

INTERNSHIP AT AULEEK IN “3D INTERIOR DESIGN”

BY

Zaowad Hossain Chowdhury

ID: 183-40-539

This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Multimedia and Creative Technology

Supervised By

Mr. Arif Ahmed

Associate professor

Department of Multimedia and Creative Technology

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

October1 , 2022

APPROVAL

This project titled "**3D Interior Design**", submitted by Zaowad Hossain Chowdhury(183-40-539) to the Department of Multimedia and Creative Technology, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Multimedia and Creative Technology and approved as to its style and contents. The presentation was held on 01/10/2022.

BOARD OF EXAMINERS



Dr. Shaikh Muhammad Allayear
Professor & Head

Department of Multimedia and Creative Technology
Faculty of Science & Information Technology
Daffodil International University

Chairman



Mr. Arif Ahmed
Associate Professor

Department of Multimedia and Creative Technology
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Dr. Md. Samaun Hasan
Assistant Professor

Department of Multimedia and Creative Technology
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Dr. Mohammad Zahidur Rahman
Professor

Department of Computer Science and Engineering
Jahangirnagar University

External Examiner

©Daffodil International University

DECLARATION

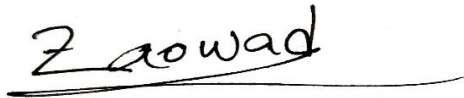
I, at this moment, declare that I have done this project under the supervision of **Mr. Arif Ahmed, Associate Professor, Department of MCT** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere to award any degree or diploma.

Supervised by:



Mr. Arif Ahmed
Associate Professor
Department of MCT
Daffodil International University

Submitted by:



Zaowad Hossain Chowdhury
ID: 183-40-539
Department of MCT
Daffodil International University

ACKNOWLEDGEMENT

To begin with, I express my heartiest much appreciated and gratefulness to Almighty Allah for His divine favoring in making us possible to total the final year project/internship effectively.

I am thankful and wish our significant obligation to **Mr. Arif Ahmed, Associate Professor**, Department of MCT Daffodil International University, Dhaka. Profound information & sharp intrigued of our boss within the field of "**3D Design**" to carry out this project. His unending tolerance, insightful guidance, persistent support, consistent and energetic supervision, valuable feedback, profitable advice, reading many inferior drafts, and redressing them have made it conceivable to total this venture.

I would like to precise my heartiest appreciation to **Dr. Shaik Mohammad Allayer, Head**, Office of MCT, **Mr. Salah Uddin, Assistant Professor**, Department of MCT, and **Mr. Mehedi Hassan**, Project Manager of “**AULEEK**”, for his kind help to wrap up our extend additionally to other staff part and the staff of MCT department of Daffodil International University.

I would like to thank my whole course mate at Daffodil International University, who took part in this talk while completing the course work.

At last, I must recognize with due regard the consistent back and patients of my guardians.

ABSTRACT

Every day, people's modes of thought-expression change. 3D animation is one of the most recent variations on the genre. I started doing 3D visualization as a hobby. So, I've been assigned an internship by the “**AULEEK**”. It became my aim to explain the entire process, including storyboarding, modeling, texturing, animation, light setup, rendering, and post-processing, in addition to the paintings. The final result of the project is a video image that combines all of the paintings in an effort to convey the idea behind them.

This internship's primary goal is to learn about 3D architectural visualization, texturing, rendering, professional work processes, client psychology, and how to operate in the market. Etc. And I'm improving every day at 3D visualization.

I've learned a lot about rendering, texturing, and 3D visualization. Three visualization projects that I started and finished in the last four months. and receive favorable comments from "**AULEEK LTD**" I feel now that I can create any kind of visualization with the Autodesk 3Ds Max software.

TABLE OF CONTENTS

CONTENTS	PAGE
Board of examiners	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
CHAPTER	
CHAPTER 1: Introduction	1
CHAPTER 2: Case Study	2
2.1 Case Study	2
CHAPTER 3: Software Details	3-7
3.1 Autodesk Max 2021	3
3.2 AutoCAD	4
3.3 Adobe Photoshop CC	5
3.4 Adobe Illustrator CC	5
3.5 Corona	6
3.6 Adobe After Effect	6-7
3.7 Adobe Media Encoder	7

CHAPTER 4: Project Work Flow	8-101
4.1 AutoCAD Plan	8
4.1.1 Floor Plan 2D	9
4.1.2 Interior Plan 3D	10
4.1.3 Garden Gate Model	11-12
4.1.4 Window Modeling	12-13
4.2 UV Unwrap	14
4.2.1 Chair	14-15
4.3 Rendering	15
4.4: Deep Green (MIA)	16
4.4.1: Bedside Table	16
4.4.2: Dining Table	17-19
4.4.3: Dressing Table	19-21
4.4.4: Drawing Table	21-23
4.4.5: Side Table	23-25
4.4.6: Tv Shelf	25-27
4.4.7: Vitrine Shelf	28-29
4.4.8: Wardrobe	30-31
4.5 Deep Green (ADELE+SOW23)	31
4.5.1: Reading Table	32-33
4.5.2 Dressing Table	33-35
4.5.3: Dining Table	35-37

4.5.4: Dining Cabinet	38-39
4.5.5: Drawing Table	40-41
4.5.6: Side Table	42-43
4.5.7: Tv Shelf	43-45
4.6: Deep Green (GRETA+ADELE)	45
4.6.1: Reading Table	46
4.6.2: Dining Table	46-48
4.6.3: Dining Cabinet	49
4.6.4: Drawing Table	50-51
4.6.5: Desk	52-53
4.6.6: Tv Shelf	53-54
4.7: MGC Office Interior:	54
4.7.1: AutoCAD Plan	55
4.7.2: 2D Interior Plan	56
4.7.4: 3D Model	57
4.7.4: MD Cabin Interior	58-63
4.7.5: Conference Room	64-67
 CHAPTER 5: Limitations and Challenges	
5.1 Limitations	68
5.2 Challenges	68-69
 CHAPTER 6: Conclusion	
 REFERENCES	71-72

LIST OF FIGURES

FIGURES	PAGE
Figure 3.1.1: Snapshot of Autodesk Max Software Interface	3
Figure 3.1.2: Snapshot of Auto Cad Software Interface	4
Figure 3.1.3: Snapshot of Adobe Photoshop Software Interface	5
Figure 3.1.4: Snapshot of Adobe Illustrator Software Interface	5
Figure 3.1.5: Snapshot of Corona Plugin Interface	6
Figure 3.1.6: Snapshot of Adobe After Effect Software Interface	7
Figure 3.1.7: Snapshot of Adobe Media Encoder Software Interface	7
Figure 4.1.1: AutoCAD Plan	8
Figure 4.1.2: AutoCAD Plan with Measurements	8
Figure 4.1.3: Floor Plan 2D	9
Figure 4.1.4: Floor Plan 2D with Measurements	9
Figure 4.1.5: 3D Floor Modeling	10
Figure 4.1.6: 3D Floor Modeling	10
Figure 4.1.7: Garden Gate Modeling	11
Figure 4.1.8: Garden Entrance Gate	12
Figure 4.1.9: Window Modeling	13
Figure 4.1.10: Window	13
Figure 4.2.1: Chair Unwrap	15
Figure 4.4.1.0: Bed Side Table wireframe render	16
Figure 4.1.1.1: Bed Side Table	17
Figure 4.4.2.0: Dining Table wireframe render	18
Figure 4.4.2.1: Dining Table	19
Figure 4.4.3.0: Dressing Table wireframe render	20
Figure 4.4.3.1: Dressing Table	21
Figure 4.4.4.0: Drawing Table Wireframe render	22
Figure 4.4.4.1: Drawing Table	23
Figure 4.4.5.0: Side Table wireframe render	24
Figure 4.4.5.1: Side Table	25
Figure 4.4.6.0: TV Shelf wireframe render	26

Figure 4.4.6.1: TV Shelf	27
Figure 4.4.7.0: Vitrine Shelf wireframe render	28
Figure 4.4.7.1: Vitrine Shelf	29
Figure 4.4.8.0: Wardrobe wireframe render	30
Figure 4.4.8.1: Wardrobe	31
Fig 4.5.1.0: Reading Table Wireframe Render	32
Fig 4.5.1.1: Reading Table	33
Fig 4.5.2.0: Dressing Table Wireframe Render	34
Fig 4.5.2.1: Dressing Table	35
Fig 4.5.3.0: Dining Table Wireframe Render	36
Fig 4.5.3.1: Dining Table	37
Fig 4.5.4.0: Dining Cabinet Wireframe Render	38
Fig 4.5.4.1: Dining Cabinet	39
Fig 4.5.5.0: Drawing Table wireframe render	40
Fig 4.5.5.1: Drawing Table	41
Fig 4.5.6.0: Drinks Cabinet Wireframe Render	42
Fig 4.5.6.1: Drinks Cabinet	43
Fig 4.5.7.0: Tv Shelf wireframe render	44
Fig 4.5.7.1: Tv Shelf	45
Fig 4.6.1: Reading Table	46
Fig 4.6.2.0: Dining Table Wireframe Render	47
Fig 4.6.2.1: Dining Table	48
Fig 4.6.3: Dining Cabinet Greta	49
Fig 4.6.4.0: Drawing Table Wireframe Render	50
Fig 4.6.4.1: Drawing Table	51
Fig 4.6.5.0: Desk Wireframe Render	52
Fig 4.6.5.1: Desk	53
Fig 4.6.6: Tv Shelf	54
Fig 4.7.1: AutoCAD Plan	55
Fig 4.7.2: 2D Interior Plan	56
Fig 4.7.2: 2D Interior Plan with Measurement	56

Fig 4.7.4: 3D Model	57
Fig 4.7.4.0: Behind the Chair Wireframe Render	58
Fig 4.7.4.1: Behind the chair	59
Fig 4.7.4.2: Door Camera Wireframe Render	60
Fig 4.7.4.3: Door Camera	61
Fig 4.7.4.4: MD Office Wireframe Render	62
Fig 4.7.4.5: MD Office	63
Fig 4.7.5.0: Conference Room Cam1 Wireframe Render	64
Fig 4.7.5.1: Conference Room Cam1	65
Fig 4.7.5.2: Conference Room Cam2 Wireframe Render	66
Fig 4.7.5.3: Conference Room Cam2	67

CHAPTER 1

Introduction

A place for research and development in 3D animation. The country of Bangladesh's first comprehensive institute for learning 3D animation and visual effects It is an association of experts from the technological and creative fields who have gathered to offer good services. 3D designers produce 3D environments and characters based on concept drawings. 3d is a very sophisticated field. As a result, 3D artists are highly sought after in all sectors of the economy. Depending on the specialty, employment in this field increased by 8–14% by 2018 as reported by the Bureau of Labor Statistics (BLS).

3D visualization is a technique of a 3D digital representation of any object or surface can be created using the computer graphics technology. People who don't know how to operate appropriately and effectively find it difficult to deal with 3D graphics. People believe that this industry is too tough and difficult for them to perform in; I am not able to work because of this. They avoid the 3D industry because of this. Many works hard to create a beautiful 3D representation, but they fail to do so because they are unaware of the correct procedures for building a realistic scene. Because of this, numerous businesses, institutions, enterprises, and agencies have been searching for a qualified and experienced 3D artist, but ultimately failed to obtain it.

Now since technology is constantly evolving, no one needs to leave their homes to make purchases. With the aid of technology, you may execute any purchase from your home. The freedom provided by 3D visualization allows you to design the interior and exterior of your home from a computer. You can furnish your home in 3D with just about any furniture, a character, as well as other objects. Today, 3D animation is commonplace. In the film industry, they're a great venue to create cartoons and animated movies. If they have rapid and simple decorating skills, those who are interested in 3D visualization can build a career in the field.

CHAPTER 2

Case Study:

I have a lot of studying to do because I have to decorate 3D structures, furniture, and other interior and exterior tasks. Identify the market environment at the moment. It is simpler for me to think of ways to increase the product output to suit their needs because the company gives me specific things.

The thought of picking a pattern, styling every item, and personalizing the atmosphere to their preferences. In order to complete this project, we also make sure to visit a number of architecture studios and view a great deal of international show reels to identify any deficiencies and discover what kinds of designs are currently popular in the marketplace. And what should encourage consumers to choose this industry. We attempted to make the visualization more meaningful for the business by looking at the websites of all those already-existing designers.

I might organize the art work effectively thanks to "AULEEK" for providing me with many website links. It much assisted me in learning how to make interactive arch viz animation and learn about color conception, camera angle, lighting, and last but not least, Creating realistic materials.

CHAPTER 3

Details of Software

3.1: Autodesk Max:

The professional 3D computer graphics program Autodesk 3ds Max[5], previously known as 3D Studio and 3D Studio Max, is used to create 3D animations, models, games, and photographs. It is frequently used by studios for architectural visualization, various TV production companies, and online video game creators. The brand-new version of 3ds Max also has shaders (including ambient occlusion and subsurface scattering), dynamic simulation, particle systems, radiosity, regular map advent and rendering, global illumination, a customizable user interface, new icons, and its own scripting language in addition to its modeling and animation tools. When it was re-launched (launch 7), the software once again featured the Autodesk logo, and the short name was changed to "3ds Max" (upper and lower case), while the official product name changed to the present "Autodesk 3ds Max." In essence, it served as our primary software for 3D visualization work.



Fig 3.1.1: Autodesk Max Software

3.2: AutoCAD:

A computer-aided design program called AutoCAD[6] was developed by the company Autodesk. It enables you to create and alter virtual 2D and 3D designs more quickly and easily than you can by hand.

Here are few professionals using of AutoCAD:

Architects: Building blueprints and floor layouts for residential and commercial structures are regularly produced using AutoCAD. It also includes integrated equipment that may detect and address design flaws in a structure.



Fig 3.1.2: AutoCAD Software

Interior Designers: Similar to this, AutoCAD may be used to model a building's inside, whether it's a dining room or a living space in a house.

Fine Artists: Even artists utilize AutoCAD because of its extensive range of possibilities to design sculptures, wooden carvings, engravings, and experimental works of art. This program was used to generate an architectural visualization's outline. where measurement can be readily added.

3.3: Adobe Photoshop:

Raster image editor Adobe Photoshop[7] was created by Adobe Inc. and made available for Windows and macOS. Photoshop has limited skills to edit or render text, vector images (particularly through the clipping route for the latter), three-D images, and video in addition to raster images. Due to the fact that these files cannot be edited like a PSD file, they are smaller than PSD documents. This software was used for post-production processing, texture creation, and color correction after rendering.



Fig 3.1.3: Adobe Photoshop Software

3.4: Adobe Illustrator:

The design program of choice in the business, Adobe Illustrator[8] enables you to express your original ideas through shapes, color, effects, and typography. Create stunning designs quickly that can be used for print, online, applications, video, animations, and more across desktop and mobile platforms.



Fig 3.1.4: Adobe Illustrator Software

3.5: Corona:

As a solo student project at the Czech Technical University in Prague, Ondrej Karlík began working on Chaos Corona[9] back in 2009. After Ondrej founded a company with former CG artist Adam Hotoš and researcher and associate professor Jaroslav Kivánek, Corona has since changed to a full-time commercial enterprise. In Prague. Global illumination techniques used by the rendering engine Corona include route tracing, photon mapping, irradiance maps, and directly calculated global illumination. Images created using this application are produced instantly. Although rendering each frame takes a while, the ultimate result is excellent.



Fig 3.1.5: Corona Plugin

3.5: Adobe After Effect:

A virtual visual effect, motion graphics, and compositing program called Adobe After Effects[10] was developed by Adobe Systems and is used in the post-manufacturing process of making movies, video games, and television shows. Keying, tracking, compositing, and animation are just a few of the things that can be done with After Effects. Additionally, it has completely basic non-linear editing, audio editing, and media transcoding capabilities. After completing all of the

pre-production work, we go on to the post-production phase, but not before adding sound and performing various color correction and masking tasks.



Fig 3.1.6: After Effect Software

3.6: Adobe Media Encoder:

Adobe Premiere Pro, Adobe After Effects, Adobe Audition, Adobe Character Animator, and Adobe Prelude can all use Adobe Media Encoder[11] as an encoding engine. We used media encoder to render our file from After Effects in a reduced file size while maintaining good quality.

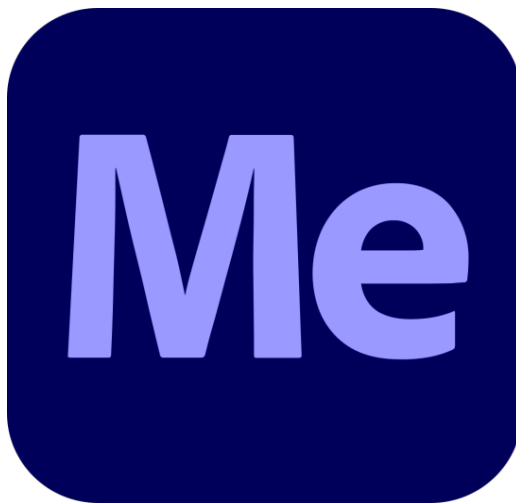


Fig 3.1.7: Adobe Media Encoder Software

CHAPTER 4

Project Workflow

4.1: AutoCAD Plan:

This is the general plane that I created using the AutoCAD program. I export the file into Autodesk Max after finishing the layout to complete the 3D modeling.

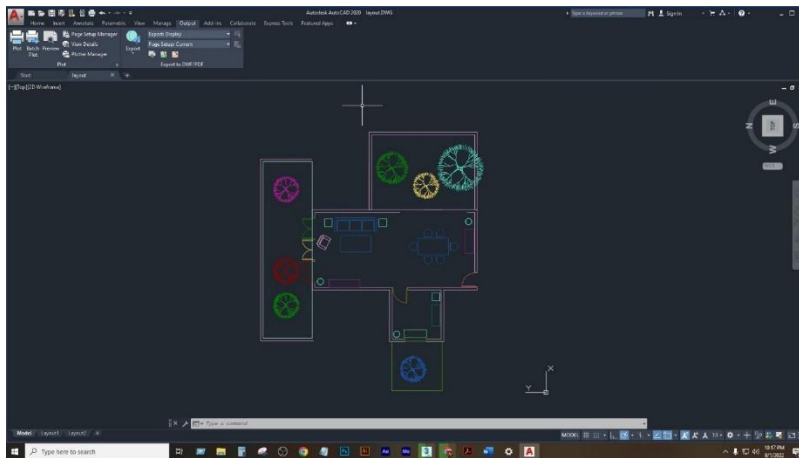


Fig 4.1.1: AutoCAD Plan

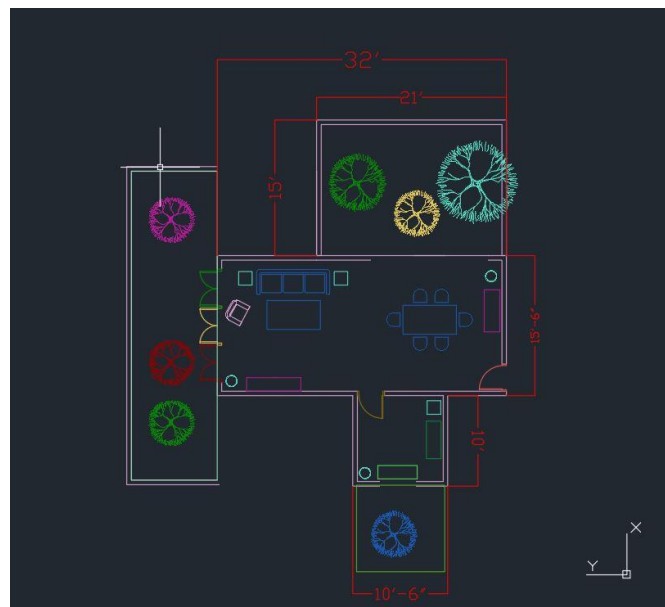


Fig 4.1.2: AutoCAD Plan with Figure

4.1.1: Floor Plan 2D:

This floor plan was created in Adobe Illustrator with the models. I first created a layout showing how to arrange all the rooms. I'll finish the rest of the task once my client gives his or her approval.



Fig 4.1.3: Floor Plan 2D



Fig 4.1.4: Floor Plan 2D with Measurement

This is how it will look in Adobe Illustrator when the furniture is arranged.

©Daffodil International University

4.1.2: Interior Plan 3D:

Take the reference file that we created in AutoCAD, import it into Max, and draw a line to create the shape's outline. Draw the shape omitting the door and window. This is the 3D model which is done by the Autodesk max. In these two pictures there are shown the 1st floor 3d design.

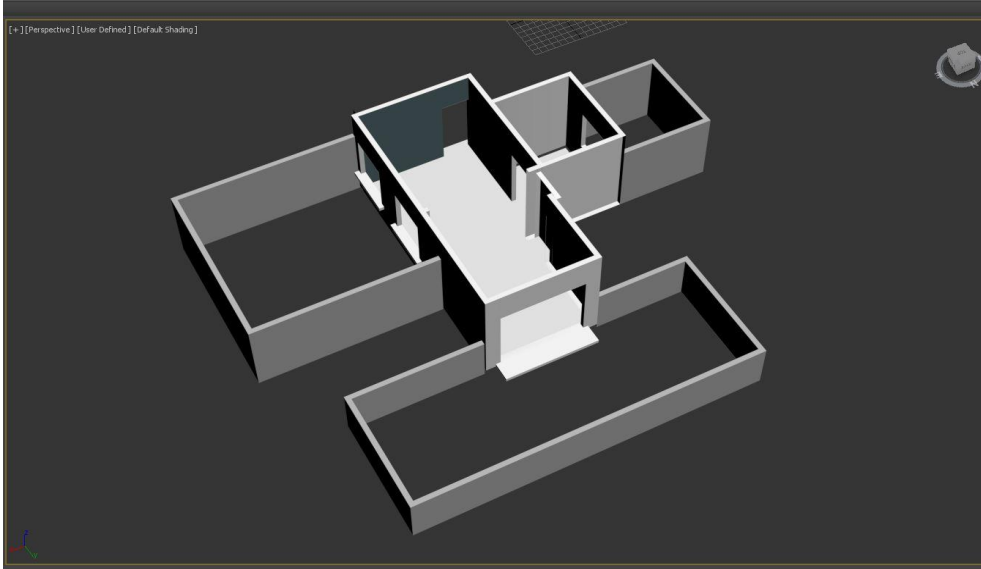


Fig 4.1.5: 3D Floor Modeling



Fig 4.1.6: 3D Floor Modeling

4.1.3: Garden Gate Model:

For the gate heading into the garden, I need model and create a design. I used the polygon editor's rectangle and box shapes to create this model. Therefore, in order to amp the gate, I had to model it in a specific method part by part as a separate group. I needed to create a pen-type sliced design for a gate's corridor, so I started with box shapes, multiplied the segment's characteristics, added the chamfer. Then lastly apply mirror modifier to it.

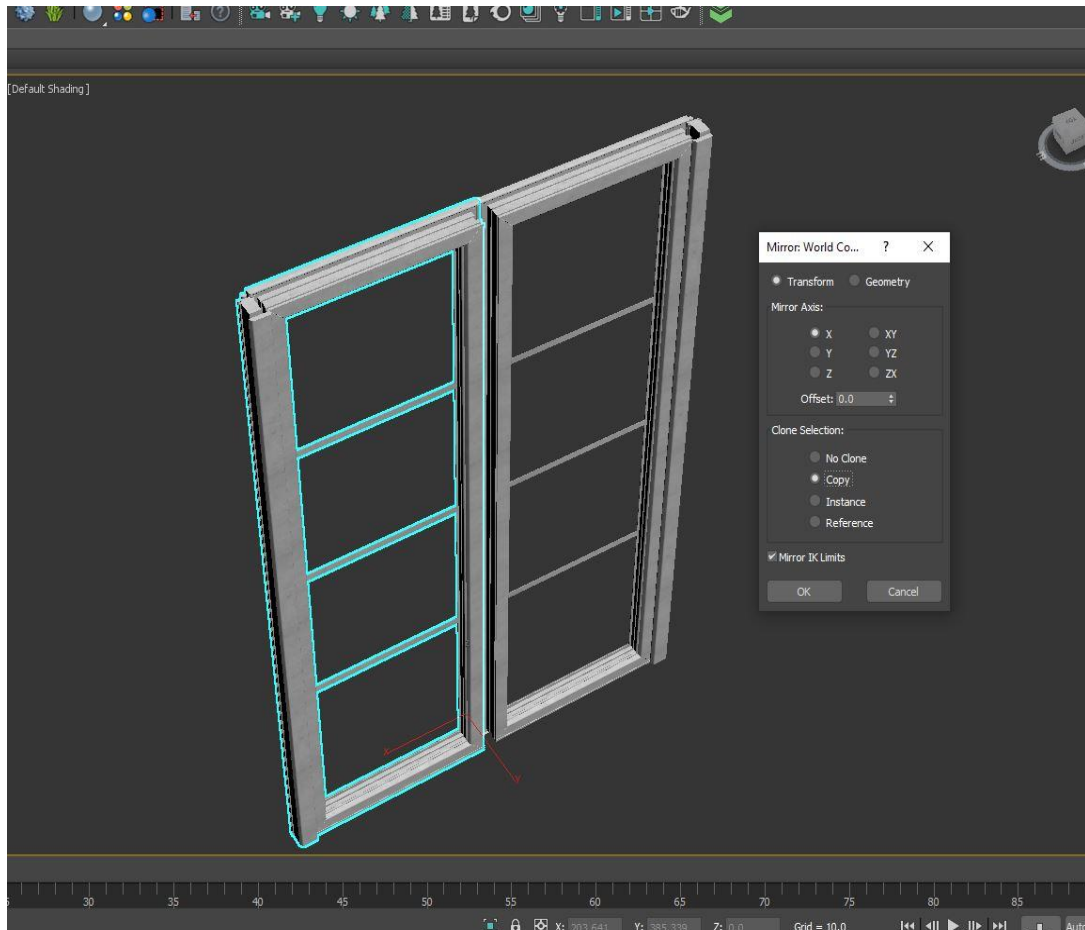
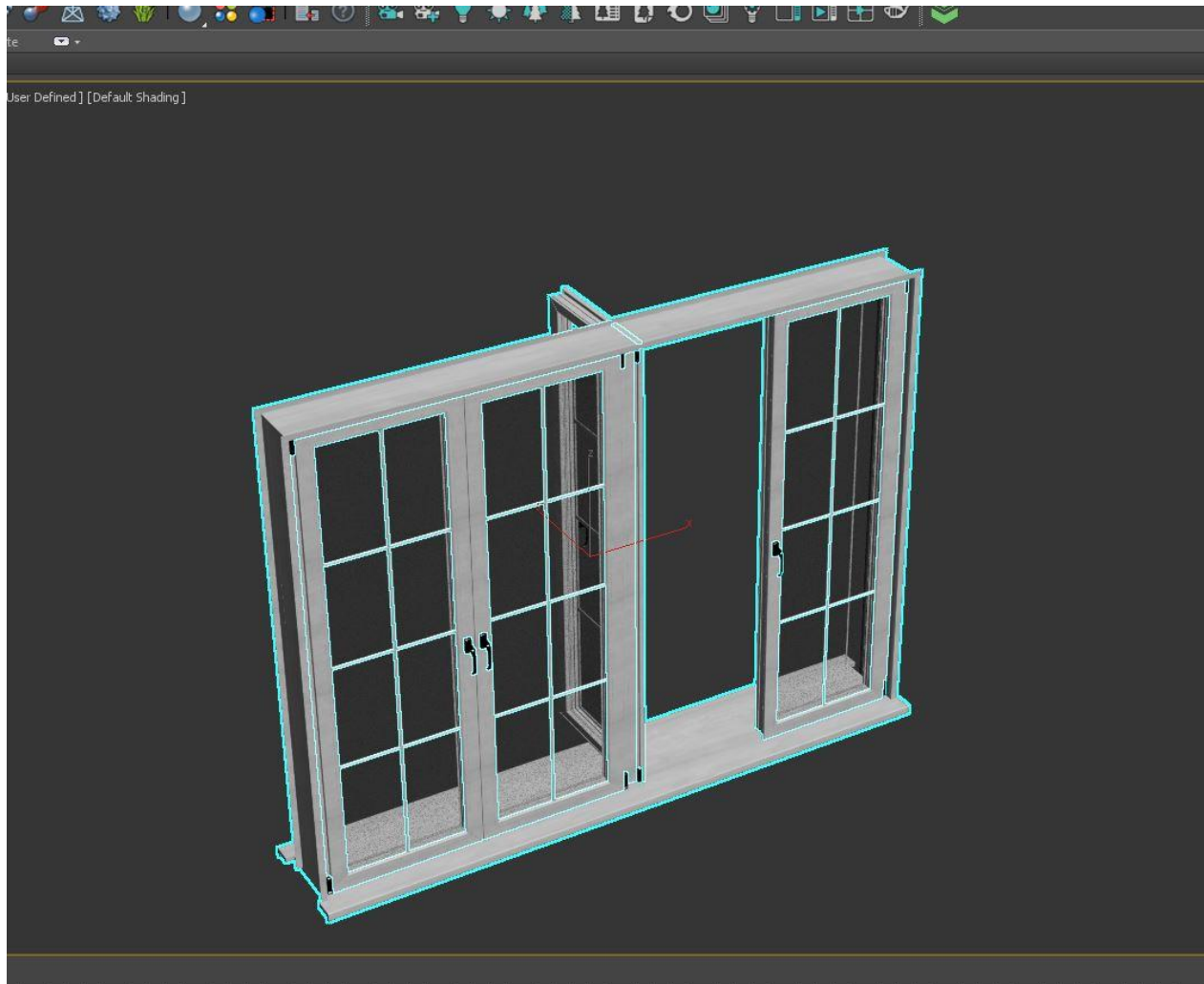


Fig 4.1.7: Garden Gate Model



4.1.8: Garden Entrance Gate

4.1.4: Window Modeling:

In many different types of buildings, windows are primarily used in the corridors. I simplified it in a few scenes. The majority of them utilized both plan and glass materials, and in some scenarios, I designed straightforward windows utilizing box and rectangle shapes with lattice modifiers being employed in others. I tried to create a poly cube design model that was actually lightweight to help prevent assembly or viewport crashes.

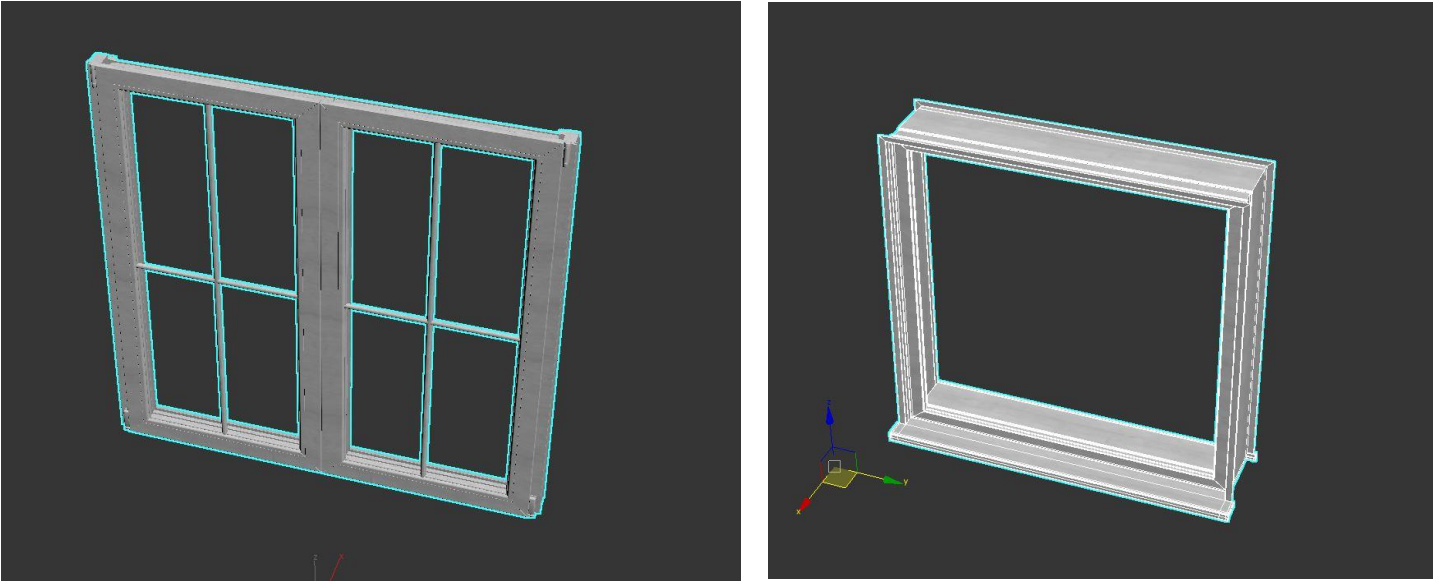


Fig 4.1.9: Window Modeling

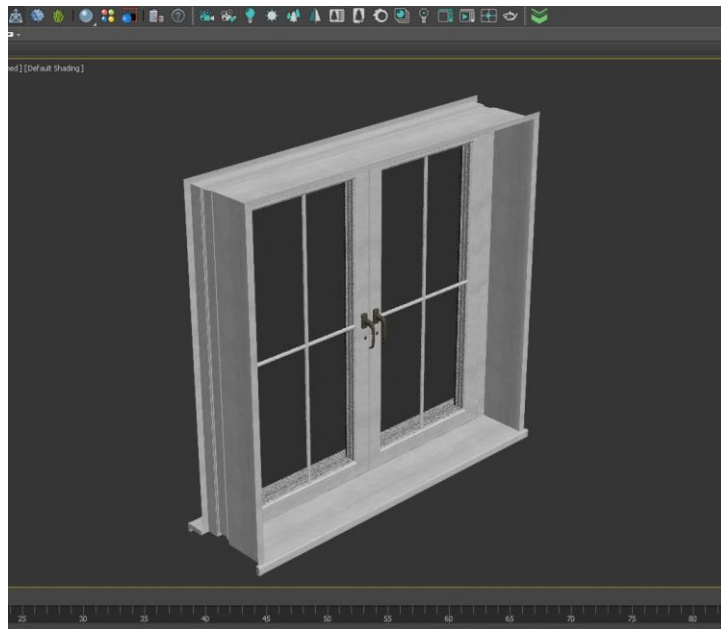


Fig 4.1.10: Window

For supplying the edges and smoothing them, I applied chamfer.

4.2: UV Unwrap:

Every time we texture a 3D object, we must first perform an Unwrap UVW Map. UV unwrapping is the procedure used to create a UV map. It's one of the often-used techniques for performing UV on any 3D object. UV refers to the representation of a flat, 2D face of a 3D object. Smooth texture is applied to 3D objects using it. It is known as UV unwrapping to create a UV map. The U and V thus stand for two axes in two-dimensional space. There are also in the third dimension. Three axes (X, Y, and Z) denote three distinct directions.

Texturing is a method for enhancing a computer-generated 3D model or graphic with minute details, surface texture, and color information. The pieces have PBR textures. A shading method called PBR (physically-based rendering) is used to accurately depict how light interacts with surfaces.

Many real-time engines use PBR to specify a set of condensed shading models that are solely controlled by a few texture maps. These shading models are supported by the Physical Material already, although PBR includes many features that aren't. These less complex programmed materials as well as a front-end UI for the physical material were therefore created. The company offers this service.

4.2.1: Chair:

I'm using a UV Unwrap Map for this object. This object has a lot of edges or faces, making it challenging to unwrap. Cut the side faces of an edge that points in the center, unfold it, and then cut the side faces once more before applying the unfold.

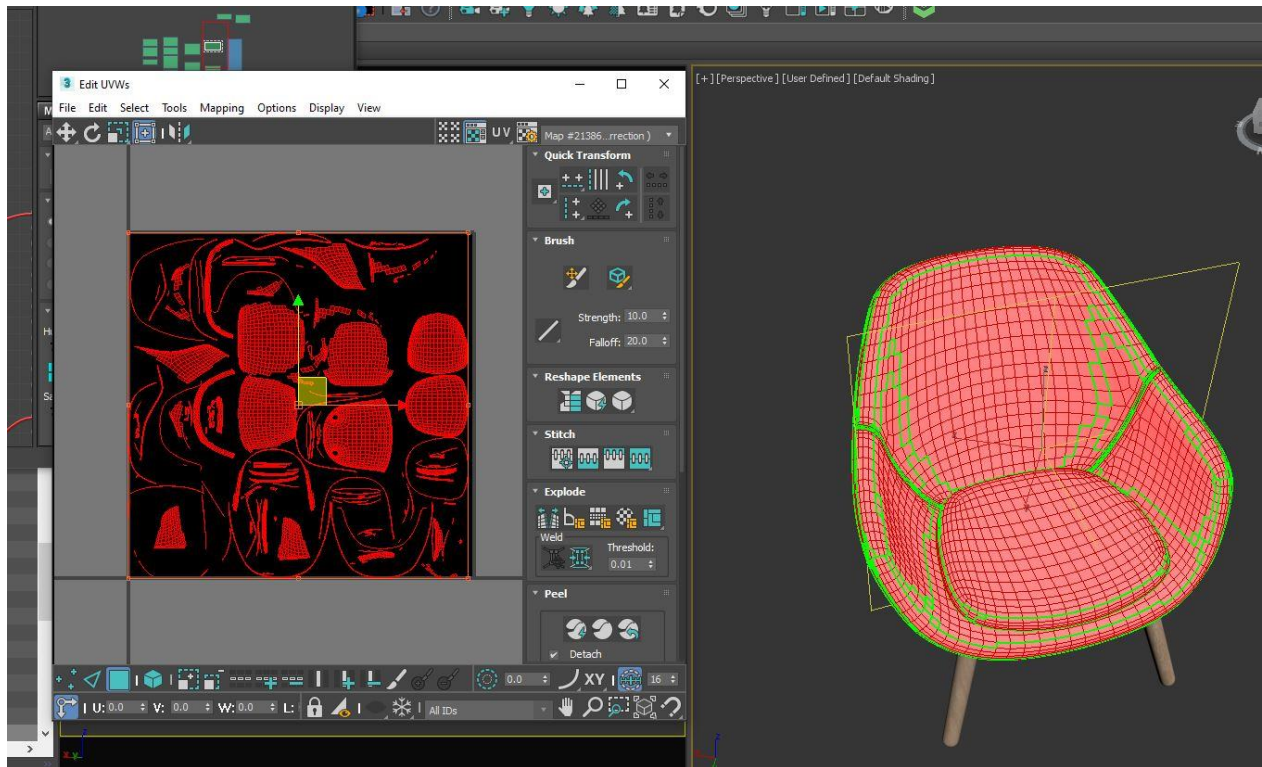


Fig 4.2.1: Chair Unwrap

Basically, divide the areas where the textures won't be the same. Supposedly cut and unfold this. used Autodesk Max to complete this.

4.3: Rendering:

By using laptop software, rendering or picture synthesis, a photorealistic or non-photorealistic image can be created from a 2D or 3D version. The render is the image that results. A scene record including devices may include many fashions described in a carefully described language or data structure. The scene record includes records detailing the digital scene's geometry, viewpoint, texture, lighting, and shading. The statistics from the scene record are then sent into a rendering program where they are processed and produced to a raster or virtual picture record. The concept of an artist's impact on a scene is comparable to that of rendering.

4.4: Deep Green (MIA)

Deep green is a team of experienced supply chain experts, designers, and collaborators that got together in 2008 to build a robust product development process in the furniture industry. Through the years of partnering with retailers, they have gained great understanding of local markets around the globe.

4.4.1: Bedside Table

I tested several lighting, materials, and rendering techniques before selecting the primary image. I utilized the same light setup and render settings for the subsequent rendering.



Fig 4.4.1.0: Bed Side Table Wireframe Render

©Daffodil International University



Fig 4.4.1.1: Bed Side Table

4.4.2: Dining Table:

I use the Corona module in Autodesk Max to render the figure. I created material from the texture the customer provided for the bedside table's finishing. Gather content for this right away, then go to the Autodesk Max panel, run the script, and load the surfaces. After finishing the surface, I rendered everything.



Fig 4.4.2.0: Dining Table Wireframe Render



Fig 4.4.2.1: Dining Table

Before taking the main shot, I tested the delivery a few times by adjusting the lighting, material, and other factors. We used the same render arrangement and identical lighting setup for the delivery of the furniture.

4.4.3: Dressing Table:

Apply the texture from the load texture to the upper portion of the dressing table while hiding the remaining portions. Unhide everything by clicking on the mouse's right side, and then add the additional material to the object. We produce the material individually for the mirror section.



Fig 4.4.3.0: Dressing Table Wireframe Render

Since I can alter the material through the material slot, I am manually adjusting some of the roughness and glossiness. raising the mirror's shine level. I did the render once everything was set up.



Fig 4.4.3.1: Dressing Table

4.4.4: Drawing Table:

I first choose the table, then I isolate the chosen furniture by pressing the left key. I chose to isolate the selection, conceal everything, and apply the texture I had loaded. Unhide everything by clicking on the mouse's right side, and then apply the other material separately.

©Daffodil International University



Fig 4.4.4.0: Drawing Table Wireframe Render



Fig 4.4.4.0: Drawing Table

I test a several times before taking the final photo for the delivery by adjusting the lighting, material, and other factors.

4.4.5: Side Table:

I'm using the same technique I did for the other objects to render the side table. I am manually altering parts of the roughness and glossiness because I can change the material using the material slot. Once everything is ready, use the render.



Fig 4.4.5.0: Side Table Wireframe Render



Fig 4.4.5.1: Side Table

4.4.6: Tv Shelf:

I am manually altering parts of the roughness and glossiness because I can change the material using the material slot. Once everything is ready, run the render. We are using Autodesk Max and Corona for the render.

©Daffodil International University



4.4.6.0: Tv Shelf Wireframe Render



Fig 4.4.6.1: Tv Shelf

4.4.7: Vitrine Shelf:

I am manually altering parts of the roughness and glossiness because I can change the material using the material slot. Once everything is ready, run the render. We are using Autodesk Max and Corona for the render.



Fig 4.4.7.0: Vitrine Shelf Wireframe Render



Fig 4.4.7.1: Vitrine Shelf

4.4.8: Wardrobe:

I first choose the wardrobe, then I isolate the chosen furniture by pressing the left key. I chose to isolate the selection, conceal everything, and apply the texture I had loaded. Unhide everything by clicking on the mouse's right side, and then apply the other material separately.



4.4.8.0: Wardrobe Wireframe Render

©Daffodil International University



4.4.8.1: Wardrobe

4.5 Deep Green (Adele+Sow23)

Deep Green has come out with some new furniture called Adele & Sow23. Some of the furniture is painted wood and some solid color.

4.5.1 Reading Table

I tested several lighting, materials, and rendering techniques before selecting the primary image. I utilized the same light setup and render settings for the subsequent rendering.



Fig 4.5.1.0: Reading Table Wireframe Render



Fig 4.5.1.1: Reading Table

4.5.2 Dressing Table

I tested several lighting, materials, and rendering techniques before selecting the primary image. I utilized the same light setup and render settings for the subsequent rendering.



Fig 4.5.2.0: Dressing Table Wireframe Render



Fig 4.5.2.1: Dressing Table

4.5.3: Dining Table:

I use the Corona module in Autodesk Max to render the figure. I created material from the texture the customer provided for the bedside table's finishing. Gather content for this right away, then go to the Autodesk Max panel, run the script, and load the surfaces. After finishing the surface, I rendered everything.



Fig 4.5.3.0: Dining Table Wireframe Render



Fig 4.5.3.1: Dining Table

Before taking the main shot, I tested the delivery a few times by adjusting the lighting, material, and other factors. We used the same render arrangement and identical lighting setup for the delivery of the furniture.

4.5.4: Dining Cabinet:

Apply the texture from the load texture to the upper portion of the dressing table while hiding the remaining portions. Unhide everything by clicking on the mouse's right side, and then add the additional material to the object. We produce the material individually for the mirror section.



Fig 4.5.4.0: Dining Cabinet Wireframe Render



Fig 4.5.4.1: Dining Cabinet

Since I can alter the material through the material slot, I am manually adjusting some of the roughness and glossiness. raising the mirror's shine level. I did the render once everything was set up.

4.5.5: Drawing Table:

I first choose the table, then I isolate the chosen furniture by pressing the left key. I chose to isolate the selection, conceal everything, and apply the texture I had loaded. Unhide everything by clicking on the mouse's right side, and then apply the other material separately.



Fig 4.5.5.0: Drawing Table wireframe render



Fig 4.5.5.1: Drawing Table

I test a several times before taking the final photo for the delivery by adjusting the lighting, material, and other factors.

4.5.6: Drinks Cabinet:

I'm using the same technique I did for the other objects to render the side table. I am manually altering parts of the roughness and glossiness because I can change the material using the material slot. Once everything is ready, use the render.



Fig 4.5.6.0: Drinks Cabinet Wireframe Render



Fig 4.5.6.1: Drinks Cabinet

4.5.7: Tv Shelf:

I am manually altering parts of the roughness and glossiness because I can change the material using the material slot. Once everything is ready, run the render. We are using Autodesk Max and Corona 7 for the render.



Fig 4.5.7.0: Tv Shelf wireframe render



Fig 4.5.7.1: Tv Shelf

4.6 Deep Green (Greta+Adele)

Greta is the latest deep green furniture. Which can be used with Adele furniture. Here's Adele's furniture in another color.

4.6.1 Reading Table

I tested several lighting, materials, and rendering techniques before selecting the primary image. I utilized the same light setup and render settings for the subsequent rendering.



Fig 4.6.1: Reading Table

4.6.2: Dining Table:

I use the Corona module in Autodesk Max to render the figure. I created material from the texture the customer provided for the bedside table's finishing. Gather content for this right away, then go to the Autodesk Max panel, run the script, and load the surfaces. After finishing the surface, I rendered everything.



Fig 4.6.2.0: Dining Table Wireframe Render



Fig 4.6.2.1: Dining Table

Before taking the main shot, I tested the delivery a few times by adjusting the lighting, material, and other factors. We used the same render arrangement and identical lighting setup for the delivery of the furniture.

4.6.3: Dining Cabinet:

Apply the texture from the load texture to the upper portion of the dressing table while hiding the remaining portions. Unhide everything by clicking on the mouse's right side, and then add the additional material to the object. We produce the material individually for the mirror section.



Fig 4.6.3: Dining Cabinet Greta

Since I can alter the material through the material slot, I am manually adjusting some of the roughness and glossiness. raising the mirror's shine level. I did the render once everything was set up.

4.6.4: Drawing Table:

I first choose the table, then I isolate the chosen furniture by pressing the left key. I chose to isolate the selection, conceal everything, and apply the texture I had loaded. Unhide everything by clicking on the mouse's right side, and then apply the other material separately.



Fig 4.6.4.0: Drawing Table Wireframe Render



Fig 4.6.4.1: Drawing Table

Veneer bottom shelf / Easy assembly

4.6.5: Desk:

Curved table top with a bent plywood shelf under the table surface Easy assembly



Fig 4.6.5.0: Desk Wireframe Render



Fig 4.6.5.1: Desk

4.6.6: Tv Shelf:

Three doors with adjustable shelves



Fig 4.6.6: Tv Shelf

4.7: MGC Office Interior:

Located in the center of Bangladesh, MGC(Mega Global Consultancy Limited) Education Consultants is one of the education consulting companies with the quickest growth. They provide the students' effective guidance for studying abroad that enable students to build active and successful professional career.

©Daffodil International University

4.7.1: AutoCAD Plan:

This is the general floor plane that they gave me. I export the file into Autodesk Max after finishing the layout to complete the 3D modeling.

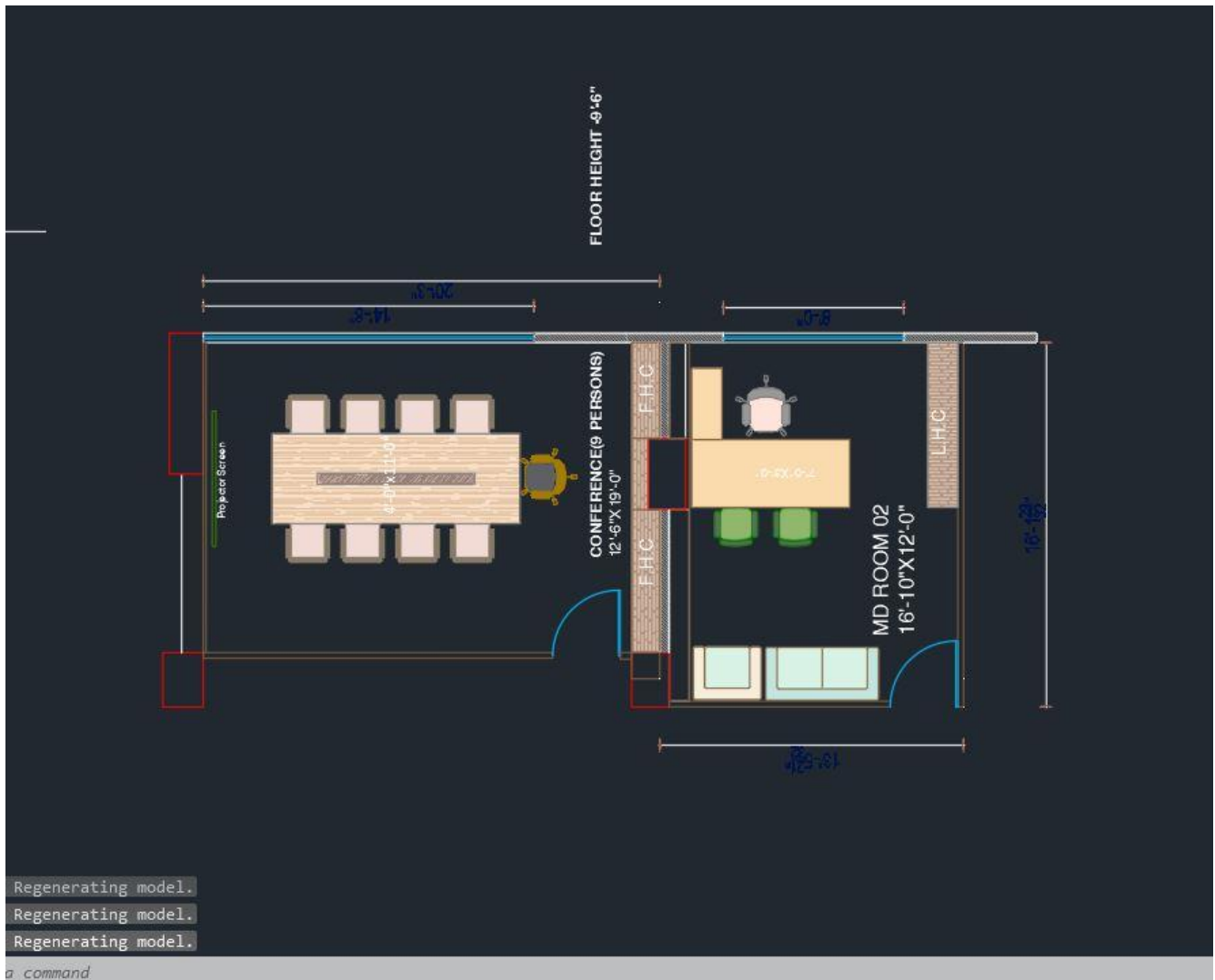


Fig 4.7.1: AutoCAD Plan

4.7.2: 2D Interior Plan:

Using the models, Adobe Illustrator was used to generate this floor layout. I started by drawing a schematic of how the rooms should be arranged. It helps a lot in 3D work in terms of size. An idea comes of the whole scene.



Fig 4.7.2: 2D Interior Plan

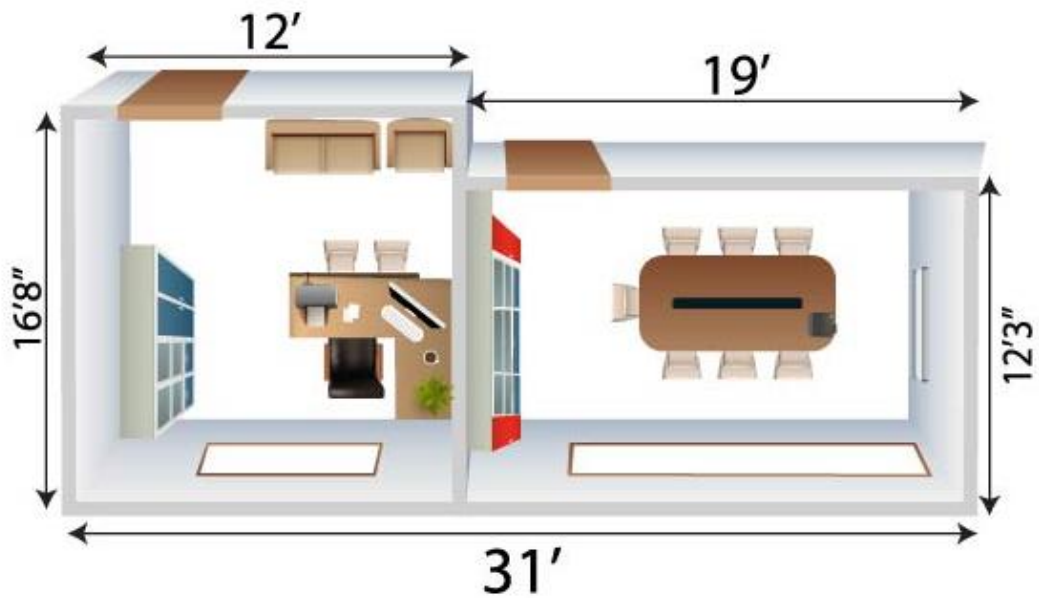


Fig 4.7.3: 2D Interior Plan with Measurement

4.7.3: 3D Model

Importing the AutoCAD reference file into Max will allow you to draw a line to define the shape's perimeter. Bypass the entrance and window when drawing the shape. This 3D model was created using Autodesk Max. These two images demonstrate the first floor's 3D design.

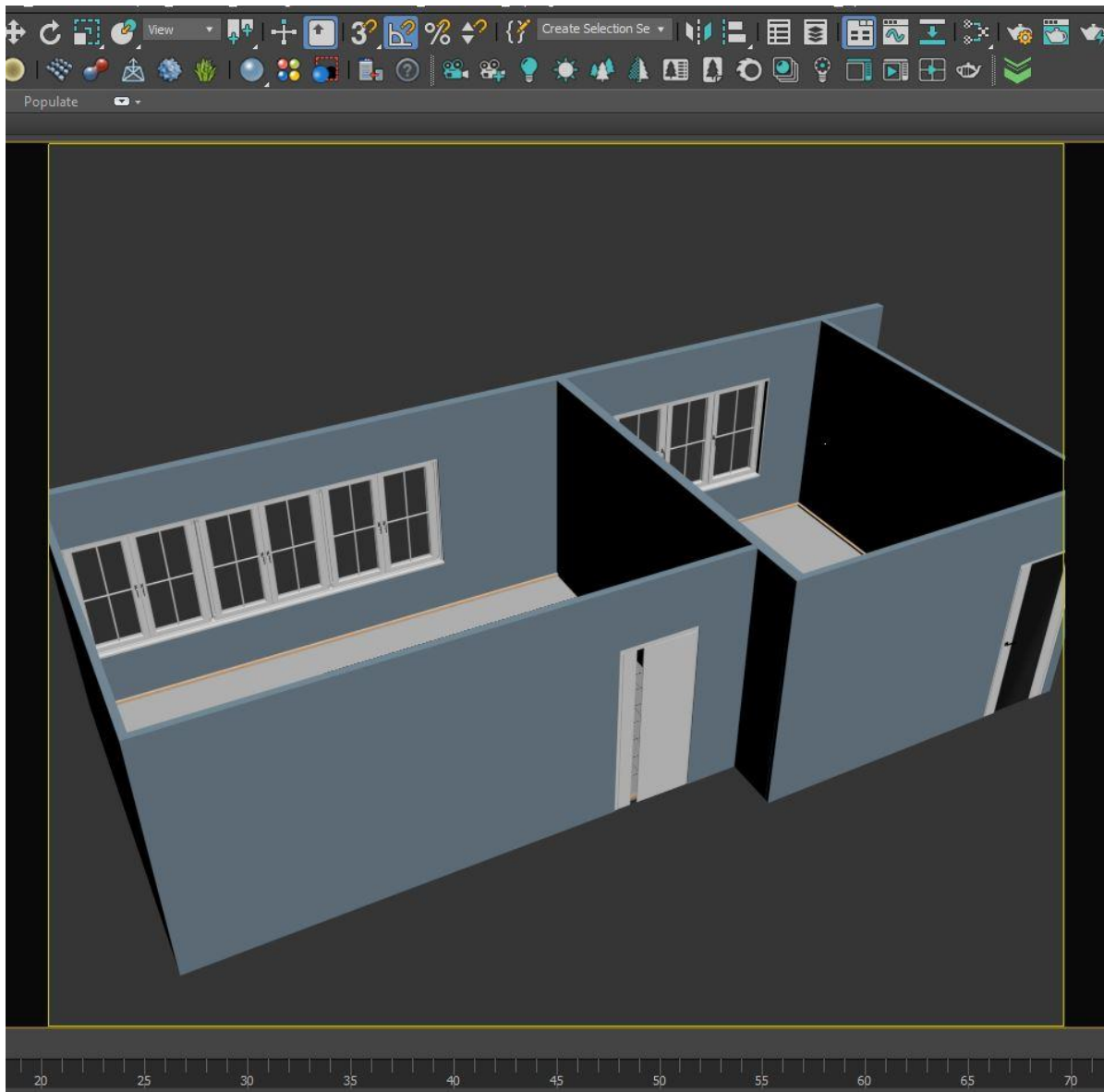


Fig 4.7.4: 3D Model

4.7.4: MD Cabin Interior

After arranging the scene I set the camera from different different angles and then do the lighting. And after lighting I do texturing. Once everything is ready, I run the render. I am using Autodesk Max and Corona 7 for the render.



Fig 4.7.4.0: Behind the Chair Wireframe Render



Fig 4.7.4.1: Behind the chair

©Daffodil International University



Fig 4.7.4.2: Door Camera Wireframe Render



Fig 4.7.4.3: Door Camera

©Daffodil International University



Fig 4.7.4.4: MD Office Wireframe Render



Fig 4.7.4.5: MD Office

4.7.5: Conference Room

I made upper part of the table according to their requirement. I also made false cining.



Fig 4.7.5.0: Conference Room Cam1 Wireframe Render

©Daffodil International University



Fig 4.7.5.1: Conference Room Cam1



Fig 4.7.5.2: Conference Room Cam2 Wireframe Render



Fig 4.7.5.3: Conference Room Cam2

CHAPTER 5

Limitations and Challenges

5.1 Limitations:

Every error is an opportunity to gain fresh knowledge. It's harder to implement a concept than it is to plan it. Giving my idea shape wasn't quite simple. I had to deal with a number of issues, confusion, and design mistakes there. Some issues arise as a result of my oversight and inexperience with the workflow. However, every issue sapped my time and energy.

I arrive in time to break and prevent them from arriving. I had problems in this chapter, and the outcomes will be discussed. While developing this concept, many impassible constraints had to be overcome. These restrictions in some way impacted the outcome of our design. A discussion of a handful of these is provided below. The greatest obstacle was a lack of experience. Throughout the entire process, there were some gists, but the correct procedure was never followed. Additionally, the range of skill execution was constrained. When it came to such a large design that needed to follow a suitable channel, we were immediately faced with the experience that affected time operation and had a chance of leading to issues.

A 3D liveliness is a type of artwork that incorporates many other kinds of artwork. A lot of influences from the cultural aspect need to be taken into account when starting a design like this. Similar to the movie's color scheme, the aesthetics of the models, camera angle, camera movement, a sense of composition, etc.

5.2 Challenges:

Since this is not a group project, so that whenever I face a problem, I do not have any group member whom I can communicate with to solve my problem.

Group projects greatly simplify problem solutions and hasten the blessings. I had to use my home as a home office throughout training because I was an intern. Every time I was unable to solve a problem, I was forced to wait a long time to do so.

High configuration computers are required for every piece of 3D software. In this instance, quality improves as configuration increases. But working with my low-quality PCs presented me with many difficulties. Personally, because I don't have a graphics card, I can't use the render function. My computer crashed frequently because of the poly count.

The program kept crashing or becoming stuck. On occasion, they arrived slowly and were unable to correctly interpret and carry out the directions. Time was spent by these kinds of issues, which would not have been a problem if better computers had been available. Advanced computer systems can dramatically reduce render time.

When creating any computer graphics, render time is a crucial consideration. Enough time has to be set out for the picture member, keeping in mind computer restrictions. Many new software programs and well-known software instructions have to be taught quickly in order to do the requested labors. Since there was little knowledge of this software, problem-solving became a major concern.

Additionally, I'm limited on time, so I have to compromise on the quality of some tasks in order to complete them by the deadlines. Because the animation takes a long time to render a frame, the enormous work requires a lot of patience and time management. 2-3 minutes are needed for each frame, albeit some take longer, which irritates me greatly.

CHAPTER 6

CONCLUSION

Nowadays, a 3D editor is a component of almost every platform's standard capabilities. Any project may be realized using a 3D editor, and there is an infinite amount of options available for each one. Construction companies create and translate a vision into reality in three dimensions while creating homes, buildings, or landscape architecture. Businesses are pushed by this tactic to present the initiative to clients in the best light possible.

As a financial consideration, this image aids in capturing the interest of the customer by quickly conveying the appropriate product attributes. With a far shorter spin-off visualization and at a considerably lower cost, a company or maker can introduce it to the market. Producers have plenty of room to develop and provide consumers with gifts in the space with 3D visualization work. From the marketing and marketing era, the organization has used 3D ads to enable producers to interact with and interact with their audience instead of searching for interaction via banner advertisements and movies on mobile devices. It could be challenging to make effective general product animations that use colors, concepts, and capture the attention of the viewer for the entire advertisement.

With a much greater return on investment, this is the most crucial general and precise shape for expanding customers to date. Although 3D visualization for advertisements is a relatively new concept in our country, making outstanding 3D commercials is no simple task. With 3D advertising, consumers can find products more quickly than with only photographs. Our objective is to present a comprehensive 3D representation of hard surface modeling on challenging flooring, including product modeling, furniture modeling, and different architectural artwork. We accomplished our assignment fast and at a high standard, as asked by the client. Since they are happy, we are pleased to collaborate with them and the AULEEK Institute.

Reference

- [1] “About Architecture Visualization”, Biblus [Online]. Available:
<https://biblus.accasoftware.com/en/architectural-visualisation-what-it-is-and-why-it-is-important-for-your-profession/> [Accessed 01.02.2022]
- [2] “3D Visualizer market place”, Creativepool [Online]. Available:
<https://creativepool.com/articles/jobdescriptions/job-description-3d-visualiser>
[Accessed 05.02.2022]
- [3] 3D Visualization websites [Online]. Available:
- [3.1][https://www.fiverr.com/categories/graphics design/architectural-design](https://www.fiverr.com/categories/graphics%20design/architectural-design)[Accessed 23.02.2022]
- [3.2]https://www.artstation.com/channels/architectural_visualization?
[Accessed 23.02.2022]
- [3.3]https://www.behance.net/search/projects?tracking_source=typeahead_search_direct&search=architecturalvisualization[Accessed 23.02.2022]
- [4] “PBR Texture | Max 2020”, Cgobsession [Online]. Available:
<https://cgobsession.com/what-is-pbr-and-what-a-3d-artist-should-know/>
[Accessed 08.03.2022]
- [5] “About Autodesk Max”, Autodesk [Online]. Available:
<https://www.autodesk.com/products/3ds-max/overview?term=1-YEAR&tab=subscription>
[Accessed 26.07.2022]
- [6] “AutoCAD,” Chartercollege [Online]. Available:
<https://www.chartercollege.edu/news-hub/who-uses-autocad-and-why-it-important>
[Accessed 26.07.2022]
- [7] “Adobe Photoshop”, Wikipedia [Online]. Available:
https://en.wikipedia.org/wiki/Adobe_Photoshop[Accessed 27.07.2022]

- [8] “Adobe Illustrator”, Wikipedia [Online]. Available:
https://en.wikipedia.org/wiki/Adobe_Illustrator [Accessed 27.07.2022]
- [9] “Corona”, Wikipedia [Online]. Available:
<https://en.wikipedia.org/wiki/Corona> [Accessed 27.07.2022]
- [10] “Adobe After effect”, Wikipedia [Online]. Available:
https://en.wikipedia.org/wiki/Adobe_After_Effects [Accessed 29.07.2022]
- [11] “Adobe Media Encoder”, Film lifestyle [Online]. Available:
<https://filmlifestyle.com/what-is-adobe-media-encoder/> [Accessed 29.07.2022]
- [12] “AboutAnimation”, Wedio [Online]. Available:
<https://academy.wedio.com/3d-animation/> [Accessed 03.08.2022]
- [13] “About Render”, Realspace3d [Online]. Available:
<https://www.realspace3d.com/resources/what-is-3d-rendering/>
[Accessed 03.08.2022]
- [14] Asset Download [Online]. Available:
<https://3dskey.org/3dmodels?cat=eksterier> [Accessed 03.08.2022]
<https://polyhaven.com/hdris/outdoor> [Accessed 03.08.2022]