TOOLS FOR ANIMATION CREATION.

2D Animation Tools:

1. **Adobe Animate:** Suitable for both beginners and professionals, great for traditional frame-by-frame animation and vector-based art.

2. **Toon Boom Harmony:** Professional-grade software supporting traditional, paperless, cut-out, and hybrid animation workflows.

3. **OpenToonz:** Open-source software for traditional 2D animation used by both amateurs and professionals.

4. **Clip Studio Paint:** Originally a drawing software, it has robust animation tools for frame-by-frame animation.

3D Animation Tools:

1. **Autodesk Maya:** Widely used in the industry for 3D modeling, animation, and rendering, offering a broad range of features.

2. **Blender:** An open-source and free 3D creation suite supporting modeling, rigging, animation, simulation, rendering, compositing, and motion tracking.

3. **Cinema 4D:** Known for its user-friendly interface and used in motion graphics and visual effects.

Stop Motion Animation:

1. **Dragonframe:** Specifically designed for stop motion animation, providing features for frame capture, editing, and playback.

Motion Graphics & Effects:

1. **Adobe After Effects:** Primarily used for creating motion graphics, visual effects, and compositing.

2. **Apple Motion:** For creating motion graphics, titles, transitions, and effects, designed for Mac users.

Online or Accessible Tools:

1. **Krita:** Primarily a painting software, but it also offers robust animation tools, including frame-by-frame animation.

2. **Pencil2D:** Open-source and easy-to-use software for traditional 2D hand-drawn animation.

3. **Animaker:** A web-based tool for creating various types of animated videos, catering to beginners.

Specialized Animation Tools:

1. **Synfig Studio:** Open-source 2D animation software that focuses on vector tweening for smoother animations.

2. **Moho (Anime Studio):** Known for its rigging capabilities and suitable for both beginners and professionals in 2D animation.

> **PhotoMirage (Corel).** Corel, the developer of the world's first full-featured graphics suite, continues to build innovative tools. For example, PhotoMirage is an animation tool that enables users to combine still images with motion graphics.
> **Piskel.** This free online editor allows digital artists to create animations reminiscent of the pixel art in video games created in the 1980s.
> **Powtoon (Powtoon).** This cloud-based animation software for digital artists and amateurs alike in business, education, and other sectors allows users to create animated explainer videos, demos, and presentations.

> **Spine (Esoteric Software).** For digital artists interested in gaming, this software offers users the tools to create 2D animation for games, as well as 3D effects.
> **Stop Motion Studio (Cateater).** This software provides an intuitive interface. Its features include frame-by-frame editing to allow digital artists of all ages to create stop motion movies using a desktop or phone app.
> **Synfig Studio.** Open source software such as Synfig Studio provides users with a host of features to create 2D vector-based animations, and it's free to use.
> **Harmony 20 (Toon Boom).** This popular 2D software tool includes end-to-end features to enable digital artists to create animations, from conception to final production.
> **TVPaint Animation (TVPaint Development).** For animators who may want to draw on paper, this 2D software, based on bitmap technology, allows artists to create animations using traditional and digital methods.

- ➤ **3ds Max (Autodesk).** This commercial animation software tool allows digital artists to produce 3D animations, including developing models and rendering them into 2D or 3D images.
- ➤ **After Effects (Adobe).** Digital artists can use this commercial tool to add visual effects and motion graphics elements to film, TV, video, online content, presentations, and more.
- ➤ **Animate (Adobe).** Users can create animations across multiple media, from cartoons and banner ads to interactive content for games, TV shows, academic content, and infographics.
- ➤ **Blender (The Blender Foundation).** This free open source 3D graphics creation suite offers a comprehensive feature set to create animations, digital art, visual effects, 2D and 3D models, and more.
- ➤ **Cartoon Animator 4 (Reallusion).** Digital artists across TV, film, web, and game development using this versatile animation tool can create 2D animation with 3D motion.
- ➤ **Character Animator (Adobe).** Digital artists can use their own movements and expressions to create animated characters in real time.
- ➤ **Dragonframe (DZED Systems).** The advanced image capture interface of this tool is popular among digital artists in the movie industry for stop motion animation, motion design, and visual effects.
- ➤ **FlipBook (DigiCel).** Whether drawing with a stylus and tablet or using pen and paper, this animation software offers digital artists intuitive tools to create 2D animations.
- ➤ **Maya (Autodesk).** This commercial software provides digital artists with a comprehensive platform and an extensive feature set, including modeling, simulation, and rendering, to create 3D computer animations.
- ➤ **Moho Pro 13 (Smith Micro).** Formerly known as Anime Studio, this vector-based 2D animation software gives digital artists various tools to create animations and cartoons, including 2D and 3D characters.
- ➤ **Moovly (Moovly).** The novice and expert can use this cloud-based software to create animated videos and videos with animated graphics for various applications, including marketing and training.
- ➤ **OpenToonz (Digital Video SpA).** This software tool allows digital artists to create 2D animations. As open source software, it's free to use, anyone can modify its source code, and it's frequently updated.
- ➤ **Pencil2D.** For digital designers interested in using traditional drawing techniques, this open source software allows users to create 2D cartoons using both bitmap and vector graphics.