**Name** | A Hole New Perspective  
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**Synopsis** | In this game, the player controls a 3D object. He has the controls to rotate this object in any direction. The gameplay revolves around a wall with a hole approaching the object, the hole in the wall is big enough to fit the object, but not in every orientation.  
  The player then needs to rotate the object so it can fit through the wall.  
  The holes can be a 2D projection of the object or just a random shape big enough to fit the object. In order to increase the difficulty we can add another wall coming from another angle at the same time or we can adjust the location of the camera so the wall comes in from a different angle.  
**Domain** | Education/Training  
**Date** | 09/11/2020 - 29/01/2021  
**Advantages** | The player is challenged to subconsciously map a 3D object to a 2D plane. This skill uses the aspect of perspective taking from different angles, for instance the angle from which the walls come. The player is also challenged to mentally rotate the 3D object to fit these perspectives. Since there are an infinite number of possible objects and hole shapes, the player can be given multiple difficulties and scenarios. This results in a generalized way of training perspective taking and mental rotation that is widely applicable and not specific to any field.  
**Research Highlights** | Skill assessment through the use of digital perspective taking/spatial orientation test.  
  Procedural object generation using a weighted tree structure to control difficulty.  
**Paper** | [https://www.overleaf.com/project/5fad9c3d37cebd3773a90a88](https://www.overleaf.com/project/5fad9c3d37cebd3773a90a88)  
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**Course** | IN4302 - Building Serious Games  
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