# DaVinci Resolve Colour Grade Current or all Timelines Script

This Python script automates the application of a colour grade to all clips in the current timeline or to all timelines in a DaVinci Resolve project. The script interacts with DaVinci Resolve's API to ensure efficient and consistent grade application. Below you will find a detailed summary of the functions and use of the script.

## Prerequisites

- DaVinci Resolve must be open before you run this script.
- Make sure that the grading file "drx" is accessible and the correct path is known.

## Features

1. Apply the grade to timeline elements: The script applies a specific grade to all elements in a video track of a timeline.
2. Apply grade to all timelines: It can apply the grade to all timelines in the project.
3.User prompts: The Users is prompted to specify the path of the grading file and to choose whether to apply the grade to the current timeline or to all timelines.

## Script workflow

1. DaVinci Resolve initialisation:
 - The script initialises the API connection with DaVinci Resolve.
 - Retrieves the project manager and the current project.

2. Load project:
 - Checks whether a project is loaded. If not, the script is terminated.

3. Handle timeline:
 - Retrieves the current timeline or creates a new empty timeline if none exists.
 - Defines the current timeline for further operations.

4. User input:
 - Prompts the user to enter the path to the grade file `.drx`.
 - Checks whether the specified sheet music file exists.

5. Grade application:
 - Prompts the user to choose between applying the grade to the current timeline or to all timelines.
 - Applies the note to the specified range (current or all timelines).

## Instructions for use

1. Make sure DaVinci Resolve is open:
 - Start DaVinci Resolve before running the script.

2. Run the script:
 - Execute the script in a Python environment.

3. Follow the prompts:
 - Enter the path to the "drx" grade file.
 - Select whether the grade should be applied to the current timeline or to all timelines.

4. Finish:
 - The script will apply the grade and provide feedback on the success of the operation.

Example of execution

1. Initialise DaVinci Resolve:
 - Make sure that DaVinci Resolve is open and a project is loaded.

2. Run the script:
```bash
python apply_grade.py
```

3. Enter the path of the grade file:
```
Enter the path to the .drx file: /path/to/your/grade.drx
```

4. Select the application area:
```
Do you want to apply the grade to the current timeline or to all timelines? (C/A): a
```

5. Result:
```
The grade was successfully applied to all clips in all timelines.
```

## Script details

### Functions

- apply_grade_to_all_timeline_items(timeline, grade_mode, grade_path):
 - Applies the specified grade to all items in the video track of the specified timeline.

- apply_grade_to_all_timelines(project, grade_mode, grade_path):
 - Iterates through all timelines in the project and applies the grade to each one.

### Main execution sequence

- DaVinci Resolve initialisation:
 - Establishes a connection to DaVinci Resolve and calls up the current project.

- Project and timeline handling:
 - Ensures that a timeline is available for grade application.

- User Interaction:
 - Prompts for the `.drx` file path and checks its existence.
 - Asks whether the note should be applied to the current timeline or to all timelines.

- Grade Application:
 - Calls the appropriate function to apply the grade based on user's choice.

## Conclusion

This script provides an efficient way to apply colour grading across time in a DaVinci Resolve project to save time and ensure consistency. It processes the user input and checks the necessary conditions before performing the colour adjustment. This makes it robust and user-friendly.