Ex. No.: 7 **Date:**

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Create a Multimedia Application that Integrates Images, Sound, and Video in a Simple User Interface

AIM:

To develop a simple multimedia application that integrates:

- **Images**
- **Audio**
- **Video**

into a unified user interface using Python and suitable libraries.

Procedure:

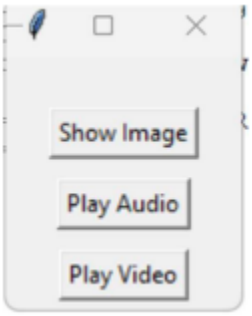
1. **Use a Python GUI framework (e.g., tkinter).**
2. **Integrate:**
   - **Image loading and display using PIL (Pillow).**
   - **Audio playback using pygame or playsound.**
   - **Video playback using opencv or tkinter with ffpyplayer.**
3. **Arrange all elements in a basic GUI.**
4. **Provide buttons to trigger media playback.**

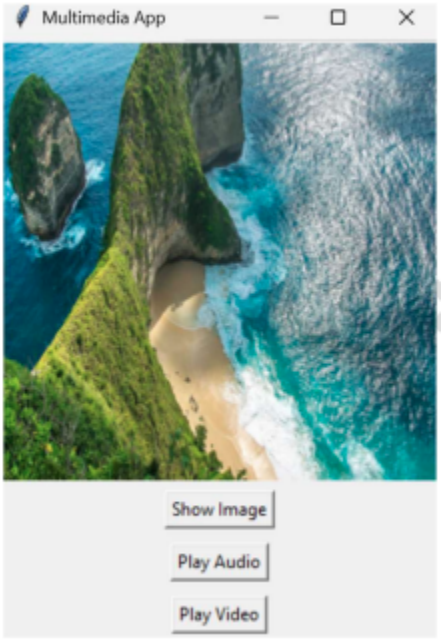
Program:

```
import tkinter as tk
from tkinter import filedialog
from PIL import Image, ImageTk
from playsound import playsound
import cv2
import threading
```

```
def play_audio():
    playsound('sample_audio.mp3')  # Replace with your file

def play_video():
    cap = cv2.VideoCapture('sample_video.mp4')  # Replace with your file
    while cap.isOpened():
        ret, frame = cap.read()
        if not ret:
            break
        cv2.imshow("Video", frame)
        if cv2.waitKey(25) & 0xFF == ord('q'):
            break
    cap.release()
    cv2.destroyAllWindows()

def load_image():
    img = Image.open('sample_image.jpg')  # Replace with your file
    img = img.resize((300, 300))
    img_tk = ImageTk.PhotoImage(img)
    panel.configure(image=img_tk)
    panel.image = img_tk

# GUI Setup
window = tk.Tk()
window.title("Multimedia App")

btn_img = tk.Button(window, text="Show Image", command=load_image)
btn_audio = tk.Button(window, text="Play Audio", command=lambda:
threading.Thread(target=play_audio).start())
btn_video = tk.Button(window, text="Play Video", command=lambda:
threading.Thread(target=play_video).start())

panel = tk.Label(window)
panel.pack()

btn_img.pack(pady=5)
```

```
btn_audio.pack(pady=5)
btn_video.pack(pady=5)

window.mainloop()
```





Result:

A multimedia application was successfully created that integrates image, audio, and video functionality into a single interactive interface.