

Hangman on Pt-51

1. [20 points] In this project, you will be creating the Hangman game on the Pt-51 kit. In this game, a player has to guess a word by sequentially guessing letters in the word. See [https://en.wikipedia.org/wiki/Hangman_\(game\)](https://en.wikipedia.org/wiki/Hangman_(game)) for more details.
 - Initially, the player is shown a certain number of blanks on the LCD. This reveals the number of letters in the word. Blanks can be depicted using hyphens or underscores.
 - The player has to use switches on the Pt-51 to input a letter as his first guess.
 - As there are four switches and 26 possible letters, the input has to be taken a nibble at a time.
 - First, a mapping between bytes and the 26 alphabets has to be decided and shared with the player. This is done via a text file containing the mapping. For example, 00H could represent a, 01H could represent b, ..., 19H could represent z.
 - The player consults the mapping text file and translates his guess letter into a byte.
 - The player inputs the byte using the switches, one nibble at a time.
 - If the letter guessed by the player is present in the word, the letter is revealed at the appropriate locations in the word.
 - If the letter guessed by the player is not present in the word, the number of incorrect guesses is incremented by one. The number of incorrect guesses should be shown in the LCD during the game.
 - The player continues to guess letters until one of the following events occurs:
 - If the number of incorrect letter guesses reaches six, the player loses.
 - If the player guesses all the letters in the word correctly, the player wins.
 - The game should support at least 100 words which are 4 or 5 or 6 letters long. These words will be hardcoded in the program.