1Table of contribution

Name	Task	Contribution [%]
Mejborn	3	50
Rylander	3	50
Erik	16	50
	30	50
Daniel	16	50
	30	50
Alexander	9	50
Claudio	9	50

Table of Tasks

Task ID	Description	Classify the complexity and extent of the task (small, medium, large)	Justify the classification, by estimating the extent of the task, e.g., in terms of
			• **number of files change, added, deleted** • **number of lines of code changes, added, deleted** • **or in case of non-coding tasks use: pages (for documentation) or lines of comments (for code comments)**
Milestone 2			
T3.1	Ask stakeholders of requirements	Small	Meeting, and writing with stakeholders.
T3.2	C++ / cmake tutorials	Small	Time spent 2-4h
T3.3	Create SMCE_Client Skeleton and runnable .exe	Small	1 file added, 1 file modified
T3.3	Feature: Implement start,stop,pause,resume	Small	1 file change (approx + 70 LOC)
T3.4	Feature: Implement uart messaging (Ongoing)	Large	1 file change (approx + 80 LOC) More complex than expected, as knowledge of functionality needs to be expanded. Many bugs were

			encountered.
T9.1	Ask stakeholders of requirements	Small	Communicate with stakeholders in Discord, understand the problem.
T9.2	Learn about MVC/MVVM	Small	Watching some youtube video(s) should be enough.
T9.3	Figure out how to implement MVC/MVVM	Medium	This is a prerequisite for the main task. It is not trivial to adapt the generic patterns MVC/MVVM to SMCE-gd.
T30.1	Ask stakeholders of requirements	Small	Writing with stakeholders.
T30.2	Implement our own version of InterpolatedCamera Class	Small	Figure out how the InterpolatedCamera class functions, reading docs and usages. Implement our own version. 2 files modified (approx + 5 LOC) 1 file added (approx + 46 LOC) Time spent: Approx 4h
T30.3	Remove node being added to scene tree	Small	Remove the node creation from the code. Change how the rotation was calculated, since there was no longer a node to rotate with (as well as the car). We now needed to keep a "fake" point in space that could keep track of rotation. 2 files modified (approx + 6 LOC) Time spent: Approx 3h 45m
T30.4	Merge all the spatial "camera" objects and their script into a single Camera spatial	Medium	Remove all the extra nodes under the camera scene. Merge the interpolated camera functionality into the controllable camera. Create a superclass for everything camera modes have in common to make it easy to add more modes in the future. Make the old FreeCam and LockedCam scripts into subclasses of this superclass, to allow for the use of polymorphism in ControllableCamera. Resolve any bugs that come with this transition (6.5h spent resolving bugs and fine tuning behaviour) 1 files added (approx + 23 LOC) 10 files modified (approx + 150 LOC) Time spent: Approx 11h 45m
T30.5	Various essential work	Small	Learning about the built in godot classes. Watching tutorials on matrix rotations, including Euler angles and quaternions. Testing the new program and comparing it

			to the old one to make sure that the behaviour is the same, and that any changed behaviour is intended. Time spent: Approx 4h
		Milestone 3	
T3.5	Feature: Implement uart messaging	Medium	Finished from last sprint, the bug is still there in windows, switched to a UNIX based system to continue development. Took way longer than it should have approx 10h+ of debugging, before switching the development environment to UNIX from Windows.
T3.6	Refactor of structure	Small	2 file changes (approx + 10 LOC) Refactored where the SMCE_Client file was, from src folder to its own Client folder. Also added in cmake so it copies the "right" SMCE.dll at compile time.
T3.7	Feature: Implement GPIO pin value setter	Small	1 file change (approx + 40 LOC)
T3.8	Feature: Implement GPIO pin reader	Small	1 file change (approx + 20 LOC)
T3.9	Feature: Implement recompile sketch functionality	Medium	1 file change (approx + 30 LOC) Should be finished soon, encountered problem with thread handling, left for next milestone.
T3.10	Refactoring of code	Small	Refactoring code to methods to make it easier to understand.
T9.4	Refactor code inside src	Large	This is the main task. There are many scripts that need to be refactored here, and tested too after each edit. (Ongoing)
T16.1	Understand what needs to be done for the task. Realised that there are several ways to go about it, and trying to figure out which is the best	Small	Time spent: Approx 8h
T16.2	Implement the class that is needed to be able to access the framebuffer during runtime	Medium	2 files added(approx + 175 LOC)
T16.3	Add the ArduinoGraphics and MKRRGBMatrix libraries as plugins in the front end	Small	1 file modified (approx + 20 LOC)

T16.4	Add a patched version of MKRRGBMatrix to the front end	Medium	2 files added (approx + 75 LOC)
Milestone 4			
T16.5	Resolved issues with boost	Medium	Time spent: Approx 10h Turned out to be an issue with the main libSMCE repository's master branch on Windows. Using the latest release resolved the issues.
T16.6	Add UI element to display screenbuffer content	Medium	3 files added (approx + 55 LOC)
T16.7	Add DisplayScreen vehicle attachment	Medium	1 file modified (approx + 35 LOC)
T16.8	Modified various files in the frontend to support our new attachment.	Small	Was for example necessary to add our new attachment's name to the list of global attachments. Also added a new slot on the car at the logo on the request of the stakeholders. Time spent: Approx 2h
T16.9	Created sketch files and config files that can be used to run the program with the display	Small	Sketch files for a smiley face and a bouncing ball on the display. Config files for setting the attachments from scratch. Time spent: Approx 3h
T16.10	Fixed various bugs that occured during development	Small	Issues with the config files merging and creating weird behaviour (solved with from_scratch). Issues with "bleed over" in the texture that was used for the UI and car component. Solved by disabling the filter. Issues with sizes of nodes in godot not behaving like expected, requiring extra time to understand and fix. Time spent: Approx 7h
T3.9	Got recompiling of sketches to work	Medium	1 file change (approx + 20 LOC) (Carried on from GM3) encountered a problem with thread handling, works now.
T3.11	Implementation of colored text in console	Small	2 file change (approx + 10 LOC) 1 library added, downloaded with cmake during compile time (termcolor).

T3.12	Implemented start arguments	Small	2 file changes (approx + 40 LOC) 1 library added, downloaded with cmake during compile time (Lyra).
T3.13	Implemented possibility to set smce_resource folder at start	Small	1 file change (approx + 10 LOC)
T3.14	Implemented possibility to set arduino root folder at start	Small	1 file change (approx + 10 LOC)
T3.15	Implement support for writing uart messages to file	Small / Medium	2 new files 2 file changes (approx + 50 LOC)
T9.4	Refactor ProfileSelector.gd	Small	2 new files (View and ViewModel scripts) LOC: 100 Time spent: 6h
T9.5	Refactor Master.gd	Medium	Moved the variables profile_manager, world, and sketch_manager to other scripts outside the View-layer 2 new files (View and ViewModel scripts) LOC: 200 Time spent: 10h
T9.6	Refactor SettingPane.gd	Medium	2 new files (View and ViewModel scripts) LOC: 150 Time to spend: 8h
T9.7	Refactor SmceHud.gd	Large	2 new files (View and ViewModel scripts) LOC estimated: 400 Time to spend: 16h
T9.8	Implement communication between view and viewmodel with signals	Medium	No new files Change existing files LOC: 50 Time to spend: 8h
T9.9	Remove ProfileManager from View layer	Medium	2 new files 3 changed files LOC: 200 Time spent: 16h