# Brief

Retro Games Ltd has commissioned you to design and develop a simplified version of Sokoban. Sokoban is a popular game by which a player pushes crates around a map to get them all in the right location. Sokoban is a single player game. The game is played on a 2 dimensional grid, but the rooms are not usually of regular shape. The edges of the room are indicated by a wall, and the player and boxes cannot get through the wall. There is a warehouse keeper, who the player must control in order to move the crates from their starting positions onto the diamonds. The diamonds are the end points for the crates. You can only push a crate when you are to one side of it and its opposite side is clear, which makes the task somewhat tricky for more complicated maps.

There are walls all around the map, and also in the middle in various configurations. Crates cannot be pushed through walls. Once a crate is up against a wall you can only push it along the wall, as you need to get behind a crate in order to push it. Once a crate is in a corner it is impossible to move it again. The warehouse keeper is unable to climb over crates, and is only strong enough to move one crate at a time. Crates can only be pushed, not pulled. The game will require at least five levels. Each level should be harder to solve than the previous one, either by having more crates or obstacles, or tighter corridors, or a more complex starting arrangement of crates. The program should record how many moves a player takes to solve a level, and output this information visually.