	22.11.2023.	29.11.2023.	06.12.2023.	13.12.2023.	20.12.2023.	27.12.2023.	03.01.2024.	10.01.2024.	17.01.2024.	24.01.2023.	31.01.2024.	07.02.2024.	14.02.2024.	21.02.2024.	28.02.2024.	07.03.2024.	14.03.2024.	21.03.2024.	28.03.2024.	04.04.2024.	11.04.2024.	18.04.2024.	25.04.2024.	02.05.2024	09.05.2024.
Working week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Tasks	Read documentation Task assignment Setup workspace for Brain Setup SimuSetup Computer server simulator Setup workspace for camera	Image preprocessing Camera image transformation and basicline detection lator A* graph analisys forpath planning Setup workspace for Embedded	Create new componentexamples Camera calibration Measure distances between objects on image	Lane detection Detect distance errorfrom lane	Add TOF sensor component	Traffic sign detection Traffic sign classification Research other path planning algorithms	Learn Control Systemsconcepts and basic implementations	Receive and process datafrom IMU sensor Vehicle-to-Traffic communication and interaction (localisation andtraffic data)	Add new camera	Car steering control andorientation adjustment Speed control (PID) Define object properties file	Intersection detection Intersection navigation Lane following	Implement path planning	Implement steering feedbackfrom IMU Implement FSM for moving (const speed,acceleration, braking) Camera and TOF fusion for emergency object detection af on track	fic light detecti	Implement lane switching Road search for mobile andstatic vehicles and pedestrians Roundabout detection	Implement FSM for semaphore interaction Roundabout navigation	Define static and exception behaviour	Implement FSM for parking Optimizations Define priorities of actions Optimizations	Testing Optimizations	Code finalization		
Results	All teammates have an understanding of their tasks	There are algorithms in place to startimplementing perception functions	The car can determine it's position and orientation on the track, as well as the position of other elements on the track				It is possible to control the speed of the car based on it's position on the map				The car cankeep it's postion between lanes	The car can determine when turning is necessary and successfully execute a turn			The car can overtake or pass an object onthe road				The car canreact to unexpected situations	The car can detect a freeparking spot and positionitself in it		All functionalities are finished and tested		
	All workspaces are set up and ready for work				The car can calculate it's distance from track lines		The car can distinguish traffic signs				The car can navigate intersections in accordance with it's planned path with respect to other objects in and around the intersection				The car is capable of stopping for pedestrians and trafficlights, emergency braking is also implemented				The car can navigate roundabouts and behave according to traffic rules whenit encounters a traffic light		The car can determine whichactions are important in the given moment			
Organization																									
Inputs and sensors																									
Research																									
Perception																									
Behaviour																									
Vehicle control																									

MCU

TOF Sensor New component

IMU

Battery voltage and consuption

CAMERA 1

CAMERA 2

CameraHandler Lane

CAMERA 1

CameraHandler Sign and Others

CAMERA 2

Distance sensor (tof400) listener

Traffic_light UDP Listener

V2V - UWB Listener

GPS_talker Car location service

IMU listener

Car inforamtion listner (Battery)

Sensors and inputs

Lane detection

Sign detection

Intersection detection

Traffic light detection and data fusion

Object classifier (Pedestrians, other cars and barriers detection)

Car Localization

Sensors and inputs processing

Traffic monitor talker

Strategy (Behavioral tree)

Decision making (Rule based system)

Path planning

Map

Behavior and motion plan

DEBUG

Break

Acceleration

V const

Road search

Switch lane

Parking FSM

Lane following

Intersection navigation

Roundabout navigation

Vehicle control

PID Controller

Steering

Velocity

PID

Logging

SerialHandler

Talker

Serial link with MCU

MCU