Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
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Mini Cricket Stadium

Project Report | Group: 7
Course Title: Engineering Drawing
Course Code: CSE 208
Section: D3

<u>Students Details</u>

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Lab Project Status	
Marks:	**Signature:**
Comments:	**Date:**

Contents

Chapter 1

Introduction

The purpose is to design a round-shaped cricket stadium, together with diverse factors such as the pitch and audience seat arrangement.

1.1 Overview

In this challenge, as a pupil, I will create a 3-D version CAD block format of a cricket stadium using AutoCAD software. The purpose is to design a detailed format of a round-shaped cricket stadium, together with diverse factors such as the pitch, grid traces, audience seat arrangement,

1.2 Motivation

The motivation behind these venture is to benefit from hands on experience using AutoCAD to develop 3D models and to understand the layout and design considerations of a mini cricket stadium by creating a mini stadium it can serve as a solution to address the lack of outdoor fields in towns if implement it by the local government it can provide provide dedicated space for cricket enthusiasm and encourage children students and community members to engage in outdoor sports activities

1.3 Problem Definition

1.3.1 Problem Statement

The problem statement for this project is to design a circuit that can accurately detect day and night lighting conditions and control the lighting automatically. The circuit should be reliable, efficient, and capable of handling varying light conditions.

Table 1.1: Summary of the attributes touched by the mentioned projects

Name of the P Attributess	Explain how to address
P1: Depth of knowledge required	Yes I learn geometrical terms(like circle which is more used in the field) in my childhood which is used in this problem of mini cricket stadium project.
P2: Range of conflicting requirements	—-
P3: Depth of analysis required	For this project size analysis of various modification tools will be required
P4: Familiarity of issues	—-
P5: Extent of applicable codes	The extent of stake holder involvement and conflicting requirements in a mini cricket stadium project can vary . stake holders may include the local government committee members cricket players architects engineers and regulatory authorities managing conflicting requirements and involving stake holders in decision making processes is essential for project success.
P6: Extent of stakeholder involvement and conflicting requirements	—-
P7: Interdependence	—-

1.3.2 Complex Engineering Problem

Since attribute 1,3,5 can be touched by my project "Mini Cricket Stadium" thats why my project can be defined as a complex engineering problem.

1.4 Design Goals

The objective of this project is to build a circuit using a NAND gate that can detect day and night light and automatically control the lighting. The aim is to design a system that turns on the light during the night when there is no natural light and turns it off during the day when there is sufficient natural light.

1.5 Summary

The application of these project is to provide a visual representation and layout plan for mini cricket stadium suitable for a society it can be used for planning discussions and presentations within the society enddocument showing error

Chapter 2

Development of the Project

2.1 Introduction

The project aims to create a 3D CAD model of a mini cricket stadium (Stadium Name: MMR-Muhammad.Moshiur Rahman) using AutoCAD software. The objectives are to design a round stadium layout with features like the pitch, boundary lines, seating, etc. It serves to provide a visual representation for planning and discussion purposes.

2.2 Project Details

2.3 Implementation

Using the circle for the main field , which is 112.01 inches ,after annotation get te below figure:
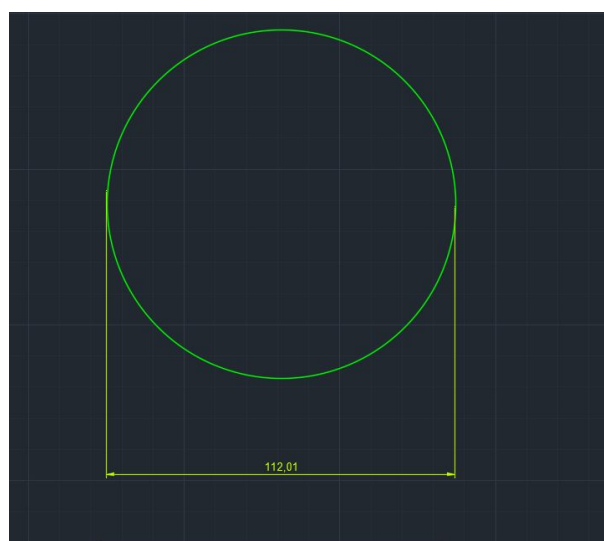
Figure: Main field

Using box tools , the width of main pitch is below:

Figure: Width of the pitch

Figure: Measuring the Seats

Using Revolve tools for circle shape boundry of the stadium Rotate objects around an axis to create a solid

Click Body tab Create panel Rotate. Find. Select the closed object to rotate. To set the axis of rotation, enter one of the following options: Start point and end point. Press Enter. To create a 3D solid, the angle must be 360degrees.
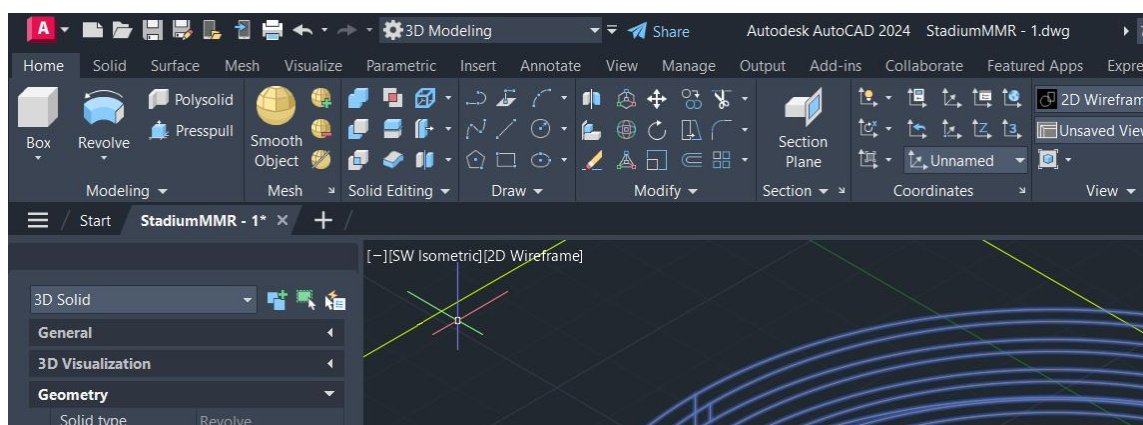

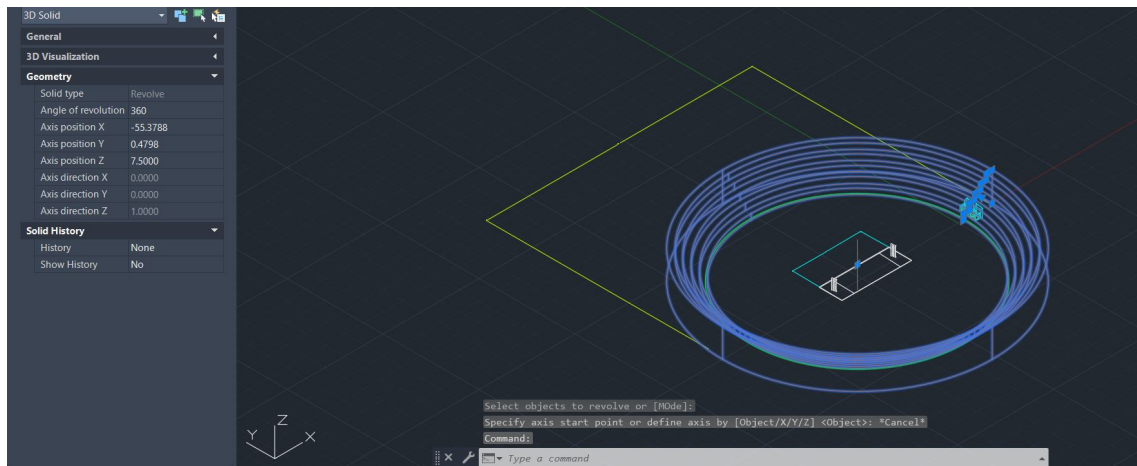**Figure: Revolve Tools**

Position of Axis are respectively X=-55.3788, Y= 0.4798 & Z=7.5000

Figure: Gallery for fans
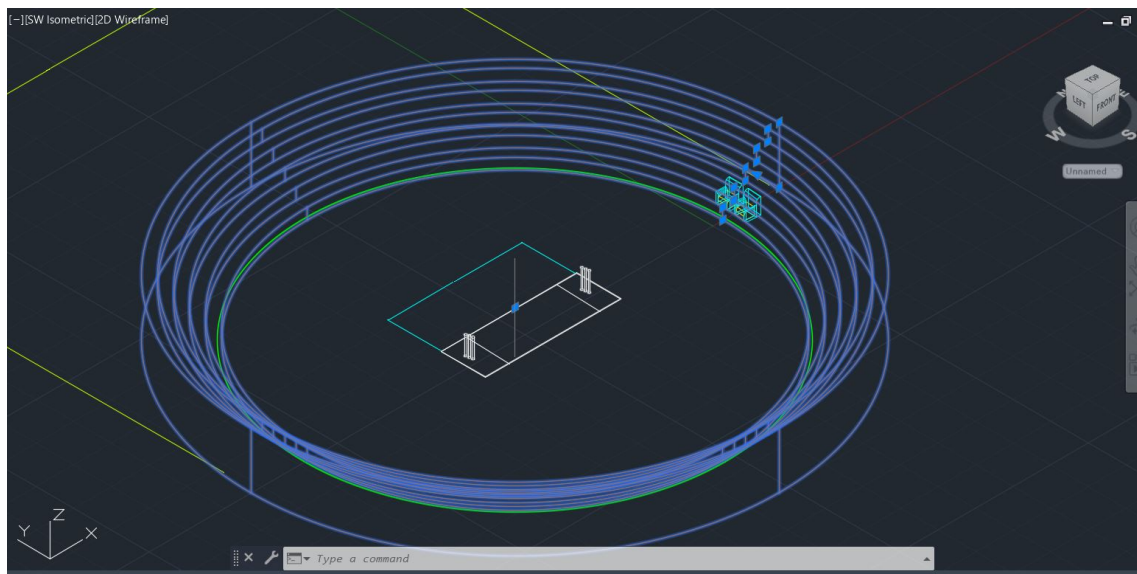
Figure: After using Revolve tools

For audience , seats are arranged according to pollar array.

After using the full shadow , the stadium looks like the below:

Now As I mentioned earlier that no fladlights are used, thats why for natural lighting. I use the sun status,full shadows modifications in the visualize portion of AutoCAD.
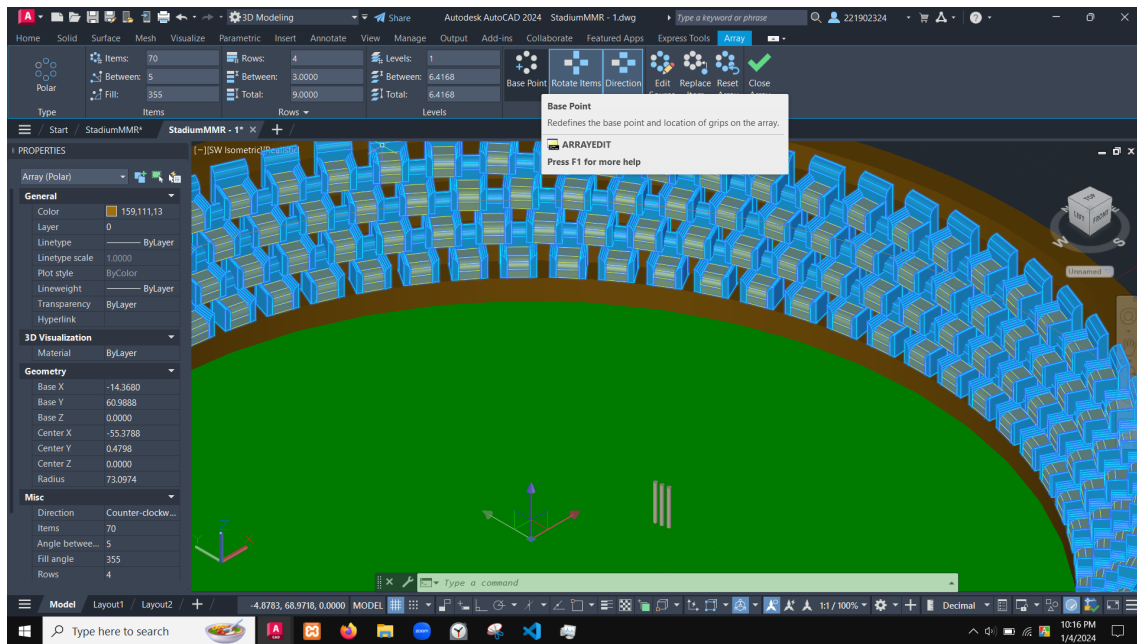
Figure: Polar array modification tools

Figure: length

2.3.1 Different views

Use the Sun status modification tools to lighting the stadium. It fallen the original day light with full shadow features.
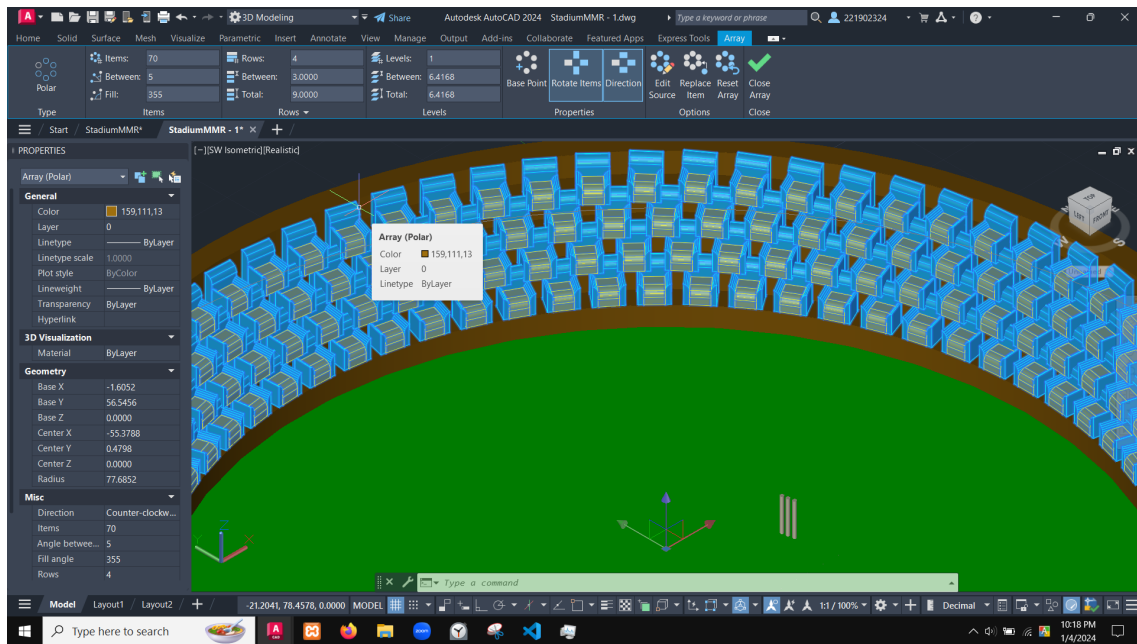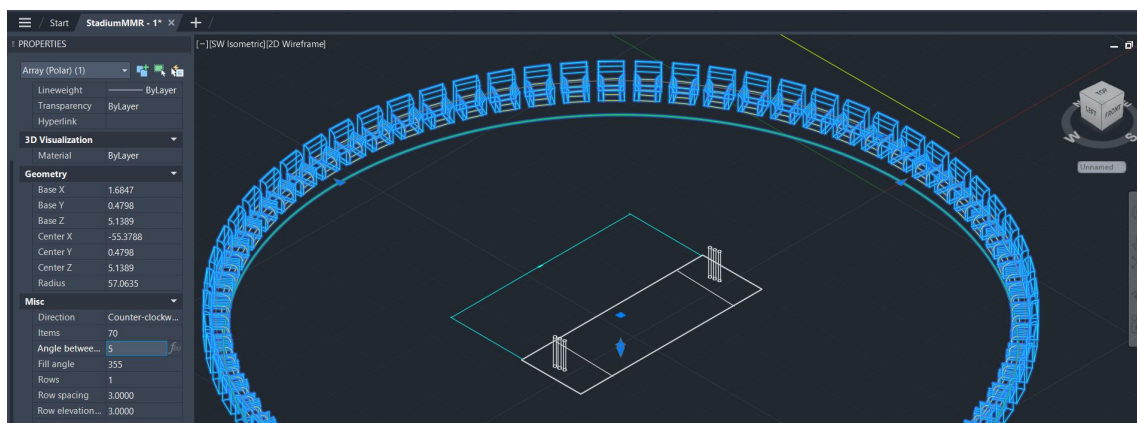
Figure: Base point of the seat
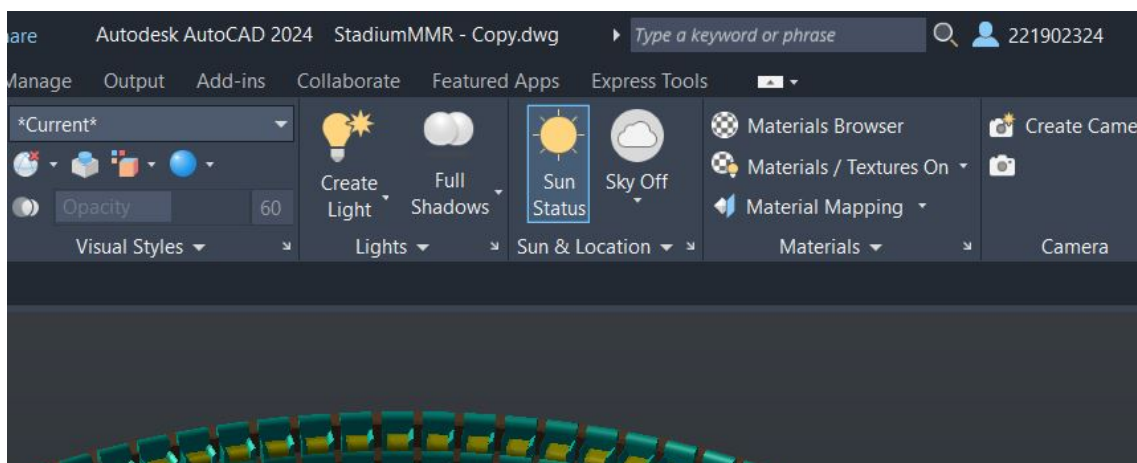

Figure: Seat for the supporters

Figure: Sun Status feature

Workflow

i) The stadium has a round footprint with the cricket pitch at the center. Key features include the cricket pitch (rectangular strip), boundaries, seating chair. Detailed draw-
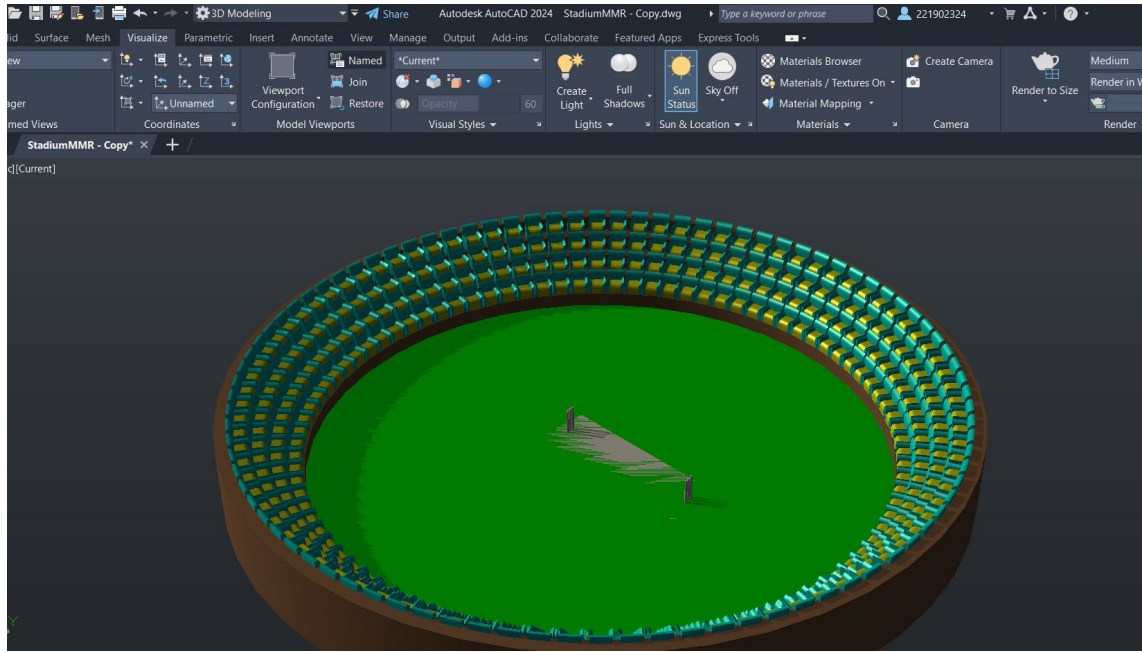
Figure: Full shadows feature

ings are created for each section like the pitch, stands, etc. Appropriate CAD tools are used for shapes, annotations, hatching, dimensions etc. Drawings are created with engineering scales and sizes.
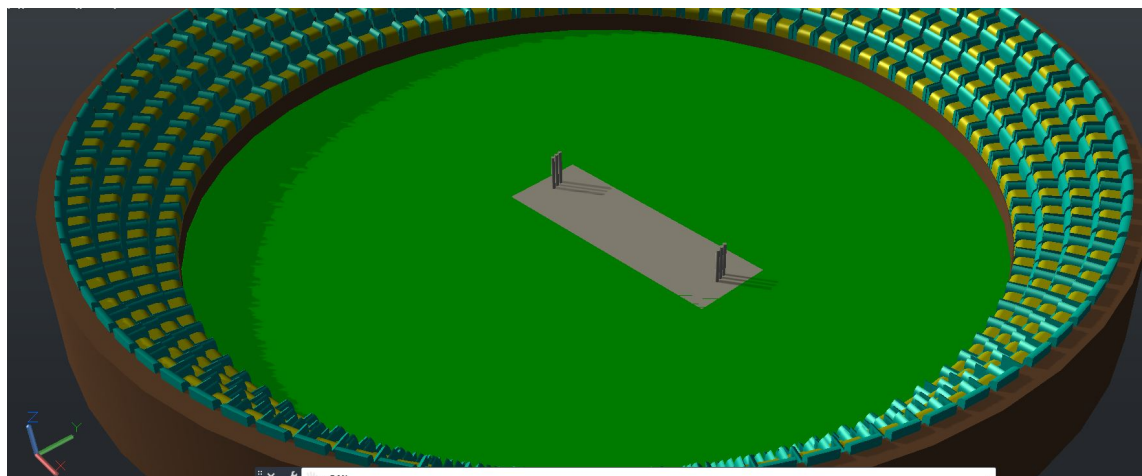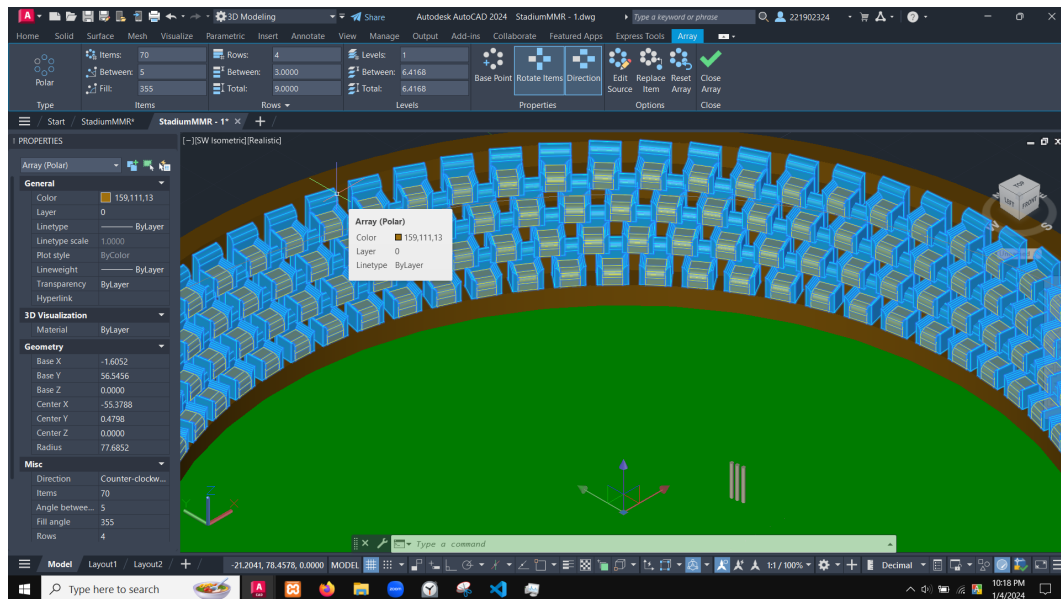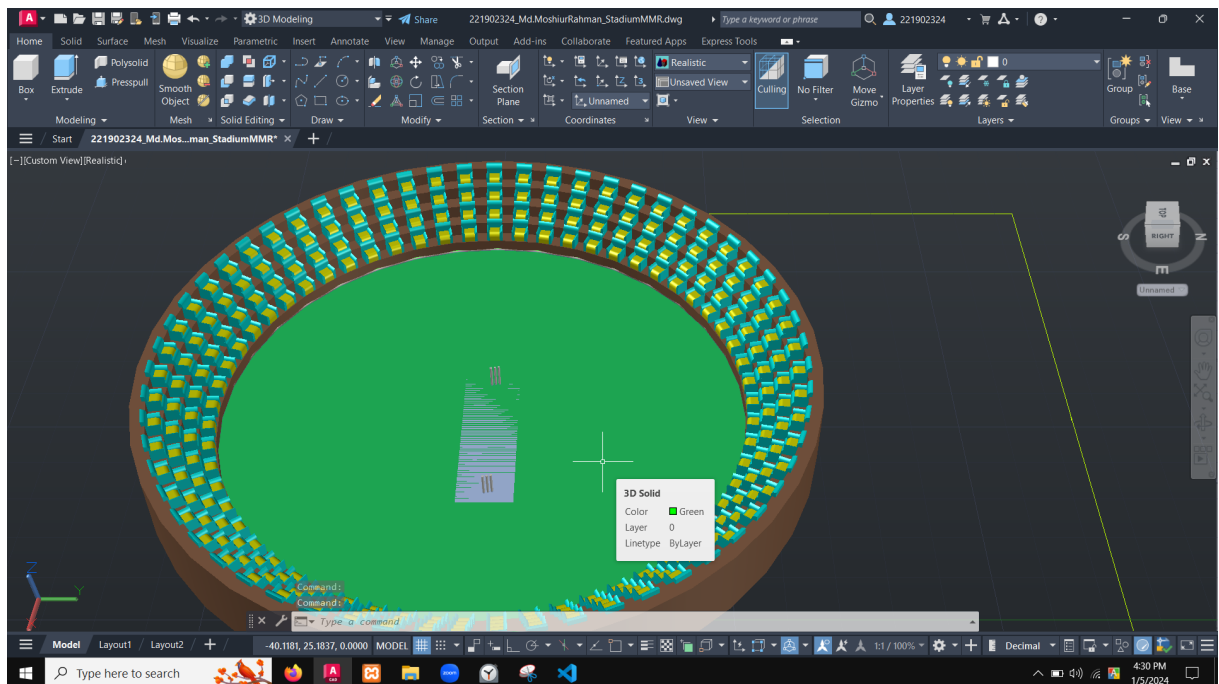

Figure: Shadow view

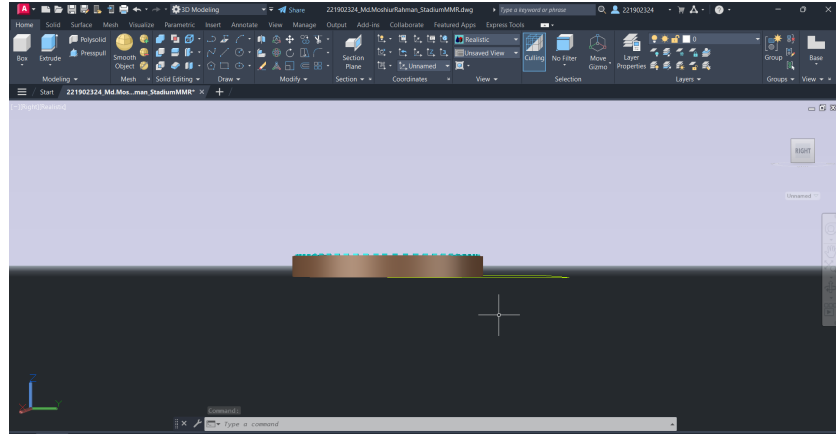**Figure: Shadow view**

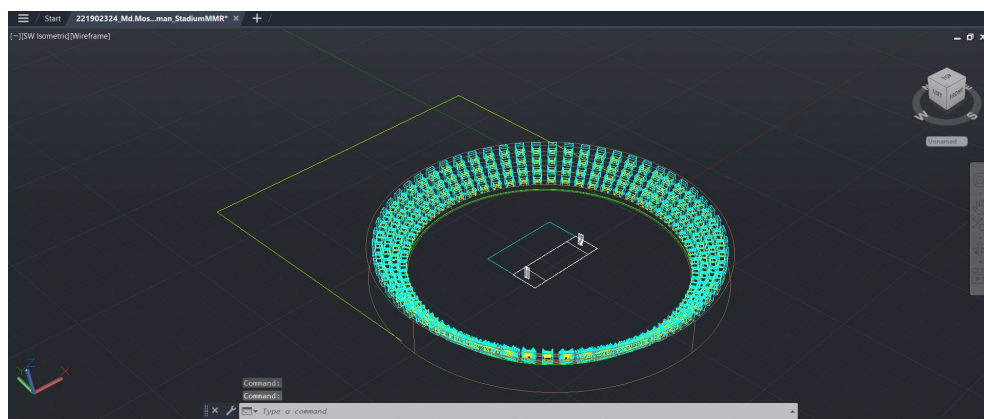**Figure: Top right view**

Figure: Right view

Figure: Wireframe view

Chapter 3

Conclusion

3.1 Discussion

I dont say that I am beginner but not professional being using the AutoCAD software but as a student I tried to complete this task. But some limitations didnot skipped in the "Mini Cricket Stadium Project"

3.2 Limitations

1. The design is limited in because of being a conceptual model in preference to an real production plan.

2.The version does not consist of finer design information like floodlight and so on.

3. Design is static and does no longer account for real-global adjustments wished in the course of production.

3.3 Scope of Future Work

1. Developing the drawing into architectural plans for actual execution.

2. Adding more detailed drawings for facilities, utilities, materials, etc. .

3. Performing analysis for seating capacity, crowed flow, parking needs etc.Also includes floodlight, dressing room for players in future.

3.4 Summary

In summary, the AutoCAD model provides an initial design concept but needs further refinement, analysis and detailing before it can be implemented as a real stadium construction project. [1]

References

[1] Cricket stadium. https://grabcad.com/library/small-cricket-stadium. Accessed on April 20th, 2013.