ITE 2732 – Multimedia Development Mini Project Documentation

- # Project Overview

This project involved the creation of an interactive 2D animated video on the theme of **sustainable tourism in Sri Lanka**. The mini project was undertaken as part of the ITE 2732 – Multimedia Development course at the University of Moratuwa, and its primary objective was to utilize animation as an educational tool to promote sustainable tourism practices. In line with this goal, the animation aims to **educate viewers about environmentally and culturally responsible travel**. It illustrates the benefits of responsible tourism and contrasts them with the harmful impacts of careless tourism behavior. By highlighting concepts such as environmental preservation and respect for local culture, the video seeks to inspire viewers to adopt more sustainable behaviors when visiting Sri Lanka's attractions, aligning with the global definition of sustainable tourism as tourism that accounts for its economic, social, and environmental impacts on host communities

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The final delivery is a short, animated video approximately five minutes in length. Through creative visual storytelling, it emphasizes why protecting the environment and respecting cultural heritage are crucial in the tourism sector. The narrative demonstrates how **small actions by tourists can significantly affect** natural sites and local communities, thereby conveying the message that **sustainable tourism** is not only beneficial but necessary for preserving Sri Lanka's natural beauty and cultural treasures for future generations.

- **Software and Tools Used**

The development of the animation utilized several industry-standard software tools to design assets and produce motion graphics:

- **Adobe After Effects 2020:** Primary software used for composing animation, including setting up scenes, animating characters and objects, and applying motion graphics effects.
- **Adobe Illustrator 2020:** Used to create vector-based artwork for the project, such as characters, backgrounds, and other graphical elements. Vector graphics ensured clean, scalable images for animation.
- **Adobe Photoshop:** Used in a limited capacity to edit and prepare raster images and textures for use in animation (e.g., minor touch-ups of visuals and exporting assets for After Effects).

These tools were chosen for their robust features and integration, which facilitated a smooth workflow. Illustrator and Photoshop were employed to design the visual elements, which were then imported into After Effects for animation and sequencing.

- # Technical Specifications

The project was developed and rendered with the following technical specifications and hardware setup:

- **Hardware:** A Dell laptop was used for production (Intel® Core™ i3-10210U CPU @ 1.60GHz up to 2.11 GHz, with 4 GB RAM).
- **Frame Rate:** 24 frames per second (fps) was the chosen frame rate for the animation, providing a smooth motion standard akin to traditional film.
- **Resolution:** 720 × 576 pixels. This standard-definition resolution (corresponding to PAL DVD video format) was used as per assignment requirements, ensuring the output file size remained manageable.
- **Animation Style:** Motion graphics-based **2D animation**. The visual style relies on flat 2D graphics and text animations (as opposed to 3D modeling), with a focus on dynamic transitions and illustrative motion.
- **Duration:** ~5 minutes total runtime. The final cut of the animation is five minutes long, which includes the last 5 seconds dedicated to displaying the student's name and ID (as required for attribution).

All content was exported in a common video format (e.g., MP4) at the above resolution and frame rate. The combination of these specs was sufficient to meet the project goals while balancing the limitations of the hardware.

- **Storyboard**

In order to plan the narrative and visual sequence of the animation, a comprehensive **storyboard** was developed in the pre-production phase. A storyboard is essentially a series of still images (sketches for each scene or shot) that show how the video will play out, giving an idea of the flow of scenes before final production

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. Each frame of the storyboard corresponded to a key moment in the animation, including transitions between scenes and the timing of on-screen actions.

The storyboard served as a visual script for the project, mapping out the storyline from the introduction to the conclusion. It helped ensure that the story flowed logically and that each segment of the animation conveyed the intended message (for example, setup of a problem, demonstration of good practice vs. bad practice, and the resolution). By reviewing the storyboard early, adjustments to scene order or content were made before committing to full animation, thereby saving time and aligning the team on the creative vision.

*// **Storyboard frames to be inserted here by the student.** The storyboard images or sketches will illustrate the key scenes and transitions of the animation, following the narrative outlined above.*

- **Concept Board**

Before diving into animation, a **concept board** (mood board) was created to establish the desired visual style and tone of the video. This concept/mood board is a collection of reference images, color swatches, and other design elements that define the visual vocabulary for the project

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. By compiling inspirational materials, the concept board guided the artistic direction — helping to ensure consistency in the look and feel of characters, environments, and overall color palette.

For this project, the mood board emphasized a **vibrant yet natural color scheme** that reflects Sri Lanka's environment. Dominant colors included greens and blues (evoking forests, vegetation, and coastal scenery), complemented by warm earth tones to represent cultural and community aspects. The board also drew inspiration from existing nature-themed illustrations and eco-tourism graphics, which influenced the friendly cartoon style of the characters and the design of scenic backgrounds. The intended mood was **educational and optimistic** – visuals needed to be engaging and accessible to a broad audience (children and adults alike), while underscoring the serious importance of sustainability.

Using the concept board as a reference throughout production ensured that the animation's visuals remained on-message. It acted as a constant reminder of the tone (upbeat and encouraging) and the thematic colors and styles chosen to represent concepts like nature, culture, and sustainability.

*// **Concept board images to be inserted here by the student.** The concept board will showcase the chosen color palette, character style references, and environmental imagery that inspired the animation's design.*

- # Creative and Technical Reflections

Character & Environment Design: The creative process began with designing characters and settings that would effectively communicate the message. The main character (a tourist figure used to demonstrate practices) was designed to be simple, friendly, and relatable so that viewers could easily identify with them. Adobe Illustrator was used to draw this protagonist and other supporting figures as clean vector graphics, which ensured they were easily scalable and ready for animation in After Effects. The environments in the animation were inspired by real Sri Lankan tourism sites and natural landscapes. Scenes were illustrated with elements such as lush green forests, wildlife, beaches, and cultural landmarks (e.g., a silhouette of a famous shrine or an ancient city backdrop) to provide an authentic sense of place. This approach not only made the narrative more engaging but also highlighted the **beauty of Sri Lanka's heritage and ecosystems**, reinforcing why these need to be protected through sustainable tourism practices.

Animation Style & Software Choices: A 2D motion graphics animation style was chosen deliberately for this project, given both the creative objectives and technical constraints. This style allowed the combination of informative content with engaging visuals in a clear, straightforward manner. Adobe After Effects 2020 served as the main platform for bringing the scenes to life. Using After Effects, the team leveraged layered compositions and keyframe-based animations to animate the characters and elements designed in Illustrator. The decision to stick with 2D (rather than attempting a 3D animation) was influenced by practicality: with the available hardware (an i3 processor and 4GB RAM), a 2D workflow was far more feasible and efficient. A 3D animation would likely have demanded significantly more computing power and time to render. Within After Effects, various techniques were employed to enhance the motion – for example, applying easing to smooth out movements and using motion blur on fast actions to make the animation feel more natural. Attention was also paid to **fundamental principles of animation** (such as anticipation before a movement, timing for comedic or dramatic effect, and slight squash-and-stretch on character motions) to give even simple graphic elements a sense of weight and life. These artistic choices in style and software ensured that the final output was visually cohesive and engaging, despite the limited resources.

Technical Challenges & Optimizations: Working on a five-minute animation with modest hardware specifications presented some technical challenges. The limited RAM (4 GB) and mid-range CPU meant that very complex scenes or high-resolution assets could slow down the editing process or cause memory issues. To manage this, the project was organized into smaller scene segments. Each scene (or sequence of a few ten seconds) was animated and rendered separately, rather than building the entire 5-minute timeline in one file. This segmentation prevented the software from becoming too sluggish and allowed focus on one part of the animation at a time. Using **vector graphics for artwork proved advantageous** – Illustrator files were imported as vectors, which kept asset file sizes low and ensured crisp quality at any scale, without consuming as much memory as large raster images would. During production, preview renders were often done at a reduced resolution or with draft settings to speed up playback for review. The team also took care to purge unused assets and optimize effects (for instance, pre-rendering or rasterizing

complex compositions) to conserve memory. Despite these constraints, all scenes were eventually assembled into the final composition and rendered at the full 24 fps and 720×576 resolution. Overcoming technical limitations was a valuable part of the experience, demonstrating that careful planning and creative problem-solving can successfully offset hardware limitations.

Storytelling and Message Delivery: From a creative standpoint, storytelling was at the heart of this project's effectiveness. Rather than just presenting facts, the animation follows a **scenario-based narrative** featuring a tourist character who experiences both **positive (sustainable) and negative (unsustainable) tourism practices**. By using this compare-and-contrast approach, the video clearly illustrates the consequences of each type of behavior. For instance, one scene shows the tourist disposing of trash properly into a bin at a beach, while a parallel scene depicts litter being carelessly left behind in a similar setting – a simple juxtaposition that highlights the immediate impact of respecting or polluting the environment. In another example, the tourist is shown **respecting cultural norms** at a historical temple (such as dressing appropriately and not disturbing the site), contrasted with an alternate scene of the tourist behaving disrespectfully (ignoring signage or touching restricted artifacts). These paired scenarios (good vs. bad practices) cover both environmental and socio-cultural aspects of tourism, allowing the audience to easily grasp what constitutes responsible behavior in each context.

By presenting such contrasts in behavior, the animation communicates the difference between sustainable and harmful tourism practices in a memorable way. The storytelling relies predominantly on **visual cues and character actions** rather than text or dialogue, ensuring that the message transcends language barriers and can be understood by viewers of any background. This visual narrative technique keeps the audience engaged and the educational points clear without the need for extensive on-screen explanation. The use of a relatable character and simple plot progression helps viewers emotionally connect with the scenarios – for example, seeing an animal harmed by litter in the "bad practice" segment creates an emotional response that underscores the lesson. By combining engaging visuals with a clear moral narrative, the video aims to inspire viewers to reflect on their own behavior when traveling and motivate them to make better choices. This approach aligns with evidence that blending storytelling with visuals can **inspire positive change and encourage people to act**, moving audiences toward more sustainable habits

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. In essence, the creative decisions in the narrative were made to ensure the content is not only informative but also impactful in shaping viewer attitudes towards sustainable tourism.

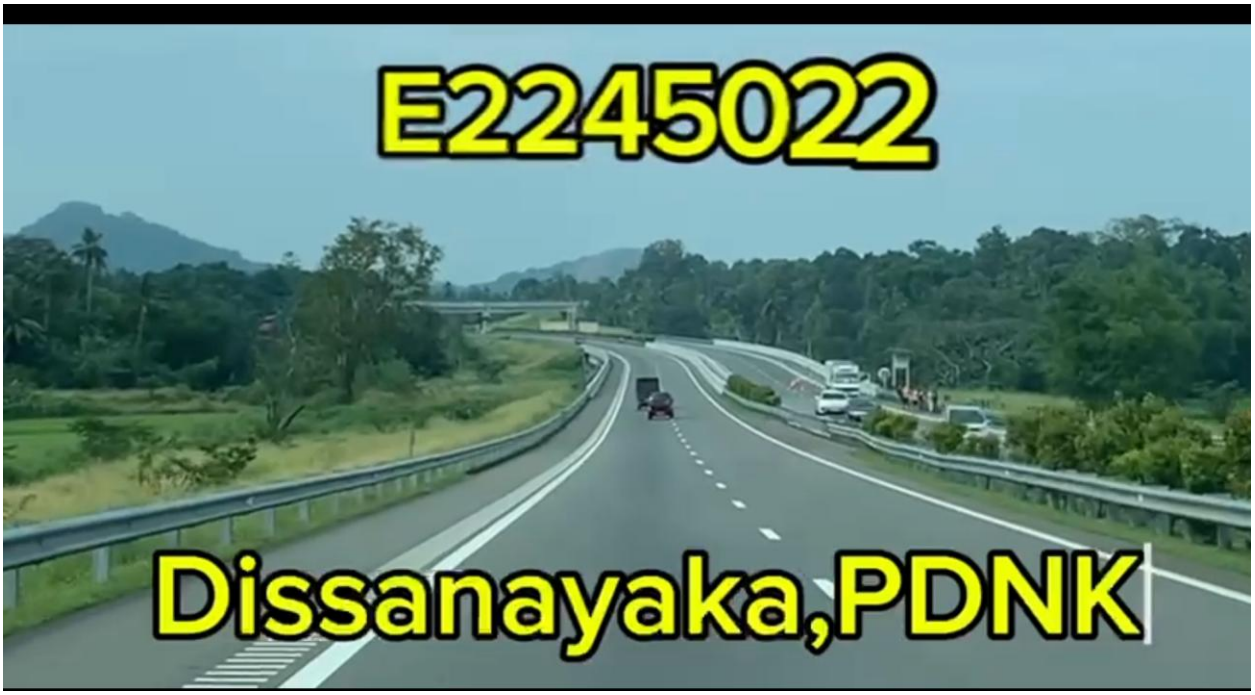
StoryBoard


SIGIRIYA
SRI LANKA TOURISM


BALOON RIDE
SRI LANKA TOURISM


JAFFNA FORT
SRI LANKA TOURISM


SRI LANKA TOURISM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- # Conclusion

In conclusion, the ITE 2732 Multimedia Development mini project successfully brought together **creative animation techniques and an important real-world message**. The formal documentation above outlines how the project was conceived and executed: from initial design concepts (storyboard and mood board) through technical production and final storytelling choices. By leveraging industry-standard tools and adhering to a clear educational narrative, the project demonstrates how multimedia content can be developed to address societal and environmental themes.

The resulting 2D animated video meets the original objective of educating its audience about sustainable tourism in Sri Lanka. Through its motion graphics and storytelling, it highlights the value of protecting natural environments and respecting local culture in the context of travel. It is hoped that viewers of the animation will gain a better understanding of **good vs. poor tourism practices** and be encouraged to adopt more responsible behaviors when they visit Sri Lanka's sites. In a broader sense, this project serves as a small but meaningful contribution to promoting sustainability awareness. By influencing even a few travelers to make eco-friendlier and culturally respectful choices, the animation helps ensure that Sri Lanka's rich environmental and cultural heritage can be enjoyed for years to come, aligning with the countries and global efforts toward sustainable tourism development.