Laser Cutting Design Worksheet

Task Overview:

Your task is to design a custom housing using Fusion 360, prepare it for laser cutting, and reflect on the process. Follow the steps below, completing each section and including screenshots and a link to your final design.

Step 1: Plan Your Design

1. **Choose Your Path:**
    - Decide whether to design a **Custom Housing** or use a **Pre-Designed Box**.
2. **Sketch Your Ideas:**
    - Think about:
        - Where components will sit.
        - Openings for buttons and ports.
        - Ventilation and overall aesthetics.
    - Create a rough sketch on paper or using Fusion 360.

Task: Insert an image or scan of your sketch with measurements below.

![Insert Sketch Here]

Step 2: Create Your Model in Fusion 360

1. **Open Fusion 360:**
    - Begin designing your housing.
2. **Design Options:**
    - **Path 1 (Custom Housing):**
        - Start with basic shapes and create your housing from scratch.
    - **Path 2 (Pre-Designed Box):**
        - Import the provided DXF file and modify it to include cutouts and customizations.
3. **Tools to Use:**
    - **Sketch Tool:** Draw your cutouts and openings.
    - **Extrude Tool:** Adjust wall thickness.
    - **Assemble Tool:** Check if components fit correctly.

Task: Insert screenshots of your progress in Fusion 360 below.

![Insert Fusion 360 Screenshot #1 Here] ![Insert Fusion 360 Screenshot #2 Here]

Step 3: Prepare for Laser Cutting

1. **Export Your Design:**
    - Once complete, export your sketches as a DXF file.
2. **Checklist Before Exporting:**
    - Ensure all lines are clear.
    - Confirm the design is suitable for the material you will use.

Task: Attach your exported DXF file and provide a link below.

[Insert Link to DXF File Here]

Tips for Success

- **Measure Precisely:** Double-check measurements to ensure components fit.
- **Think About Assembly:** Ensure your housing can be easily assembled after cutting.
- **Test Fit:** Use cardboard prototypes if possible before cutting the final version.

Reflection

1. **What Worked Well?**
    - Describe the successful aspects of your design and process.
2. **What Would You Improve?**
    - Reflect on areas for improvement in future designs.

Task: Write your reflection below.