding, so does your team have members who are good at writing and members who are good at performing research. **When dividing up the work, be aware of these differences and assign tasks accordingly.** Be careful here, however. The main purpose of the team project is for the student members to learn. By being involved with the research part of the project, a member who feels uncomfortable with their research skills can become more proficient in that area. However, giving this person total charge of that portion of the project is not a good idea. Teaming them with someone who feels that they are good at research gives both a chance to further their skills.

Resource control: Self-managed teams have control over the resources provided to accomplish the project goals. In the case of your project team, your major resources are time and the team members’ labor. Although you are required to hand in task assignments to your instructor, your team has total control over how those assignments are made--the instructor simply wants to make sure that the assignments have been made and that no major tasks are missing. Your instructor can also provide insight into how much time and effort is involved in completing various tasks. The team is responsible for seeking this guidance and for managing time by planning meetings, meeting milestones, etc.

Individual goals: One of the most important tasks for managers is to bring individuals' goals into congruence with the organization's goals. The situation is similar with self-managed teams. Although there is no formal manager, there are team and individual goals and each member must find a way to achieve their individual goals while still attaining the team's goals. Even though every member will have a unique set of goals, we can assume that most members will have at least three, 1) to learn course material, 2) to gain interpersonal and teamwork skills, and 3) to get a good grade.

Let's tackle these in reverse order. In order to get a good grade; your team must perform well. In order for the team to perform well, the team members must do two things--they must each perform well, and they must function as a unit. So, by working together, and by each member pulling their load, individual team members can accomplish their goal of getting a good grade. Accomplishing the second goal, to gain interpersonal and teamwork skills, can be helped by 1) thinking about teamwork, and 2) being an active member of the team. Thinking about teamwork involves giving real thought to the issues raised in this document and to the teamwork process. You will find that in the course of completing the team project you must compromise on some items in order for the team to do well. Being an active member of the team means completing tasks assigned to you and providing *constructive* comments to other members of the team. The final goal, learning the course material, can be achieved by following the above advice and, of course, by staying up with the rest of your course work. The project is designed to reinforce the concepts discussed in class. If you don't participate in class, complete assignments and read the assigned readings you won't benefit from the reinforcement available in the project and you probably won't be a very valuable team member.

Notice from the discussion above that the goals are interrelated. By accomplishing the goal of learning the course material and by concentrating on gaining teamwork and interpersonal skills the possibility of receiving a good grade increases dramatically. Notice also that these goals are not in conflict with the superordinate team goal of completing the project in a satisfactory manner.

Individual rewards: In self-managed teams a portion of an individual's reward is based on team performance. In this class, your external reward is your grade in this class. As the syllabus notes, a substantial part of your course grade comes from your project grades. To put it another way, your performance as a team has a significant impact on your individual reward--your grade.

Team and Project Organization

If your team is to be successful, it must be organized. There are two aspects to this organization, team and project. Both are discussed here.

Team Organization

Initial team meetings: As soon as you know who is on your team, you should get together to exchange basic information including names, phone numbers, and email addresses. In addition, you should find out each member's preferred contact method (phone or email), meeting times and meeting locations. You will be given time in class to hold this initial team meeting, but little additional in-class time will be available for team meetings.

You will be given some class time to meet, but plan to also spend time outside of class. Use the in-class meeting time to produce two products, an initial task list and a preliminary project schedule. These are discussed in the section on project organization. Also, get to know each others' knowledge, skills and attributes. Find out who enjoys writing, who is good at organizing, etc.

Written record: A written record should be kept of each meeting. This record should focus on decisions made by the team, including task assignments. You may also want to briefly state the reasons for arriving at particular decisions. If you fail to keep this record, you will find the team considering the same issues over and over because the team won't remember or won't agree on many decisions reached earlier. It is important that these notes should focus on decisions made and the rationale behind them--not on the interpersonal disagreements that, in the long run, matter little to the project. This record should also note any changes made to the project task list, schedule or task assignments. Also, you will want to check off any tasks completed--always a good feeling.

Maintaining focus: It is critical for the team to maintain focus--keep *your eyes on the prize!* Your best friends in keeping this focus are the project schedule and manners (yes, like Mom taught you). Minimizing interpersonal conflict is crucial. Expect this conflict, it's a natural part of being on a team, but remember the overriding goal of doing a good job on the project. Disagreements on individual project components are actually a good thing--the project will be better for the effort taken in working these out. Disagreements rooted in interpersonal problems are a bad thing and should not be allowed to fester. Review these conflicts in terms of the project tasks, not in terms of personalities. Following the hints presented later can help your team accomplish this.

Project Organization

Task list: The task list requires that all members understand the project and be prepared to share their take on what tasks need to be accomplished in order to complete the project. While this task list is likely to change over time, your team needs to agree on this initial list of tasks. Once agreement has been reached, the task list needs to be recorded and copies made for each member. The task list is one of the most important project management tools your team will have.

Remember that *big problems are solved by taking a series of steps*. A marathon is completed one step at a time. If you only look at the enormity of the overall project and don't break it down into manageable steps, the magnitude of the project will seem insurmountable. By breaking the project down into tasks, the project suddenly seems easier.

Project schedule: The second product to come from your initial team meetings is a preliminary schedule - derived from the initial task list. In order to come up with a project schedule, the team must add times and priorities to the task list. The first step is to establish the priorities of the various tasks. Some of these will be obvious, others will not. Keep in mind that some tasks require other tasks to be completed before they can be started. For example, most tasks depend on the requirements statement being complete before they can be started. Also remember that some tasks can be done in parallel. Perhaps one team member works on researching one area of the project, while another looks into a different area. Once you understand these priorities, the team needs to come up with the time required to complete each task. When this is done, start from the project due date and work backwards to determine the milestone for each task. Be sure to put in some slack for unexpected delays. Once these steps are done, your project schedule is complete. If you want feedback, your instructor will be happy to review the schedule.

Task assignments: Assigning tasks to individual team members is critical to a successful project. Several factors should be taken into consideration. First and foremost, consider which team member(s) has the proper skills to best complete the task. Although for this project all team members should be capable of performing every task, some members will be better suited to particular tasks than others. Also, consider balancing the workload. Don't overload any one member with more than he/she can handle--this will only result in missed deadlines and unnecessary anxiety. Make sure each team member takes other class work into account when deciding whether or not she can meet a given deadline. You should also be sure to allow for peer review (described below). You may be required to hand in task assignments to your

instructor who may offer you some suggestions, although the team is ultimately responsible for making and sticking to task assignments.

Peer Review: One of the advantages of working in a team is having someone to review your work. In order to take advantage of this, you should assign one or two members to review each task output. For example, in Project 1, one team member may be responsible for finding definitions to a number of terms, while another member is charged with reviewing these definitions. Be sure to allow sufficient time in your schedule for the peer review and for revision of the output. Following this recommendation can significantly increase the quality of your project ... *and your grade!*

Hints and Strategies for Effective Teams

Acknowledgements: The following tips are, in part, based from Tips for Teams: A Ready Reference for Solving Common Team Problems, by Fisher, Rayner and Belgard, McGraw-Hill, 1995, and from Gerard Blair's "Groups that Work" which is located at <http://www.ee.ed.ac.uk/~gerard/Management/art0.html>.

- *Assume the best in people*
Most problems are not the results of malicious intent, but as a result of our frustrations we start to see problems as being the result of intentional actions on the part of others. Fight this urge. Your team members share many of your goals, and being reasonable people, want to accomplish those goals. The ability to rise above interpersonal differences and focus on the task at hand is a mark of a good team. Make the assumption that your team members did the best they could and work on ways to improve the situation so performance can also be improved.
- *Focus on the task*
Make every decision, judge every result, resolve every conflict in terms of the task. Putting everything in terms of the task at hand will provide a structure and basis for making decisions and planning actions. This also prevents the team from getting off track.
- *Establish regular meetings*
To avoid miscommunication, establish a regular time and place for team meetings. In these meetings you should 1) provide updates on task progress, 2) discuss any problems that individuals may be having with their tasks, and 3) update the task list and schedule if needed. By holding these meetings, everyone can stay on the same page and problems can be dealt with while they are still relatively minor.
- *Handling negative feedback*
It's important to fix the problem, not the blame. Blaming a particular member does little good. It's usually more productive to 1) solve the problem and 2) establish ways to avoid a recurrence of the problem. A criticism should be viewed as an opportunity for improvement. The best in any field work on their weaknesses so negative feedback is simply an opportunity for the member and the team to become stronger. It's also important to focus not on the individual but on the task at hand. Frequent feedback (both positive and negative) is important. This can establish an atmosphere of mutual coaching.
- *Focus on behaviors*
Behaviors are easier to modify than are attitudes. Saying "You're a lazy jerk" to a team member may reflect a fact, but it is unlikely to result in any benefit to the team. Instead, focus on the behavior that needs to be changed; "The team needs you to complete your tasks on time. What can we do to help you accomplish this?" This approach lets the team member become more

effective and also display's the team's willingness to help.

- *Positive feedback*
Remember that you are all managers, and a good manager recognizes good performance. When a member performs well, other members should be sure to praise that effort. This both reinforces positive actions and also softens the blow of any later negative feedback (i.e. criticism).
- *Dealing with failures*
Your team is going to have occasional failures; expect them and see them for what they are-- an opportunity for improvement. The team should accept responsibility as a team and should look for ways to avoid such failure in the future. If handled properly, a mistake should not be repeated.
- *Ask for help if you need it*
This suggestion applies to individuals and to the team. Individuals who find changes in their circumstances should ask their team members for help before the problem becomes insurmountable. Don't wait until two days before the project is due to inform your team of problems in completing your assigned tasks.

The team as a whole should not hesitate to ask for input from the "manager" (your instructor). Going to someone outside the team does not mean that the team is incompetent. Remember that you are in a learning situation--the sole purpose of the team project is for you to learn. If the team is unable to solve a problem, ask the instructor (who will, of course, politely inform you if the team needs to put more effort into solving the problem).

- *Involve everyone*
Teams often have both mice and loudmouths. Input from both is valuable so the team should strive to involve the mouse and to prevent the loudmouth from dominating. Ask quiet members for their input and ask more vocal members to summarize their views. Each team member should also contemplate whether they are a mouse or a loudmouth and modify their behavior accordingly.
- *Dealing with deadlocks*
Sometimes factions within the team will take opposing views. Among the more useful strategies is to have each side debate from the other's point of view. Another suggestion is to point out common ground and look for a possible alternative strategy. Remember to view these disagreements in light of the overall task. Most important of all, limit the time you spend on deadlocks for relatively unimportant issues. For example, deciding what color to use for input screen text is not worth a two-hour debate. Flip a coin and keep moving toward the finish line.
- *Communicate actively*
Communication takes two. Responsibility for effective communication is shared by the sender and the receiver. The sender is responsible for expressing ideas in an effective manner. The receiver is responsible for actively trying to understand the message and for seeking clarification if necessary. Only through active participation in the process can effective communication occur.
- *Focus on results*
Stay on track. Keep thinking about the overall goals of learning and producing a good project. Consult progress against the project schedule frequently--it should be a major focus of every group meeting. When faced with the inevitable hurdles that crop up, remember that there are overriding goals in place. Look toward the finish line, and the hurdles become smaller.

Managing Intra-Group Conflict

- *Don't let interpersonal conflicts escalate beyond control.*
Just as a minor scratch can, if neglected, become infected, many problems and conflicts which begin as relatively minor irritations can fester into major issues when unresolved. Deal with difficulties when they are still minor and easy to resolve.
- *Try the following tips for conflict resolution.*
 - Put the problem or conflict in perspective with the overall goal of the project.
 - Try to identify the common ground --the risks and benefits the sides have in common.
 - Give everyone a chance to air their point of view on any issues involving them.
 - If needs and expectations are unclear, ask clarifying questions.
 - Emphasize the common goal--to do a good job on the project.
 - Remember that the responsibility for resolving the conflict rests with the entire team.
 - One more time, deal with the conflict while it is still small and easy to resolve.
- *Remember that a certain amount of conflict is healthy.*
Many conflicts arise as the result of skilled people who care about the team's success--they simply have a difference of opinion. There is usually some right and some wrong on both sides. Taking the time to resolve the conflict often results in better ideas than if the conflict never occurred.
- *Remember to respect the ideas of others.*
Fight the urge to judge new ideas immediately. Being open to the ideas of others makes you and the team more effective. If only your ideas are valuable, there is little point in having a team.
- *Use the following steps to resolve conflict.*
 - Acknowledge the existence of the conflict.
 - Look for common ground.
 - Even if you don't agree, consider other points of view.
 - Develop a plan of action showing what each member will do to resolve the problem.