INSTRUCTIONS:
Fill out the hazard analysis and risk assessment below.
HA-001 should be for the lane departure warning function as discussed in
HA-002 should be for the lane keeping assistance function as discussed in
Then come up with your own situations and hazards for the lane assistanc
When finished, export your spreadsheet as a pdf file so that a reviewer car
HA-003 Car Display ECU
HA-004 Camera Sensor

Hazard ID			
	Operational Mode	**Operational Scenario**	**Environmental Details**
HA-001	OM03 - Normal Driving	OS03 - Highway	EN01 - Normal
HA-002	OM03 - Normal Driving	OS03 - Highway	EN01 - Normal
HA-003	OM03 - Normal Driving	OS03 - Highway	EN01 - Normal
HA-004	OM03 - Normal Driving	OS03 - Highway	EN01 - Normal

the lecture.
ı the lecture.
:e system. Fill in the HA-003 and HA-004 rows.
ı easily see your work.

Situational Analysis		
Situation Details	**Other Details (optional)**	**Item Usage (function)**
SD03 - High speed	Night Time + Flow	Correctly used
SD03 - High speed	Night Time + Flow	Correctly used
SD03 - High speed	Night Time + Flow	Correctly used
SD03 - High speed	Night Time + Flow	Correctly used

Situation Description	Function	Deviation
Normal Driving on Highway during Normal day	Lane Departure Warning	DV01 - Function not activated
Normal Driving on Highway during Normal day	Lane Keeping	DV01 - Function not activated
Normal Driving on Highway during Normal day	Car Display ECU system shall provide a	DV01 - Function not activated
Normal Driving on Highway during Normal day	Camera Sensor shall detect the the road	DV13 - Sensor sensitivity is too l

Hazard Identification		
Deviation Details	**Hazardous Event (resulting effect)**	**Event Details**
Automatic Oscillating	EV00 - Collision with other vehicles	Vehicle crashes into other vehicles
Steering torque was not	EV00 - Collision with other vehicles	Vehicle crashes into other vehicles
Car display did not provide warning for lane departure	EV07 - None	Driver is not noticing the feedback
Camera Sensor does not detect the lane and as a	EV00 - Collision with other vehicles	Vehicle crashes into other vehicles

Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)
Failure of oscillating steering	E2 - Low probability	High driving is part of regular driving
Failure of Steering wheel torque	E2 - Low probability	High driving is part of regular driving
Failure of Car Display system	E1 - Very low probability	High driving is part of regular driving
Failure of Camera Sensors	E1 - Very low probability	High driving is part of regular driving

Hazardous Event Classification		
Severity (of potential harm)	**Rationale (for severity)**	**Controllability (of hazardous event)**
S3 - Life-threatening or fatal injuries	Because the driver is	C3 - Difficult to control or uncontrollable
S3 - Life-threatening or fatal injuries	Because the driver is	C3 - Difficult to control or uncontrollable
S0 - No Injuries	Severity would be low	C0 - Controllable in general
S3 - Life-threatening or fatal injuries	Because the driver is	C3 - Difficult to control or uncontrollable

	Determi
Rationale (for controllability)	**ASIL Determination**
The malfunction was that the lane keeping	B
The malfunction was that the lane keeping	B
Driver still has steering wheel feedback	QM
The malfunction was that the lane keeping	A

nation of ASIL and Safety Goals

Safety Goal
be time limited and the additional steering
be time limited and the additional steering
Total loss of Car Display ECU warning shall be prevented
The Driver should be warned if the Camera Sensor suddenly stopped so that the driver