INSTRUCTIONS:
Fill out the hazard analysis and risk assessment below.
HA-001 should be for the lane departure warning function as discussed in the lecture.
HA-002 should be for the lane keeping assistance function as discussed in the lecture.
Then come up with your own situations and hazards for the same assistance system. Fill in the HA-003 and HA-004 rows.
When finished, export your spreadsheet as a pdf file so that a reviewer can easily see your work.

Hazard ID	Situational Analysis										Hazard Identification			Hazardous Event Classification						Determination of ASIL and Safety Goals	
	Operational Mode	Operational Scenario	Environmental Details	Situation Details	Other Details (continued)	Item Usage (function)	Situation Description	Function	Deviation	Deviation Details	Hazardous Event (baseline effect)	Event Details	Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)	Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)	ASIL Determination	Safety Goal
HA-001	OM03 - Normal Driving	OS04 - Highway	EN01 - Normal conditions	SD02 - High Speed		IU01 - Correctly used	Normal Driving on Highway during Normal conditions with High Speed (Correctly used).	Lane Departure Warning (LDW)	DV04 - Actor effect is too much	The LDW function applies an oscillating torque with very high torque (above limit).	EV00 - Collision with other vehicle	High haptic feedback affects driver's ability to steer as intended. The driver loses control of the vehicle and collides with another vehicle or with road infrastructure.	The LDW function applies an oscillating torque with very high torque (above limit).	E3 - Medium probability	The driver is on a highway and actives the LDW functions. It happens often.	S3 - Life-threatening or fatal injuries	Because the driver is traveling at high speed, severity would be S3.	C3 - Difficult to control or uncontrollable	If the lane departure function causes the steering wheel to vibrate excessively with swings of the steering wheel, most of the drivers are difficult to control the vechile.	C	The oscillating steering torque from the lane departure warning function shall be limited.
HA-002	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal conditions	SD02 - High Speed		IU02 - Incorrectly used	Normal Driving on Country Road during Normal conditions with High Speed (Incorrectly used)	Lane Keeping Assistance (LKA)	DV03 - Function always activated	Lane Keeping Assistance fuction is activated.	EV00 - Collision with other vehicle	The driver takes off hands from wheel steering and misuses the lane keep assitance function as an autonomous function.	The driver misused the LKA function.	E2 - Low probability	The driver is on a country road and misusing the system. That combination probably does not happen often.	S3 - Life-threatening or fatal injuries	Because the driver is traveling at high speed, severity would be S3.	C3 - Difficult to control or ...	The malfunction is that the lane keeping assistance was always on and had no time limit, so drivers could take both hands off the wheel. Because hands aren't on the wheel at high speeds, a vehicle accident would not be controllable.	B	The lane keeping assistance function shall be time limited and the additional steering torque shall end after a given time interval so that the driver cannot misuse the system for autonomous driving.
HA-003	OM03 - Normal Driving	OS02 - City Road	EN06 - Rain (slippery road)	SD01 - Low Speed		IU01 - Correctly used	Normal Driving on City Road during Rain conditions with Low Speed (Correctly used)	Lane Departure Warning (LDW)	DV04 - Actor effect is too much	The LDW function shall apply an oscillating torque with very high torque (above limit).	EV00 - Collision with other vehicle	High haptic feedback affects driver's ability to steer as intended. The driver loses control of the vehicle and collides with another vehicle or with road infrastructure.	The LDW function applies an oscillating torque with very high torque (above limit).	E3 - Medium probability	The driver is on a city road. It happens often.	S1 - Light and moderate injuries	A low speed collision implies severity of S1.	C3 - Difficult to control or uncontrollable	Controllability is C3 because the steering wheel jerking back and forth violently would be difficult to control even at lower speeds.	A	The oscillating steering torque from the lane departure warning function shall be limited.
HA-004	OM03 - Normal Driving	OS03 - City Road	EN01 - Normal conditions	SD01 - Low Speed		IU02 - Correctly used	Normal Driving on City Road during Normal conditions with Low Speed (Correctly used)	Lane Departure Warning (LDW)	DV04 - Actor effect is too much	The LDW function applies an oscillating torque with very high torque (above limit).	EV01 - Collision with other vehicle	High haptic feedback affects driver's ability to steer as intended. The driver loses control of the vehicle and collides with another vehicle or with road infrastructure.	The LDW function applies an oscillating torque with very high torque (above limit).	E4 - High probability	The driver is on a city dry road. It always happen.	S1 - Light and moderate injuries	A low speed collision implies severity of S1.	C3 - Difficult to control or uncontrollable	Controllability is C3 because the steering wheel jerking back and forth violently would be difficult to control even at lower speeds.	B	The oscillating steering torque from the lane departure warning function shall be limited.