

Racing games are one of the most popular video game genres today. The main goal of this work was to design and implement a 3D racing game that allow users to select, unlock and improve vehicles in which players race on various tracks. These tracks can be unlocked by player. The game provides players with game modes such as time mode, elimination mode and classic race mode each setting different conditions for the successful completion of the race. Players in the game can create, delete and log in to players accounts, which contain informations about the current point status of the player as well as keep all records, unlocked tracks and cars that the user unlocks during the game. Part of the game is the Replay option, which allows player to view a record of his ride. The project itself includes an editor that allow developers easy manipulation, repair, and addition of new tracks and cars. During implementation of the game, we used the Unity game engine, which provides us with great support in creating games. This work addresses the design, engineering and implementation of tracks, vehicles, player accounts and the user interface that the game will contain. In the analysis we tried to find the best solutions to implementation problems, including the creation of models, method of creating a record or the method of implementation and the behaviour of artificial intelligence. Finally, we described how to control the editors that we implemented in the project in Unity.