

# Code Of Conduct – Group 65

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## ABSTRACT

This Code Of Conduct is written by and for group 65 of the TU Delft CSE Object-Oriented Programming Project course. It contains the collaboratively agreed on rules about, among others, our values, the assignment, our goal, our planning, our communication, our commitment, the decision-making process and dealing with conflicts within the team.

## 1 SHARED TEAM VALUES

Agreeing on a set of team values is crucial as it ensures all of us are aligned with the same goals and principles, which leads to better collaboration between team members and a higher quality of the project. It is important that values are shared and followed by all members of the group therefore in this section we will outline some core values that we have agreed upon.

### 1.1 Responsibility

We will break down our project into smaller tasks and each task would be divided into different parts. Each part would then be assigned to a team member to do, and as we need all parts combined together to achieve a task's goal, it is crucial that each of us is responsible for completing our assigned part on time. This would help the project to progress according to the timeline and be done in 10 weeks. Moreover, we should put forth our best efforts to fulfill all the requirements and functionality that our individual tasks entail with a high quality. To achieve this, we should actively learn how to do things and seek help from other teammates if needed. In addition, each team member should be responsible for attending and contributing to group meetings, both face-to-face and online, so that we can discuss our progress, strategies to solve current issues, creation of to-do tasks and deadlines, etc.

### 1.2 Collaborative spirit

In our project, collaboration serves as a cornerstone value for our team to work effectively. It is important that we are all respectful of each other. We should make constructive comments and feedback on the works of our teammates, as well as clearly identify specific parts they could improve on and explain how they can improve their work. If other teammates need help, we should do our best to assist them, however, it does not mean to do their part for them but rather offer guidance for them to the correct approach. Moreover, everyone should be proactive in contributing for the benefits of our team. If a person possesses strengths or expertise in a particular area then it would be nice of him to share his knowledge and skills with the team, assisting others as needed. By doing so, we are helping our peers to develop themselves. Furthermore, as all members are equally valued, every significant decision-making process should involve everyone from the team, ensuring that they feel included and empowered to contribute.

### 1.3 Quality

Aside from meeting deadlines for our tasks, we must also deliver work that meets high quality, from code implementation to user interface design. To achieve it, we should pay close attention to details, adhere to coding standards and principles and be willing to continuously improve our work. Each team member should review their work thoroughly to identify any errors or inconsistencies before submitting it. Besides, we need to ensure that every logic paths are considered and each functional requirement is implemented in the most efficient way. We should also test all aspects of our application that we can because thorough testing is crucial to ensure the reliability and functionality of our application.

### 1.4 Effective communication

Effective communication plays a key role in enhancing strong team collaboration. Encouraging active participants is essential, this includes raising our voices for ideas and suggestions if we think they can either contribute positively to the project or resolve critical problems that our group is facing. All team members can freely share ideas and engage in discussions, thereby creating a transparent and inclusive working environment, which leads to thorough decisions. In case there are conflicts in the group, we should discuss the differences in opinions in a constructive and respectful manner, then work together to find mutually acceptable solutions. Details on how to handle conflicts are described more in depth in section 4. Also, good communication avoids potential misunderstandings between members, wasting time doing tasks that we are not asked for. Therefore, all team members should read meeting notes to know which task each one is assigned to and also regularly check our agreed-upon communication platform for updates.

### 1.5 Creativity and openness to change

All team members should embrace change as part of their work process. We should respect our teammates' opinions and suggestions as diverse perspectives could help make big improvements on our work. Actively seeking constructive feedback from others is also a good way to help us learn from others, and we should be open to making adjustments or incorporating new methods as needed. Moreover, we are encouraged to explore new techniques and approaches that would make our working process more efficient or enhance the quality of our project.

## 2 ASSIGNMENT DESCRIPTION

Our task is to create an application called "Splitly" to manage shared expenses between a group of users for a particular event. Users can create or join events and in each event, they can create and edit expenses as well as adding/inviting other people to the event. The application simplifies the process of splitting costs and keeping track of who owes what to whom. It does this by dividing an expense between group members based on the user's chosen

method of splitting (either evenly among the group or between some participants), the application then calculates the debt per person automatically. It then provides clear payment instructions (including bank transfer details) to settle the open debt within the group. An important requirement is that the app should calculate the (at most)  $N-1$  transfer instructions that are required in a group of  $N$  people, and the total amount of transferred money should be correct and minimal.

The application must have a client-server architecture and users can connect multiple clients at once to one server, so two users can use Splitly simultaneously. Users should be able to switch between events they are in, edit details about events and switch between English and Dutch while using the application. Moreover, users can choose their preferred currency for the app and they should only see that currency in all expenses. Additionally, a statistics page needs to be implemented, so users can explore the distribution of expenses for an event with a pie chart. The application should also have the functionality to automatically send notifications and reminders to participants' emails.

### 3 TARGET AND AMBITION LEVEL

As participants in this collaborative project, we uphold the following principles to foster a positive and productive environment. Our collective commitment extends beyond mere functionality; it encompasses learning, effective teamwork, and the pursuit of quality.

#### 3.1 Learning as Our Guiding Light

We recognize that this project is an educational journey. Every line of code, design decision, and debugging session contributes to our growth. We encourage curiosity, exploration, and the exchange of knowledge. Let's learn from each other's strengths and challenges.

#### 3.2 Effective Teamwork: Our Foundation

Communication, empathy, and mutual respect are non-negotiable. We value diverse perspectives and actively listen to one another. Collaborative brainstorming, code reviews, and pair programming sessions strengthen our bonds and enhance our outcomes.

#### 3.3 Quality Over Quantity: A Core Value

Rather than chasing an extensive feature list, we prioritize quality. A well-crafted, bug-free application speaks volumes. Rigorous testing, thoughtful design, and efficient algorithms are our allies. We believe in doing fewer things exceptionally well.

#### 3.4 The Perfect Working Application: Our North Star

Our goal isn't just functionality; it's perfection. We envision an application that delights users and leaves no room for improvement. Attention to detail matters: intuitive interfaces, elegant code, and robust error handling.

### 3.5 The Grade: A Balanced Target

While we aim high, we remain pragmatic. An 8 out of 10 seems like a reasonable target — a testament to our dedication without compromising our well-being. Remember, grades reflect effort, understanding, and execution. Our pursuit of excellence extends beyond the classroom.

## 4 PLANNING

As contributors to this collaborative project, we recognize the critical role of planning and accountability. Our commitment extends beyond individual tasks; it encompasses collective success, effective communication, and adherence to deadlines.

### 4.1 Concrete Decisions and Clear Roles

We believe in specificity. For each sub-assignment, we make concrete decisions about responsibilities, timelines, and deliverables. Clarity is our ally: every team member knows their role, understands the expectations, and commits to fulfilling their share of the work.

### 4.2 Weekly Planning Sessions: A Collective Effort

Collaboration begins with shared planning. Weekly sessions involve the entire team, where we discuss progress, upcoming tasks, and potential roadblocks. By aligning our efforts, we ensure that no one is left behind. These sessions also serve as a forum for addressing questions and seeking guidance.

### 4.3 Early Deadlines for Safety

We play it safe by setting internal deadlines ahead of the university's official submission dates. These early milestones act as safety nets. They allow time for unforeseen challenges, revisions, and unexpected complexities. Our motto: "Better early than rushed."

### 4.4 Final Deliverable Decision-Making: Context Matters

Who has the final say in the project's deliverable varies based on the assignment. Context matters. For technical aspects, the most knowledgeable team member may take the lead. For design or user experience, we seek consensus. Ultimately, our goal is a cohesive, well-rounded outcome that reflects our collective expertise.

### 4.5 Submitting on Behalf of the Team: A Shared Responsibility

While individual contributions matter, submitting to Brightspace is a team effort. We respect the trust placed in us. The designated submitter ensures that all elements—code, documentation, and any supplementary materials—are complete and meet the required standards.

## 5 BEHAVIOR

It's important that we establish clear guidelines for behavior to ensure good collaboration, clear communication, and effective interaction among team members. This part describes ideas how we'll

treat each other, handle disagreements, not keeping to deadlines, and determine when to ask for help a TA or teacher.

### 5.1 Behavior Towards Teammates

We are committed to treating each other with respect, friendliness and professionalism at all times. We'll be actively listening to each other's ideas, providing proper feedback, and value different points of view. We understand that every team member brings unique strengths and contributions to the project, and we will work together to use these strengths for the benefit of the team.

### 5.2 Mutual help

In addition to being friendly to other teammates, it's important to be helpful to them as well. We know that helping each other makes our project stronger. Whether it's helping with a tough task, giving advice on a hard problem, or just encouraging each other, we want to support one another. By working together and being helpful, we can overcome challenges and make our project a success, making everyone on the team happy.

### 5.3 Handling Disagreements

Disagreements can happen when collaborating with other people and can lead to better solutions. We will approach disagreements with an open mind, trying to understand the other viewpoints and finding compromises good for all members. We will not use personal attacks, or hostility towards fellow team members. If we can't reach an agreement, we will ask for help our TA or teacher.

### 5.4 Dealing with missing deadlines

Being on time is important for a team to function effectively. If a team member is late for a meeting, they are expected to communicate that beforehand to the team and provide an explanation for not being present. The team will be understanding of unpredictable situations but will also hold each other responsible for unmet commitments and respecting other's time. Repeated situations of unmet deadlines may require a discussion within the team to find a solution to the issue that is good for all teammates.

### 5.5 Escalation

If we can't fix internal problems on our own, we've made a plan for dealing with conflict escalation. First, we'll try to talk it out together. If that doesn't work, we'll ask our TA to help reach an agreement. If we still can't solve the issue, we'll talk to the teachers for advice and help with resolving the conflict. This plan clearly show us how to get help when we need it, making sure we're following the rules and staying safe.

By following these guidelines, we want to have a positive and productive working environment where all team members can contribute their ideas towards finishing our project.

## 6 COMMUNICATION

*In what ways do we communicate with each other?*

Good communication is key to an effective and peaceful team environment. Without a well-organized communication system, miscommunications can arise. Also, time can be wasted when we

do not communicate with each other timely. This section will cover ways we communicate outside of our in-person or online meetings.

### 6.1 WhatsApp

We utilize WhatsApp as our low-level, informal communication platform since it is easy to access and use. We discuss small things like our progress on certain tasks, problems we encounter, or agreements that need to be met. Here we also notify the group whenever merge requests are made, so that the team knows to take a look in GitLab.

Furthermore, we announce online meetings in WhatsApp as needed (see section Outside Collaboration). We must communicate with evident intent and not send any unnecessary messages. We must be concise and clear with whatever we want to send, not to overshadow important messages.

### 6.2 Mattermost

Mattermost serves three main purposes within our team:

- (1) Questions for the TA.
- (2) Announcements for everyone (including the TA). Examples are when the meeting notes are added to the repository and when something vital should be added to the agenda.
- (3) Significant updates or questions that impact the entire team, ensuring that everyone is aware of these crucial developments. Examples are big changes in GitLab or big agreements that need to be made.

In essence, we only use Mattermost for what **matters the most**.

## 7 COMMITMENT

*Why should the commitment be measured?*

In order to be able to deliver a completely working product, every time changes are made, all members of the team must ensure that the new features are correctly implemented and, simultaneously, useful for the final purpose of the product. Hence, a way to determine the quality of the work done by each one of the members must be implemented.

### 7.1 How should the quality of someone's work be determined?

In most cases, every new addition is going to be discussed at the weekly meetings. Thus, the chair of the current meeting is the first one to express his opinion about the new feature, offering then the possibility to every attendant to do the same. In the exceptional situation when everyone is of the opinion that the work meets the quality standards of the project, the new feature is approved by the chair. In any other situation, improvements, along with any other alternatives should be suggested and further discussed until an ideal version is found and approved.

### 7.2 Disagreements handling

Every disagreement should be the subject of a debate where pro- and contra-arguments are brought into discussion. Aspects on which a piece of work should be assessed: · Functionality · Effectiveness · Readability · Structure

### 7.3 Chair's and minute taker's commitment

Besides, the chair's and the minute taker's commitments should also be considered. As written in the agenda, at the end of every meeting, a feedback session should take place where suggestions for future meetings should be proposed by every attendant, if existent.

### 7.4 Aspects to be considered by the members regarding the quality of the meeting

Chair's attributes:

- coverage of the meeting (was every main aspect discussed or not?)
- quality of the subjects
- time-management
- tasks division among the team (if applicable)
- speech quality (clearly indicates every goal, describes the procedures, makes sure everyone is listened to)

Minute taker's attributes:

- consistency of the notes taken
- coverage of the notes taken
- time management

## 8 DECISION MAKING

*Importance of having a designed process for decision making*

It is already well known that in every teamwork project, the process of decision-making has one of the most important roles in reaching the targeted goal.

### 8.1 What should be the team's approach

Every decision must be first discussed with all team members before reaching an agreement regarding future actions! Hence, most decisions, or at least the important ones, should be taken during the weekly meetings.

Firstly, the person, who suggests the new idea/action/feature should present it to the team. If no such person exists, the current chair should do it instead. In order to avoid possible conflicts that may arise during such debates, the chair should be the one to ensure that every meeting attendant has the chance to express his point of view.

### 8.2 Outcome of the discussion

After everyone finishes exposing his opinion on the new idea, 2 outcomes could appear:

- (1) Everyone agrees and the chair expresses the final decision and adopts it.
- (2) There are some misunderstandings and, therefore, a new debate session is opened by the chair, where the parties involved have the chance to express their arguments to the others. In the end, when an agreement is reached, the chair closes the debate and concludes it.

## 9 DEALING WITH CONFLICTS

*How do you handle conflicts within the team?*

During the project a variety of conflicts may appear. These conflicts may arise for example during the decision-making process,

when it seems impossible for parties to come to an agreement. Although our process for decision-making is precisely described in the above section, it is still important to prepare in advance on what to do when such situations may come up, as to minimize the time lost to these conflicts.

A few other situations in which a conflict may arise: Communication -a team member fails to communicate/communicate appropriately-, Progress -a team member fails to deliver their tasks, or a team member is not satisfied with another team members progress-, Meetings -the team decided on a meeting date and time, but a team member does not show up or consistently shows up late-, Agreements -the team made an agreement, for example about a design choice, but a team member does not adhere to these choices, which will result in inconsistency.

### 9.1 The importance of solving conflicts

It is important for the efficiency of our team and the quality of our end-product to be able to solve conflicts effectively, reliably and preferably also fast. As mentioned before, every member of the team has committed to wanting to develop a well-functioning, good-looking full-stack product. This development process requires time which should not be lost to conflicts.

Within a well-functioning team, personal relations should be maintained and every team member should be content in their role in the group and thus dare to speak up when they do not agree.

### 9.2 General rules of how we plan to solve conflicts

In solving conflicts all of the team members should adhere to some ground rules about how to tackle these problems effectively and with mutual respect.

The first of these agreements is to have an open discussion about the conflict with involved members. In this discussion every party will speak their mind about the issue, and the others give them the opportunity to do so. It is important to support your view with arguments and to not let emotion get the upper hand. This discussion is also a good time to provide constructive feedback.

Secondly; be open to compromise. It is important to remember that a member only disagrees when they truly believe they are right about the subject and feel like their approach to the issue is for the better of the product.

Also, to make the conflict resolution process go faster, we should only involve the team members who are really involved with the issue so as to not waste others' time and to have more time for a substantive discussion.

Lastly, when the above agreements have not yet solved the conflict, an unbiased third party, preferably another team member should get involved in the conflict, since they might bring new insights which could solve the issue.

### 9.3 Escalation

If a conflict escalates, i.e. the involved parties can not come to an agreement and all of the rules above have been applied to the issue to try to solve it, an outsider with authority should come in to help settle the argument, based on their experience. This outsider should most probably be the TA who guides us with the project. Since they

have already done the project, they have a better idea about what ideas are feasible and useful for the end-project. If the conflict is about the behavior of a certain team member, the TA can also help, since they know the team -and thus the team dynamics- from the start, but still have an outsider opinion, with authority. If the TA is not able to solve the issue, they may decide to bring in a course lecturer to help settle the argument.

## 10 CONSEQUENCES

*What are the consequences if a participant in the team does not keep the agreements?*

In the case when a team member does not keep to the agreements (like being late to meetings or struggling to deliver features), there should be consequences. This should serve as an incentive to keep to the agreements the next time and reflect on one's behavior. Not adhering to the made agreements will be detrimental to the team dynamic and subsequently to the final product.

The consequences should differ in severeness, i.e. a consequence for missing an entire meeting should be greater than one for being 5 minutes late. There are multiple possible consequences:

- (1) A formal conversation in which the cause of the behavior is determined and in which new tasks with strong deadlines are made.
- (2) Do extra work before a certain deadline.
- (3) Get assigned to a different (less important) aspect of the application.
- (4) Temporarily revoke certain privileges or opportunities within the team (e.g., participation in decision-making meetings)
- (5) Termination from the team

Consequence (5) should be **avoided** at all costs and only serve as a last resort, every member of the team should collaborate in solving conflicts and coming to feasible solutions together.

## 11 OUTSIDE COLLABORATION

*How do we collaborate outside of the mandatory meetings?*

While the weekly mandatory meetings at 13:45 on Tuesdays are crucial, they are not sufficient for effective team communication. This section will outline our strategies for how we will communicate outside of these weekly meetings.

### 11.1 Google Meet

We utilize Google Meet for real-time discussions whenever necessary. Whenever a team member finds this necessary, they can announce this in WhatsApp specifying the required team members, as well as a clear purpose for the meeting. If anyone does not agree on meeting or does not find it necessary, they should announce this as well. For discussions involving more than three people, we use a WhatsApp poll to find the most suitable time slot. Whenever possible, we aim to meet before a mandatory meeting (on Sunday or Monday) to settle the discussion points.

These online meetings are also beneficial for side-by-side coding sessions. This way of working makes it easy to assist each other and ask questions. This working style could of course also be reached by working together on campus. When we work together, we align our goals and prevent individuals from becoming sidetracked.

### 11.2 Flexible Scheduling

We choose to not set fixed weekly time slots for additional meetings for several reasons. First of all, these additional meetings allow us to address urgent matters or have an effective spontaneous collaboration. Establishing fixed time slots risks wasting time if no pressing issues are present.

Secondly, this would imply every member to attend each meeting when in reality, their participation may not be necessary. Therefore, fixed time slots would again lead to time wasted for our team. However, we remain open to this decision of not setting fixed weekly time slots, as our needs can change over time.