



Objective

The objective in this exercise is to practice some of the techniques you have learned.

Overview

In this exercise, you will create a physical database using the modelling process – a scenario is given below.

Scenario

You have been asked to design the data structures for a new, multiplayer game from AdventureWorks, set in a Haunted Mansion.

The game revolves around characters. Each player is a character who journeys through the house searching for artefacts, gold coins, and weapons. Each character can possess at most two weapons (one for each hand). Each character can carry up to five artefacts, but artefacts may be traded with other characters for gold. Characters can acquire unlimited gold coins.

As the characters move around the house, they will encounter and fight with various ghosts and ghouls using the weapon(s) they possess. Artefacts increase the power of weapon strikes according to what kind of artefact it is, but they can only be used once. Ghosts and Ghouls have no weapons but suck 5% of the life force from characters each time they strike. When life force reaches zero the character dies. If the character is killed, then the game is over. The winner is the first player to reach 1000 gold coins or the last hero standing!

Identify the Entities (pun intended!) and their relationships. and draw a Conceptual Data Diagram (see Part 1 below).

It is IMPORTANT to distinguish between data and functionality. Only data should be represented in your diagrams.

Part 1

Create a Conceptual Data Diagram showing entities and relationships.

Part 2

Using the Conceptual Data Diagram from Part 1, draw up a Logical Data Diagram.

Part 3

Create a Physical Data Diagram showing all tables, columns, and data types to be used in your database.