

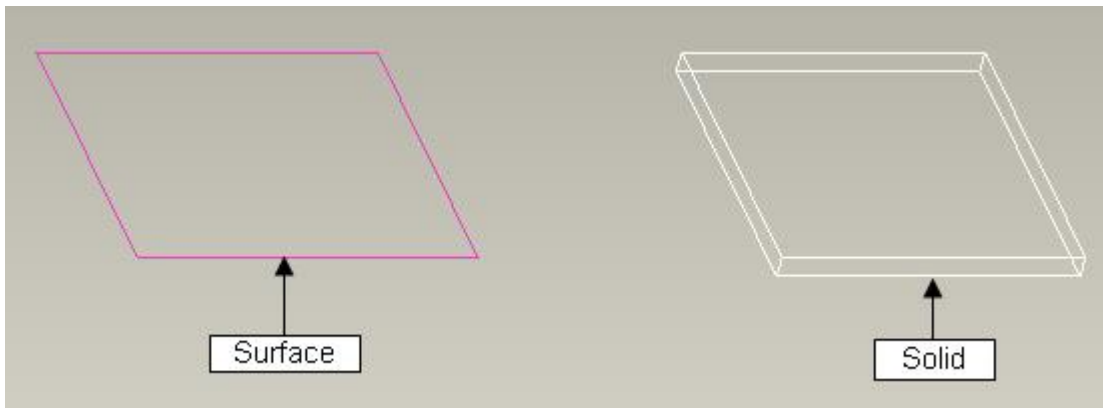
# Basics of Surface Modeling

In this section we will learn the basic terminology and tools used to build the surfaces.

“Surface” and “Quilt” terms are frequently used while building models with surface modeling techniques. So first we will explain the meaning of these terms.

## What is a Surface

A surface is a 2D or 3D object with zero thickness.



## What is a Quilt

A quilt is a collection of surfaces. A quilt may consist of a single surface or a collection of surfaces.

The following figure shows a quilt consisting of only one surface patch.

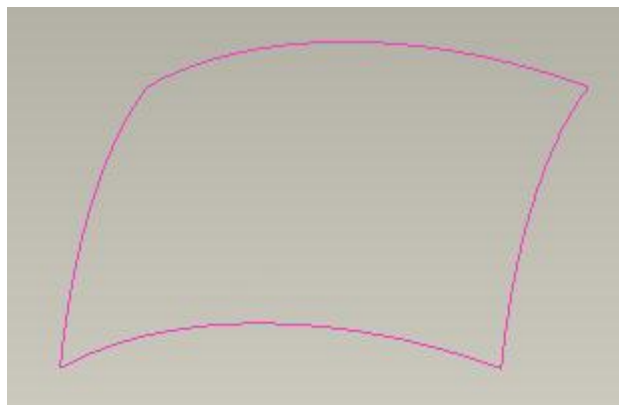


Figure: A quilt consisting of one surface patch

The following figure shows a quilt consisting of four surface patches

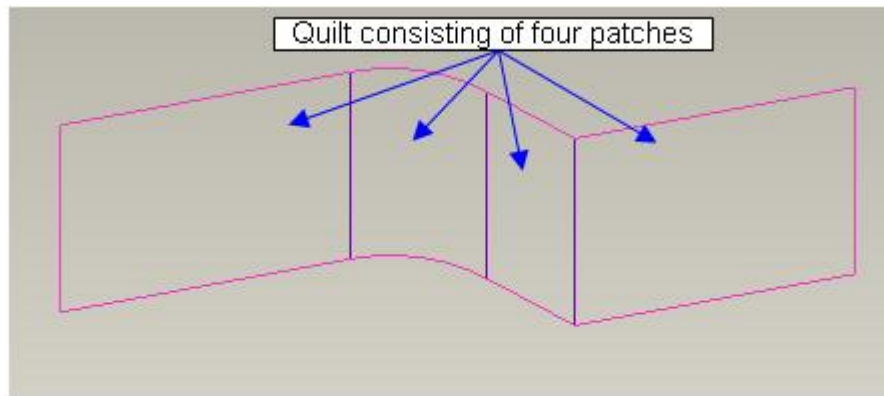


Figure: A quilt consisting of four surface patches

## Surface Creation and Manipulation Tools

The features and tools used for creating solid models can also be used for surface modeling. There are some additional tools that can be used only with surfaces. We will learn about all of these tools by working on simple examples. Tools which we will learn are as follow.

1. Extrude
2. Revolve
3. Fill
4. Sweep
5. Blend
6. Swept blend
7. Boundary blend
8. Offset
9. Copy
10. Mirror
11. Move
12. Merge
13. Trim
14. Extend