Programming Project: 2D Stealth Platformer

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# Analysis of the problem

## Description and justification of the features that make the problem solvable by computational methods, and an explanation of why it is amenable to a computational approach.

### Thinking Abstractly

The problem I am addressing is the entertainment of teenagers with a platformer game. I would like to attempt to solve this problem as I have a personal interest in videogames and having a go myself is of great interest to me. With every videogame, such as ‘Pong’, there is great abstraction at work, the player rarely witnesses what goes on in the background and there is usually a lot going on in the background. My project will be no different from those already out there. The players, NPCs (Non Player Characters) and map design will be abstracted to a level that is visually appealing but not too complicated to the player. Score and health will be displayed on screen but how they work will be hidden. NPCs will have an area of vision, these will be seen as a ray of light, but that is all the player will see.

### Thinking Ahead

The user will have a few inputs to enter such as the direction they wish to travel, whether they are crouching and so on. These will be the main inputs that the player has to enter; the rest will be up to the program. It will have some precondition like setting the health to 100% and the score to zero. Things like speed will stay the same throughout the gameplay, although there will be different levels of speed that the user can choose from, however, these values will stay the same. Almost all of the variables will have an integer data type, although, I may have a section where the user can enter a name which would be stored in a string data type. For validation, I already have many bits of reusable code available to me, such as checking for a valid input.

### Thinking Procedurally

There will be many different sub procedures for my game