***Cars Game Documentation***

***Introduction:***

**Team “Genie”** includes the following members:

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Our team “Genie” tried to reproduce a game that many of us have played in our younger days – f1 race. But in order to be creative our team figured out that the pixilated car design and the gameplay of “falling cars” are somehow old. So we invented a brand new look for our car using ASCII Table characters. For better visualization our game is being played in landscape mode. So the main difference with the classic game is that we use the buttons for “Up Arrow” and “Down Arrow”.

We named our console game “Car race F1” so that it reminds of the primary source of our idea. We used 13 more methods apart from the main function so that every member of the team can take part at least for 1 method. In the beginning we created 1 structure for objects (cars). And we used this structure for every car in the game.

A player can set his best score and can improve it with every new game played. We used a method that saves the information about the best score into file. Another method is being used to read the best score from the file. The player has 3 lives available at the start of the game with a chance to increase them after a certain amount of points. Additional points could be earned when passing through bonus items. We also set current speed that accelerates in process. Therefore the longer one plays the game, the faster the incoming cars will “fall”. And when the lives are over the game displays information about player’s score and the best score so far.

***Description:***

In order to accomplish the game we used 13 different methods a part from the main one. First of all we created ***WriteIntoFile()*** method for writing into file the best score. Our second method is ***ReadFromFile()*** which we use to read the best score from the file saved before. We used the ***PrintOnPosition()*** method for printing on the console the object we want, where we want. It requires the coordinates, the color for the object and an array of chars.

Furthermore we used the method ***Print()*** for setting the cursor where we want in the console display. We used the ***PrintStringOnPosition()*** method to print the final “picture” when the game ends (when the player is out of lives and dies). We added other methods called ***MoveUserCar()*** *,* ***MoveUserCarDown()*** and ***MoveUserCarUp()*** in order to move the player’s car up and down. We divided the algorithm for moving objects on the screen in order to be more understandable. Our **NewObject()** method declares new object for our structure and **OldCar()** methods help us to cast the “falling” cars. We made another method called ***DrawInfo()*** that is being used to print on the screen information about the lives, speed, score, etc. Finally we have three boolean methods ***HittingCars()*** for checking if the user’s car has been hit by the “falling car”, another for checking whether a bonus is hit and another method ***EndGame()*** for checking if the lives of the player are over. And last but not least in the ***Main()*** method we set the functions in specific order, we clear the console when needed and we cut the lives of the user when needed.

We used <https://github.com/> for developing our project so here’s the link of our Cars Game:

<https://github.com/EmilMitev/TelerikTeamProject>