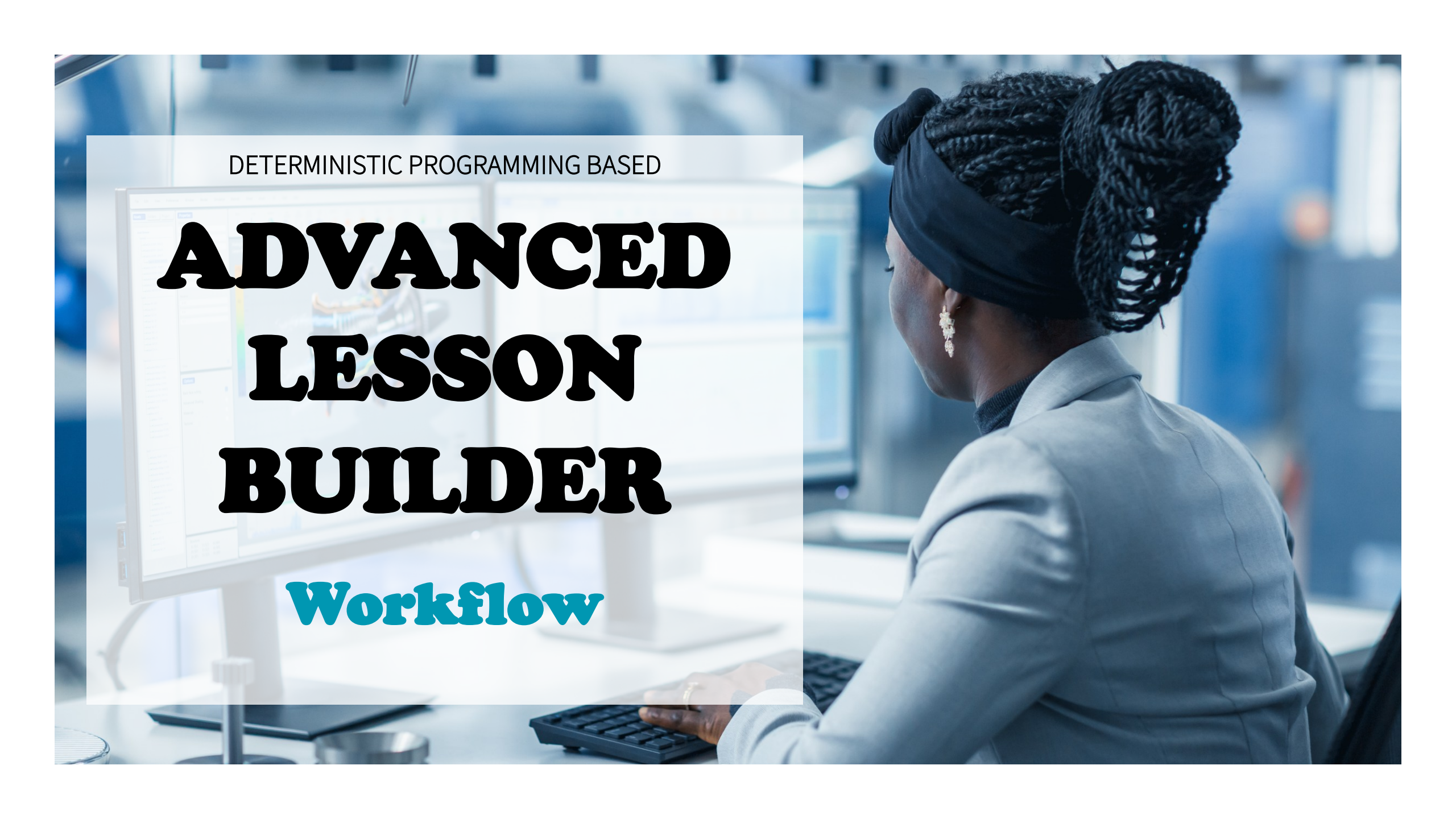


A woman with dark braided hair, wearing a black headband and a light blue blazer, is seen from the side, working at a desk with multiple computer monitors. The background is a blurred office environment with blue tones.

DETERMINISTIC PROGRAMMING BASED

ADVANCED LESSON BUILDER

Workflow

Overall Flow

The tool will:

- 1.**Input and Parse Content** from multiple sources (textbook, SME, manual input).
- 2.**Structure the Content** into screens with a logical flow.
- 3.**Generate Screen Titles**, transitions, and recommended interactive activities.
- 4.**Highlight Content Sources** using color codes (blue for textbook, green for SME, yellow for transitions).
- 5.**Export Outputs** in Excel and Word formats for review and integration into the custom builder.
- 6.**Integrate into Builder**, enabling drag-and-drop functionality, editable text, placeholders for multimedia, and recommended alt text.

Step 1: Onboarding and Metadata Input

Purpose: Capture lesson-specific metadata and initialize the process.

- **User Actions:**
 - Login (Role-based access: ID or Reviewer).
 - Enter the following:
 - **Course metadata:** Course #, module #, unit #, lesson #, titles, and lesson objectives.
 - **Lesson duration:** Default is 15 minutes (adjusts based on word count).
 - **Number of screens:** Dropdown (7–10 screens minimum).
 - **Default placeholders:** Banner image, alt-text recommendations.
- **Validation:** Ensure all metadata fields are completed.

Step 2: Content Input

- Inputs Supported:
 - Textbook Content: PDF, DOCX, TXT.
 - SME Content: Excel, DOCX, TXT.
 - Manual Entry: Additional content typed directly.
- Processing:
 - Parse and segment the input by:
 - Textbook Content (Blue): Verbatim with no changes.
 - SME Content (Green): Shuffled/rephrased for logical flow.
 - Transition Text (Yellow): Minimal additions for context and flow.

Step 3: Parsing and Logical Structuring

- **Purpose:** Segment content into lesson sections/screens and organize it logically.
- **Sections:**
 - **Introduction:** Objective and context-setting phrases.
 - **Core Concepts:** Main instructional material.
 - **Activities:** Interactive steps like tabs/accordions.
 - **Reflection Prompts:** Engaging learners with questions.
- **Rules for Flow:**
 - Maintain **1–2 minutes per screen** (140–280 words).
 - Ensure logical progression (e.g., Introduction → Core → Activities → Reflection)
 - Screens must provide **discrete, actionable content**.
 - Each screen includes a **title, content, and activity suggestions**.

Step 4: Generating Interactive Activities

Purpose: Suggest and populate interactive activities based on content patterns.

- **Rules:**
 - **Tabs:** For multi-step processes or sequential content.
 - **Accordions:** For hierarchical or layered information.
 - **Reflection Questions:** For engaging learners with thought-provoking prompts.
 - We must include the interactives that are in the repository and create rules based on them
- **Output:**
 - Recommend activity type and auto-fill content.

Step 5: Transitions and Flow

Purpose: Add minimal text to connect screens logically.

- **Transition Types:**
 - **Screen Start:** Context-setting (e.g., “Let’s explore this concept further...”).
 - Refer to the final guideline document.
 - **Screen End:** Smooth transitions (e.g., “Now that we’ve seen this, let’s move to...”).
- **Example Transition Output:**
- **Input:**
- **Objective:** "Understand logical flows."
- **Core Concept:** "Logical flows guide learners systematically."

Step 6: Export and Validation

- **Export Formats:**
 - **Excel:** Each screen as a row with columns for screen number, title, content, source, activity, etc.
 - Refer to the Final guidelines for the type of screens.
 - **Word:** Formatted lesson structure with highlighted content (blue, green, yellow).
- **Validation Rules:**
 - Minimum **7–10 screens**.
 - Each screen has a title, content, and transitions.
 - Logical flow and pacing checks.

Step 6: Export and Validation

Final Output

1. **Excel:** A structured storyboard with screens, word counts, and activity recommendations.
2. **Word:** A formatted document with titles, transitions, and color-coded content.

Phase Two - Feature Expansion Phase

Builder Integration:

1. Screens load into a drag-and-drop interface with editable text, placeholders, and recommended alt-text for images.