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Part A:

VLC Media Player is a free and open-source multimedia player developed by the VideoLAN project. It supports a wide range of audio and video formats, making it a versatile tool for playing various media files. Users can utilize VLC to play files, discs, webcams, devices, and streams. Fast Hardware Decoding: VLC offers hardware decoding on most platforms, which allows the software to utilize the GPU (Graphics Processing Unit) for decoding video streams. This offloading of tasks from the CPU to the GPU results in smoother playback, reduced CPU usage, and improved overall performance. The feature supports 0-copy on the GPU and can fallback on software decoding when necessary.

Supported video formats: MPEG-1/2; DivX(1/2/3/4/5/6)

Supported audio formats: MPEG Layer (1/2); MP3; ACC

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | .wav | .mp3 | .ogg | .mp4 |
| Example 1 | 1.02 MB | 523 KB | 319 KB | 523 KB |
| Example 2 | 2.04 MB | 522 KB | 498 KB | 523 KB |
| Example 3 | 4.98 MB | 461 KB | 474 KB | 462 KB |
| Example 4 | 9.92 MB | 920 KB | 939 KB | 920 KB |

Findings: The .wav format consistently has the largest file size, while .ogg files tend to be the smallest. The .mp3 and .mp4 files have similar sizes, indicating their efficient compression.

Part B:

1.

GIMP is a free image editing software with powerful features:

1. Advanced Editing Tools – Offers brushes, cloning, and healing for detailed image retouching.
2. Selection & Paths – Provides precise selection tools and Bezier curves for design.
3. Layers & Masks – Supports non-destructive editing with multiple layers and blending modes.
4. Plugins & Scripting – Extends functionality using Python, Perl, and various plugins.
5. Color Management – Supports RGB, HSV, and CMYK for accurate color editing.

2.

1. .bmp (Bitmap)

Description: Uncompressed raster format, large file size.

Use: High-quality images, medical imaging, archival storage.

2. .gif (Graphics Interchange Format)

Description: Supports 256 colors, lossless compression, and animation.

Use: Simple animations, logos, and web graphics.

3. .jpg (Joint Photographic Experts Group)

Description: Lossy compression, small file size.

Use: Digital photos, web images, and online sharing.

4. .png (Portable Network Graphics)

Description: Lossless compression supports transparency.

Use: Web graphics, logos, and images requiring transparency.

5. .tiff (Tagged Image File Format)

Description: High-quality, supports lossless/lossy compression.

Use: Professional photography, printing, and archiving.

3.