Technical assignment

**1. Name application under development**

*Sudoku*

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**2. Purpose application under development**

*The purpose of the Sudoku Solver game is to provide users with a graphical interface to play and solve Sudoku puzzles. The application aims to improve the user's logical thinking and problem solving skills while providing an enjoyable gaming experience.*

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3. **Goal and Objectives of the Project**

*Goal: Develop a Sudoku game using PyQt5 and focusing on object-oriented programming principles and GUI design. Use a special algorithm to generate an entirely random Sudoku puzzle.*

*Tasks:*

*-Design and implement a user-friendly graphical interface using PyQt5.*

*-Develop a data structure for the Sudoku board and implement Sudoku logic.*

*-Implement a backtracking algorithm to solve Sudoku puzzles.*

*-Generate entirely random Sudoku puzzles of varying difficulty levels.*

*-Allow users to enter numbers into the Sudoku grid and validate their moves.*

*-Test and debug the program to ensure optimal performance and user-friendliness.*

*-Document the project, including installation and usage instructions.*

4. **Main Functionalities of the Application**

*4.1* Displaying the Sudoku Grid

*4.1.1* Create a graphical user interface using PyQt5 to display a 9x9 grid representing the Sudoku board

4.1.2 *Style the grid to provide a visually appealing and intuitive user interface*

*4.2*

*4.3*

*4.4*

*4.5*

*4.6*

*Author: Danilka06*

*Github:* *https://github.com/Danilka06*

*Version: 1.0.0*

*Updates:1-4 paragraphs*