# **Project 4C**

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Modelling:

We have used a college building to demonstrate our project. The building is similar to Woodward. We have implemented two floors with 4 classrooms on each floor. To navigate through the corridors we have installed doors at the start of each corridor. To go the next floor (or previous floor) we have installed lifts at two positions one each to go up and go down respectively. We have shown two views on the canvas to give a better understanding of where you are currently, and to give you an overview of the whole model.

Rendering:

A hierarchical rendering strategy was employed in a simplistic manner to tag every quad polygon to belong to certain categories.

Each quad can belong to one of 4 corridor categories (1, 2, 3 or 4). Each corridor has a predefined configuration of objects. Each quad polygon is further tagged to specify the type of object it is part of (Eg: Door, ceiling, floor, etc). This strategy helps to customize each quad polygon with different object types and helps in customizing the building structure more flexible. We keep a count of the total number of points created and make a call to the render function only once. You can peek through the windows to see what is going on inside the classrooms.

One color texture panel was created to encapsulate all the necessary texture images. We created necessary texture co-ordinate arrays and used them accordingly by identifying the type of object being rendered (Using object tags)

Navigational Features:

The up and down arrow keys are used to navigate through the corridors.

Up Arrow to go straight.

Down Arrow to go backwards.

The w, z, a, d keys are used to look around from wherever you are standing.

W – Look Up

Z – Look Down

A – Look Left

D – Look Right

At the end of the second corridor you will reach a lift door. Here all navigation controls will be disabled, and the user must press L to go to the next floor. If Similarly, at the end of the fourth corridor you must press L to go to the previous floor.

Lighting Controls:

Use the light toggle button on the UI to turn lights on and off.