CAD I REPORT

Architecture Design / CAD I

1. <u>Introduction</u>

- The aim of this project is to understand the fundamental principles of modelling a 3D Architectural project which is acted as an entire process from a newbie start to get used to a 3D program until finalizing the complete separator. Its values are vital for student not only for this module but can also utilize these skills to apply for a further modules/projects. This report is going to focus on the CAD methodology and approaching in relation to what we learned throughout the weeks.

2. <u>CAD methodology and approach</u>

- *Primary Stage*: This is where the preliminary design is initially taken place. Create a various shape of rectangles by using commands: Rectangle, Polyline, line, … After creating "skeleton" sketch, it is then switched-on to solid walls/floor by using Offset and ExtrudeCrv Command. Doors and windows are established through the assemble of commands from ExtractSrf the surface that need to be Trim, Offset the Frame for an aesthetic appearance. In some special cases, few elements with unsymmetric/unsual configuration can also be create by firstly create array of Layers run coordinately with the curve of the elements, it's then attached together and

transformed into wanted shape by using command: Loft, this command is quite usefull for generating uncommon geometry.
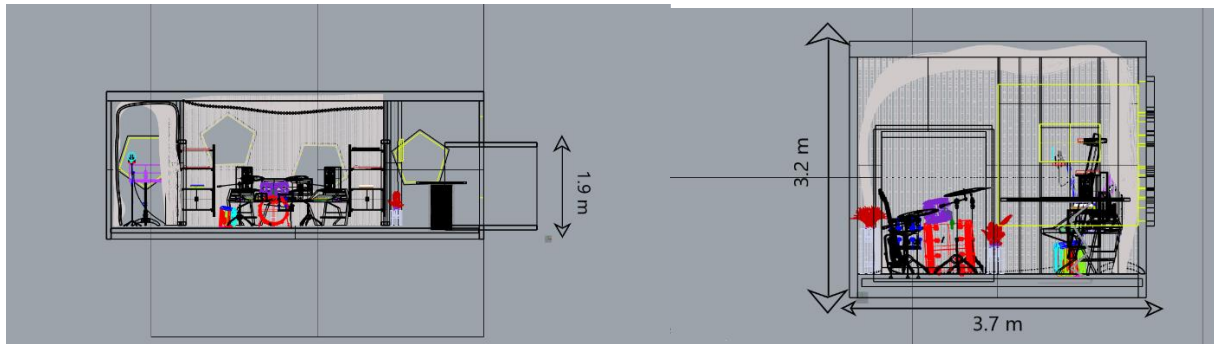

Figure 1. Floor Plan and Front View

- *Secondary Stage: Create additionally function component*. Firstly, Wooden grid was meant to be playing sufficient role as an noise cancelling 'plaster'/layer, it has been created by generate a Loft command to create a sub-layer of a room, it's then been modified its shape by using Gumball to drag or simply using PointsOn command. After achieving admired shape, the bunch of thin layers are now create along the actual Loft by using Contour command. It is then finalized by increased its thickness with ExtrudeCrv command in the right directions. So as to Waffle Roof/Pavilion.
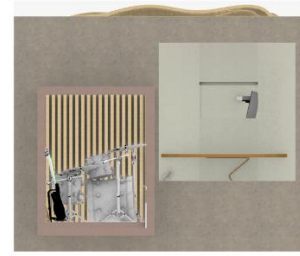
Figure 2. Design Development

- *Final Stage: Modify Materialisation*. This stage is where the 'blank' components are modified with specific material related with its primary scheme. In my case, Concrete was applied to the exterior façade while masonry/sand lime brick was used for an internal wall. Pavilion and inside grids were both instituted by timber but unlike grids, because the effect of different factors (weathers, intrusion...), it can be coated with special sealant act like an insulation to prevent unwanted damage and maintain it for long-term using.
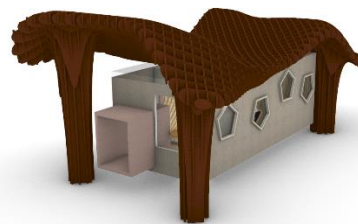

Figure 3. Rendered Project

3. <u>Discussion</u>

- After completely finalize the project, we are now evaluating the process in which has gone through. For rooms splitting scheme, the separator has been divided into 3 separate rooms: rest room/compose room, the audio room and the record room. In my opinion, the arrangement is clear straight-forward, however, the size of the restroom is matter as it seems to be a little narrow, thus it can only fit comfortably for one at a time. Moreover, the wooden grid that been added turn out to be functionless as it does not contribute to any roles. Last but not least, the optional Waffle that create above the glazer roof, apart from preventing harsh UV light as the rooftop is create entirely by transparent glass, like wooden grid, it is also presenting more like an ornament rather than a architectural modernist elements.

- Except three issues that I mention above, the separator has developed smoothly to what has been planned for. It is fully satisfying the requirements.