TASK 4 – REAL WORLD PROJECT REPORT

Residential Building (Plan, Elevation & Section)

1. Introduction

This project involves the preparation of 2D drawings of a residential house using AutoCAD.

The aim of this project is to understand basic civil drafting practices and represent a residential building using plan, elevation, and section drawings.

The residential house consists of two bedrooms, a living room, a kitchen, a bathroom, and a separate WC, designed with standard dimensions and wall thickness.

2. Objective of the Project

- The main objectives of this project are:
- To prepare a residential floor plan using standard dimensions
- To draw the front elevation with proper levels and heights
- To draw the section showing structural details
- To understand the use of layers and blocks in AutoCAD
- To follow standard civil engineering drafting practices

3. Software Used

AutoCAD

Units used: Meters and Millimeters

4. Drawing Details

4.1 Floor Plan

The floor plan is designed for a single-storey residential building.

It includes:

Living Room

Bedroom 1

Bedroom 2

Bedroom 3

Kitchen

Bathroom

WC

Staircase

Wall Thickness:

External walls: 0.23 m

Internal walls: 0.150 m

All room names, dimensions, doors, and windows are clearly shown.

Proper layers are used for walls, doors, windows, text, and dimensions.

Doors and windows are created using blocks for uniformity.

4.2 Front Elevation

The front elevation represents the vertical view of the building and includes:

Ground level

Plinth level

Doors and windows

Slab and parapet wall

Head room

Standard Heights Used:

Plinth height: 0.45 m

Sill height : 0.9 m

Floor height: 3 m

Slab thickness: 0.15 m

Parapet wall: 0.9 m

Head room : 2.1 m

4.3 Section (A–A)

The section shows the internal structural details of the building.

It includes:

PCC

Footing

Foundation

Plinth beam

Floor level

Slab

Parapet wall

Head room

Hatching is applied to concrete and earth portions, and all important levels and dimensions are mentioned.

5. Standards Followed

Standard residential room dimensions

Standard wall thickness

Standard floor heights and foundation details

Proper use of layers and blocks

Metric units as per civil engineering practice

6. Learning Outcome

From this project, I learned:

Preparation of residential plan, elevation, and section

Proper use of layers and blocks in AutoCAD

Importance of standard dimensions and levels

Presentation of drawings in a professional manner

Practical application of AutoCAD for civil engineering works

7. Conclusion

This project helped me understand the real-world application of AutoCAD in civil engineering.

The drawings were prepared following standard practices, and this task improved my drafting skills and confidence in creating residential building drawings.