

**CONCEPT** A 3D printer is a device that uses a digital model to create a physical object by adding successive layers of material. The printer builds the object from the bottom up, layer by layer, until it is complete. It does this by melting or softening plastic or other materials and depositing them in precise locations. Different types of 3D printers use different materials, such as plastics, metals, ceramics, or even living cells, and can create a wide range of objects, from simple toys to complex medical devices or architectural models.

## BACKGROUND

In the 1980s, early techniques of 3D printing, such as Stereolithography and Fused Deposition Modeling, laid the groundwork for the 3D printing technology used today. In the 1990s and early 2000s, 3D printing was mostly used for rapid prototyping and creating complex shapes that were difficult to manufacture using traditional methods. However, as the technology improved, 3D printing started to gain wider acceptance in manufacturing. Today, 3D printing is used in a variety of applications, from aerospace and automotive industries to medical device manufacturing and even fashion.

