# SPECIFICATION DOCUMENT, OBSERVATIONS, CONCLUSIONS DEVELOPMENT AND EXPERIENCES IN HASKEL

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# MASTERMIND

# PROJECT DESCRIPTION

The MasterMind is a game in which the user guesses a sequence of colors using different color combinations that hides your opponent, in this case the opponent is the computer, at the end of each turn the opponent will tell you how many colors you are right and if well placed or not.

To know how to guess whether successful or not will be white and black colors, the black indicates that happened to one color but not to change its position that White is right to suggest that the position and color, the game ends when all colors have guessed the correct position of each color in this case when 4 colors appear white.

## WHO SHOULD THE APPLICATION

This game is intended for any user who likes games adivinazan, is intended for users who have skills to guess a random sequence. The game takes much into account the user's mental ability has been implemented as a genetic algorithm that makes it a better option to select the choice of colors.

#### COMMENTS

Develop in Haskel was complicated, had to refresh all the knowledge of recursion to implement this function is that Haskell is a purely functional language, was obtained complications in developing functions to make randomness and putting a element within an array, so it had to investigate and analyze many examples implentar to what I wanted to do for our project.

### CONCLUSIONS

In this project we learned to solve genetic algorithms, which allow the best choice would a target population in our project is implemented it for a better choice would dela population that random color for each correct.

## **EXPERIENCES**

Learning a purely functional language perimitido be delayed in the efficient implementation of the project. Multiple roles have allowed language to better implementation, in which language was rare not to find the FOR and WHILE statements, doing a little research on functional programming found that this type of language is almost implosible find such sentences because it applies recursion on the whole language.