SE: Portfolio - Case Studies

Session 8

Functions: Vehicle Dashboard

The automotive industry has seen significant growth in South Africa over the last few years and contributes significantly to the GDP of the country. There are only 22 companies in South Africa involved in the production of cars and commercial vehicles and you've been hired by one of them to be part of their software engineering team.

You've been selected to be in charge of one of the most important aspects of the car: the onboard entertainment system. Given how vital and powerful technology is in our lives, the vehicle dashboard is a major contributing factor when deciding which car to buy. The features offered, the attractiveness of the user interface, how "smart" the system all play a role in the driver experience.

The original software used, called DashMaster, has become outdated and is facing very stiff competition in the industry. You have to design the newest vehicle dashboard software, DashMaster Pro, which will be used for the onboard entertainment system in the next generation of vehicles produced by the company. This case study will involve creating the backend of the system only.

Students are tasked with designing the backend of a vehicle dashboard and infotainment system which leverages the terminal as opposed to the entertainment system and screen found in cars. The purpose of this task is to design all the functions that will be used by drivers. There are several categories each of which has several functions available to the driver. Students must ensure that the system is well documented, easily modifiable and modular.