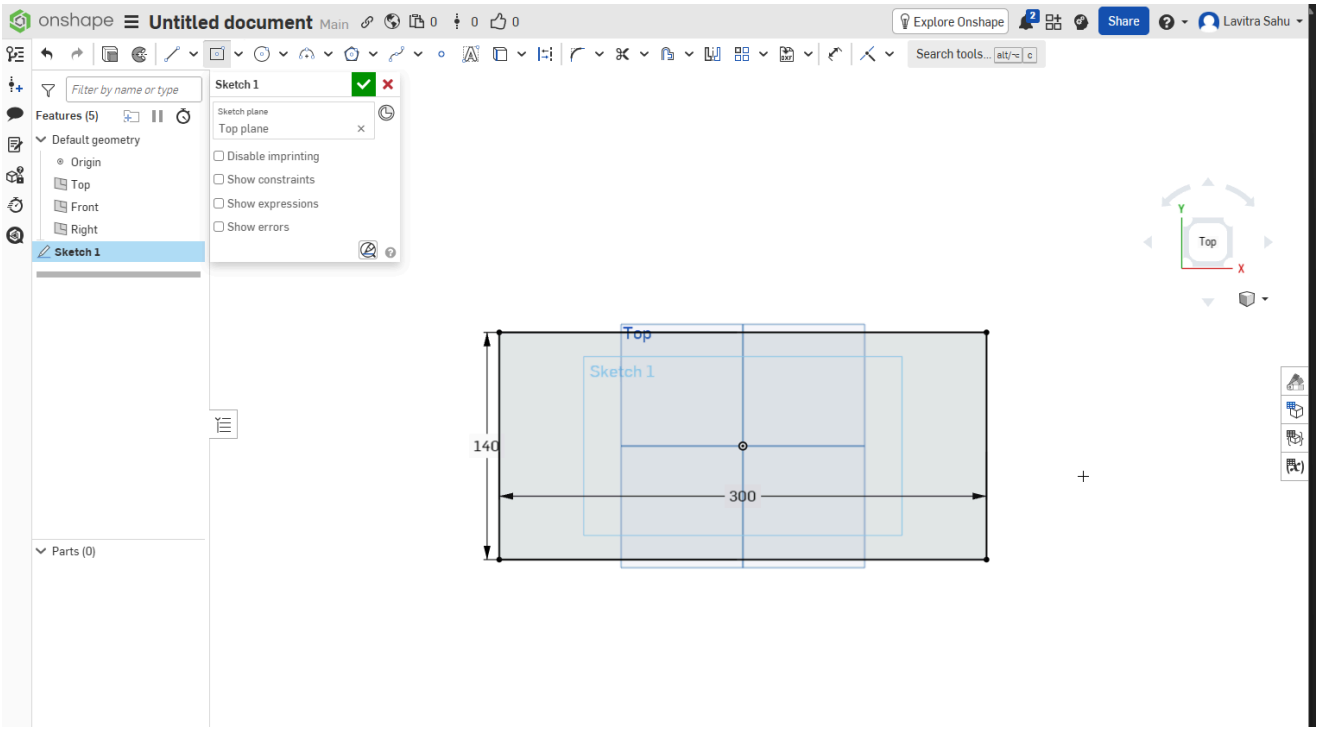
Ice Tray Design in Onshape (Sketch, Extrude, Draft, Pattern, Shell, Sweep, Fillet)

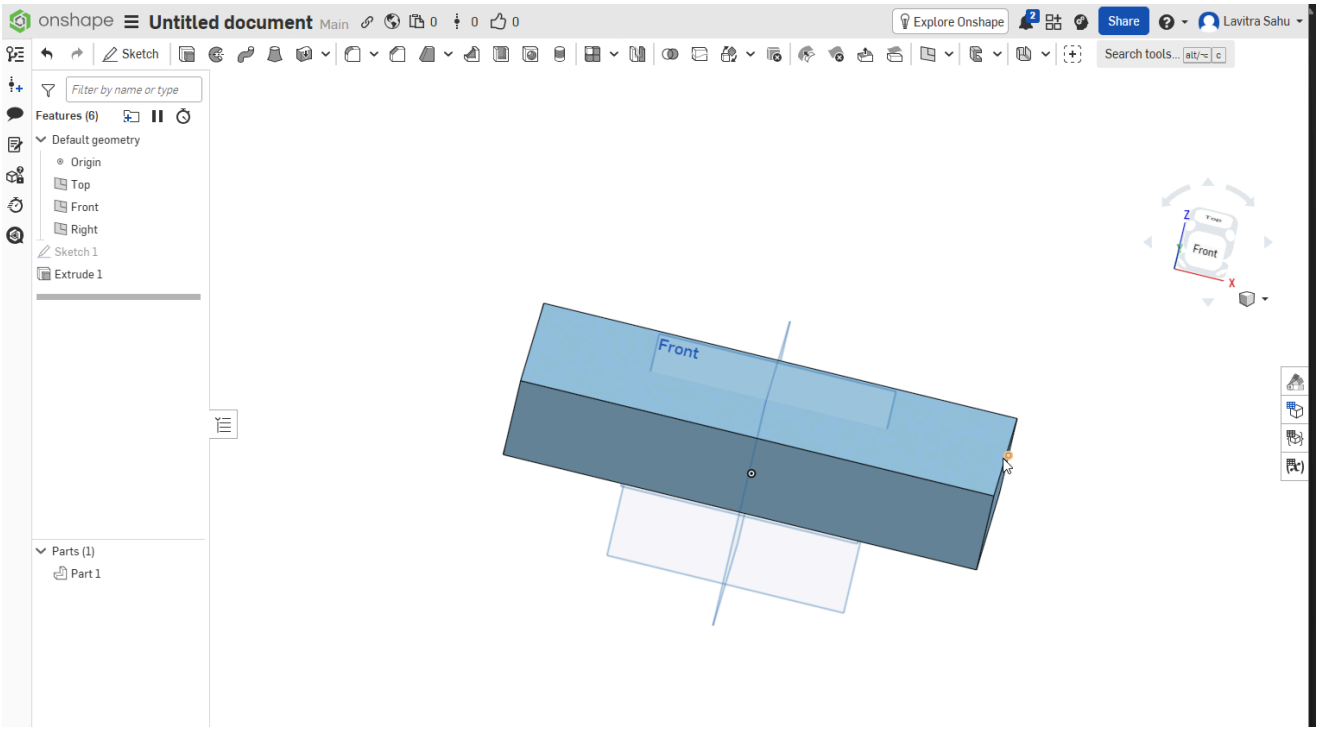
In this section, we will design an **ice tray** using core Onshape tools such as **Sketch, Extrude, Draft, Linear Pattern, Shell, Sweep, and Fillet**.

Step 1: Base Sketch on Top Plane



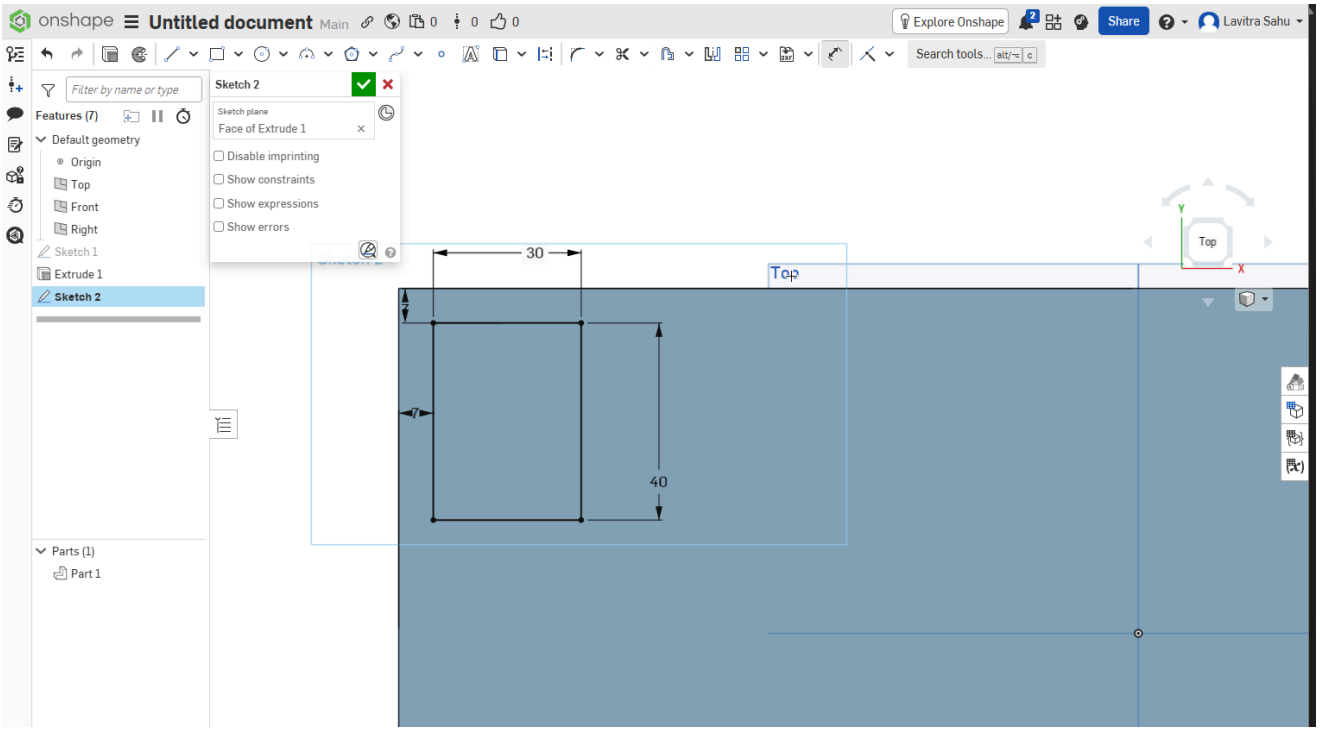
- Create a **Sketch on the Top Plane**
- Draw a **Rectangle**
  - Width: **140 mm**
  - Length: **300 mm**

Step 2: Extrude Base



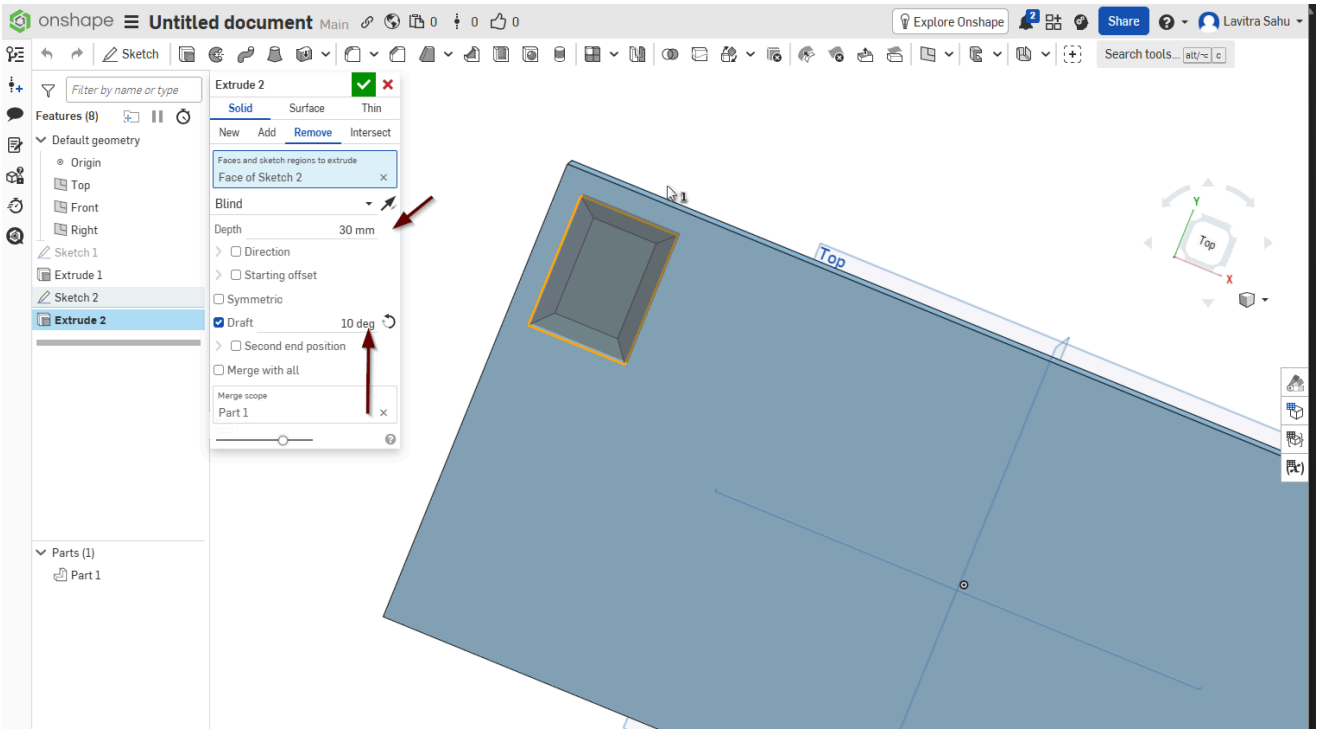
- **Extrude** the rectangle by **50 mm**

Step 3: Ice Pocket Sketch



- Create a sketch on the **top face**
- Draw a **40 mm × 30 mm rectangle**
- Keep **7 mm offset** from all sides

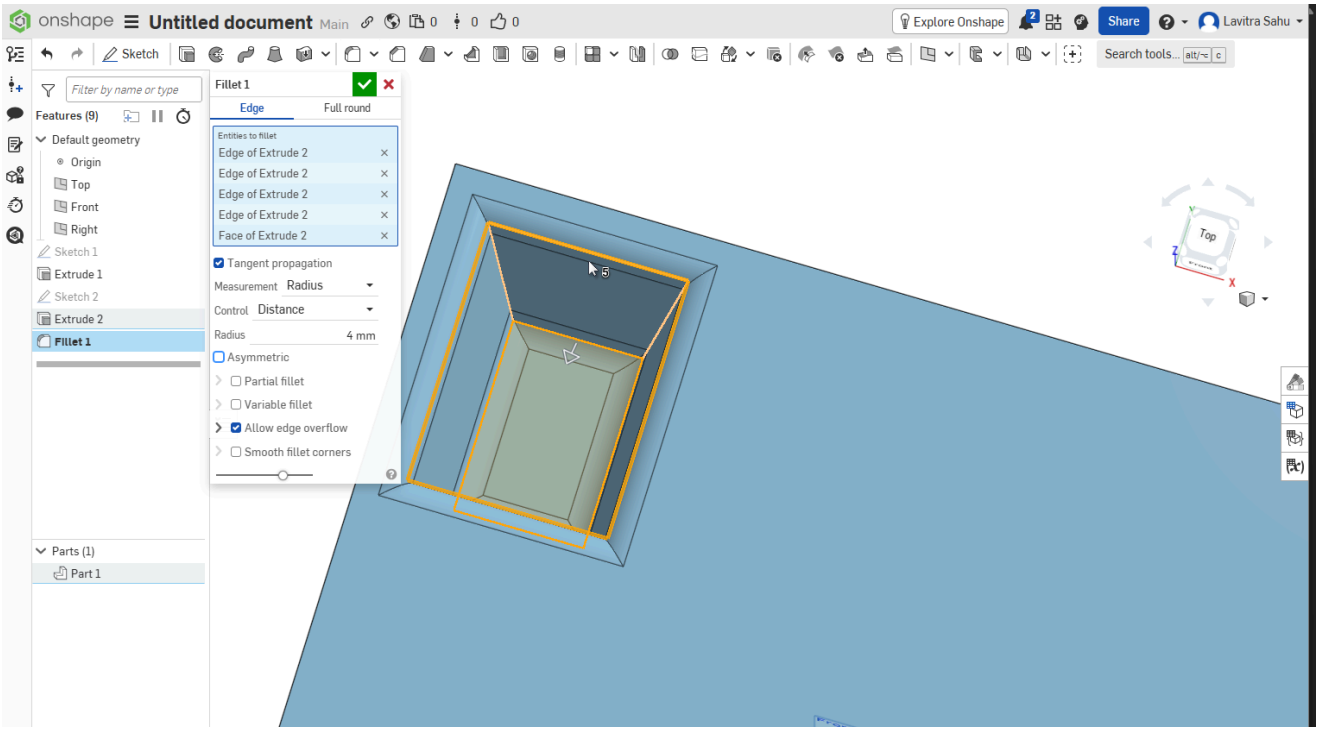
Step 4: Cut with Draft



- Perform a **negative extrude (cut)** of **30 mm**
- Apply **10° draft angle**

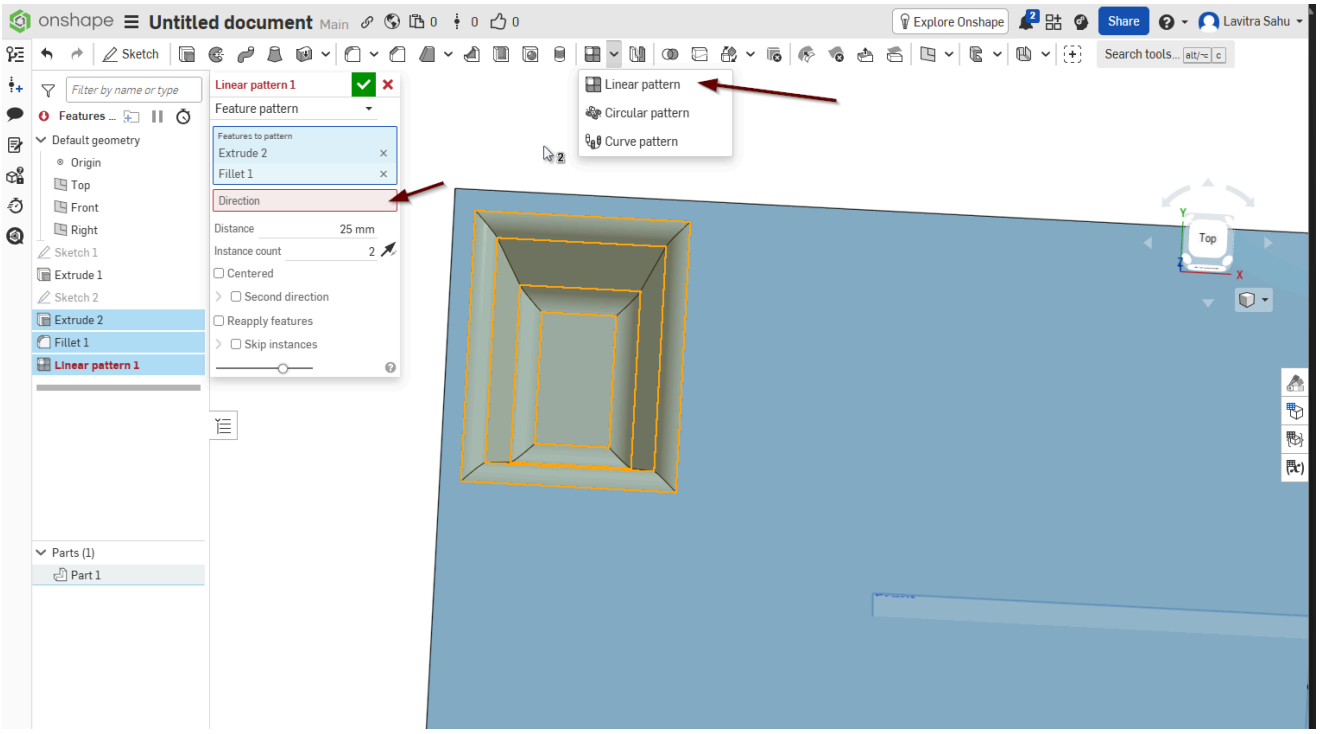
This creates the tapered ice pocket.

Step 5: Fillet the Pocket



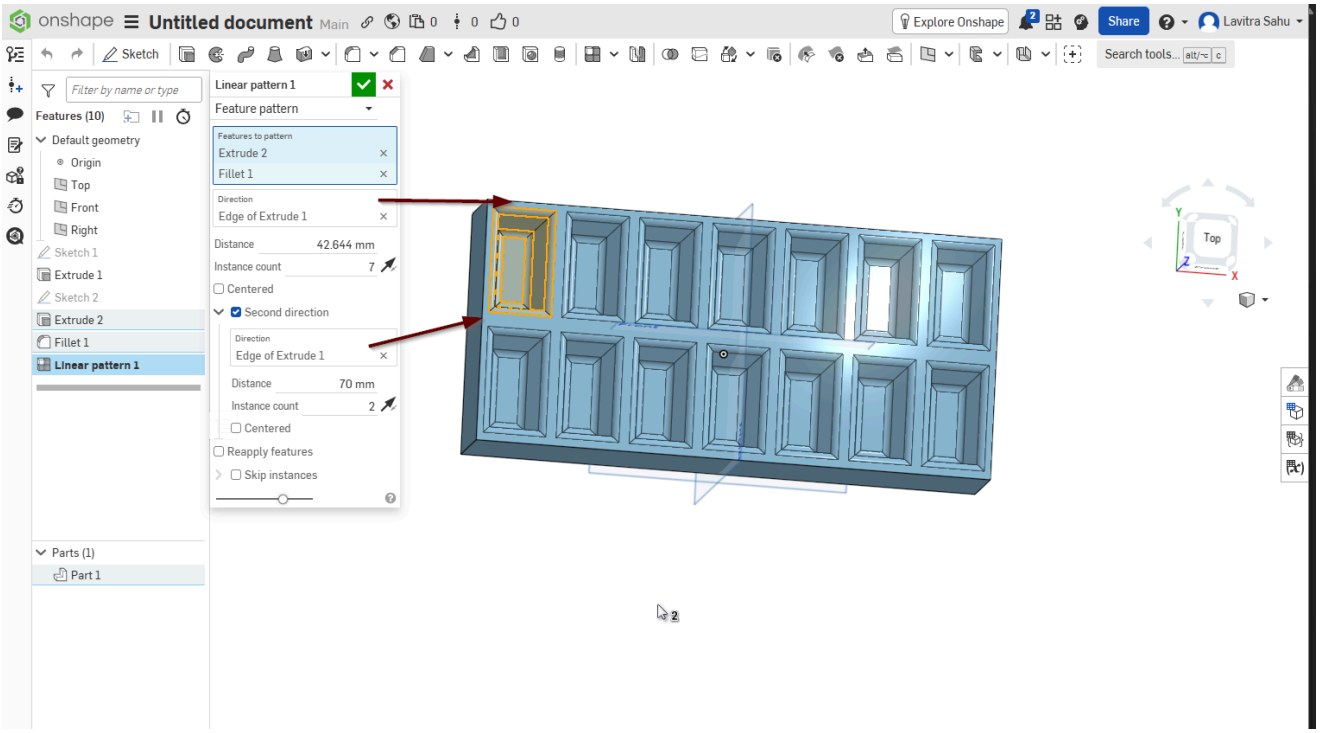
- Add **fillets** to smooth the pocket edges

Step 6: Linear Pattern



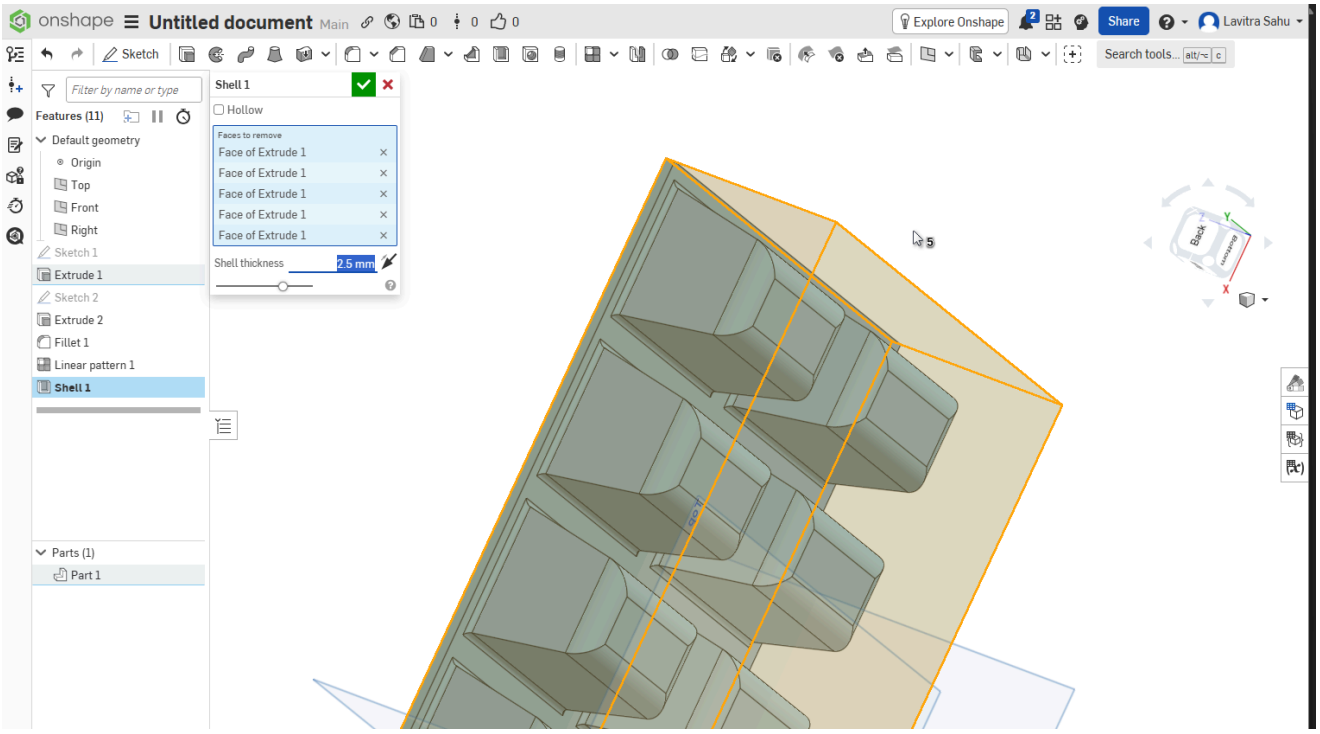
- Go to **Linear Pattern**

Step 7: Select Pattern Direction



- Select the correct **direction**
- Pattern the ice pocket feature across the tray

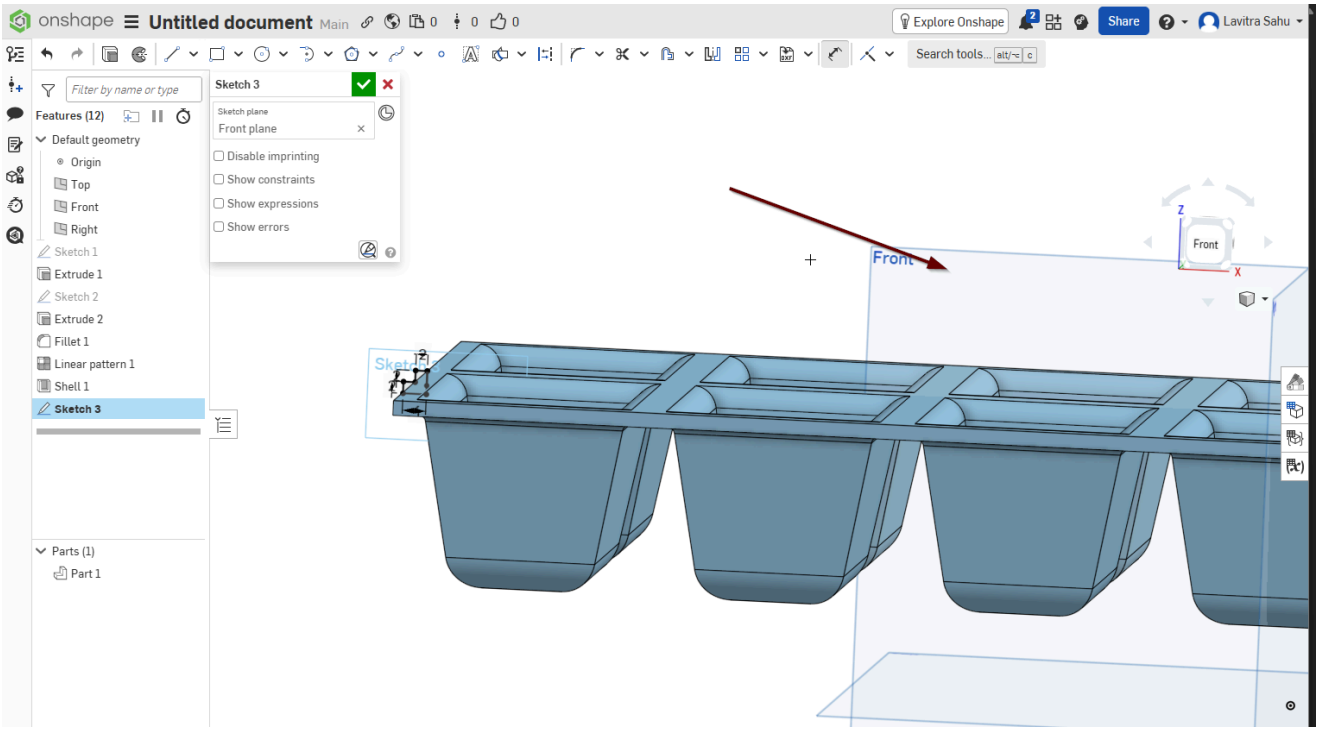
Step 8: Apply Shell



- Use the **Shell tool**
- Set shell thickness to **2.5 mm**

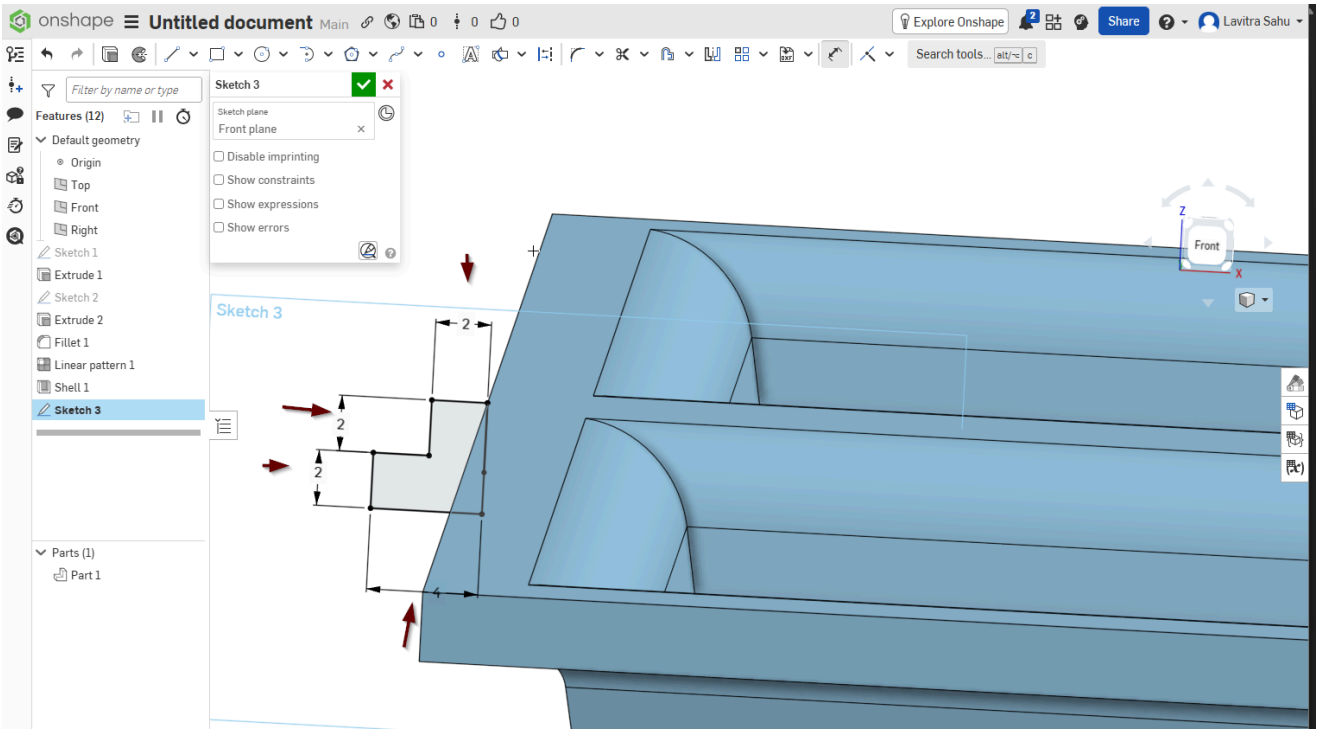
Tray Edge Reinforcement

Step 9: Front Plane Sketch



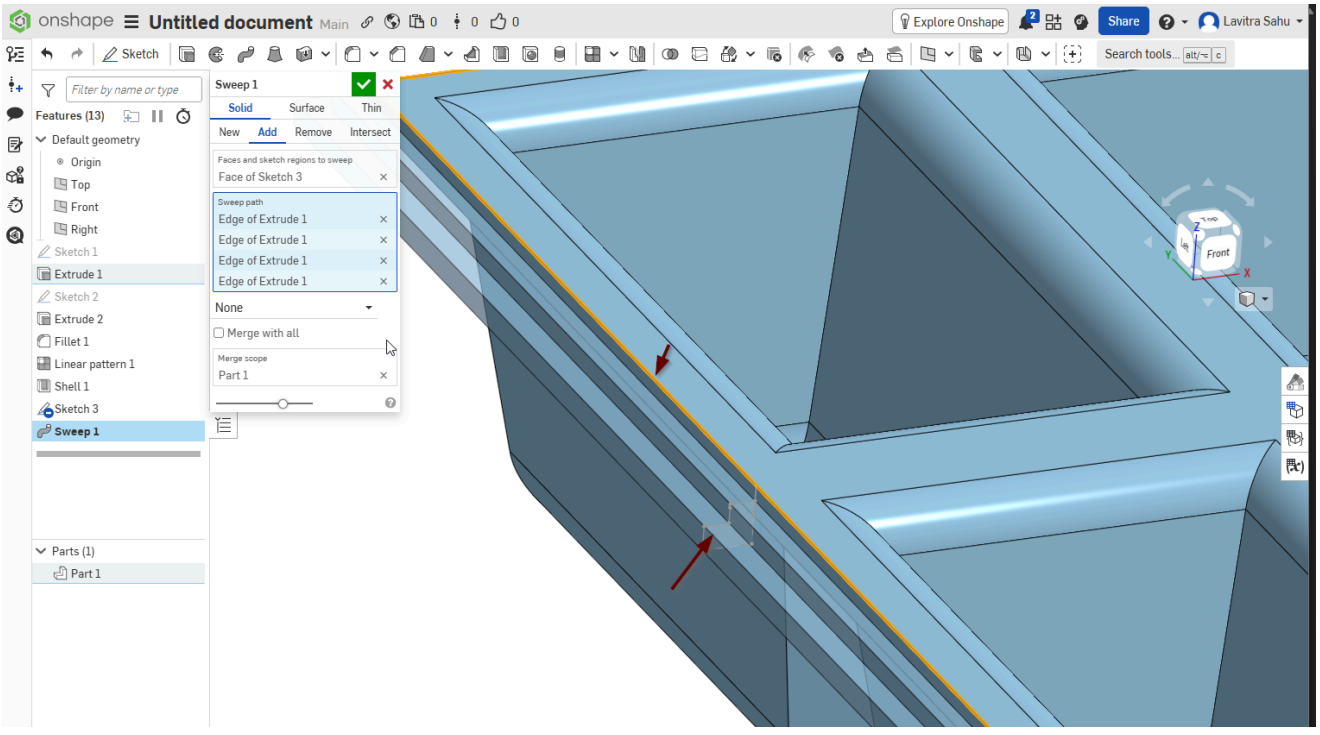
- Create a **Sketch on the Front Plane**

Step 10: Project Tray Edges



- Use **Intersect / Project**
- Project the side edges of the tray
- Draw an **L-shaped profile** using the projected geometry

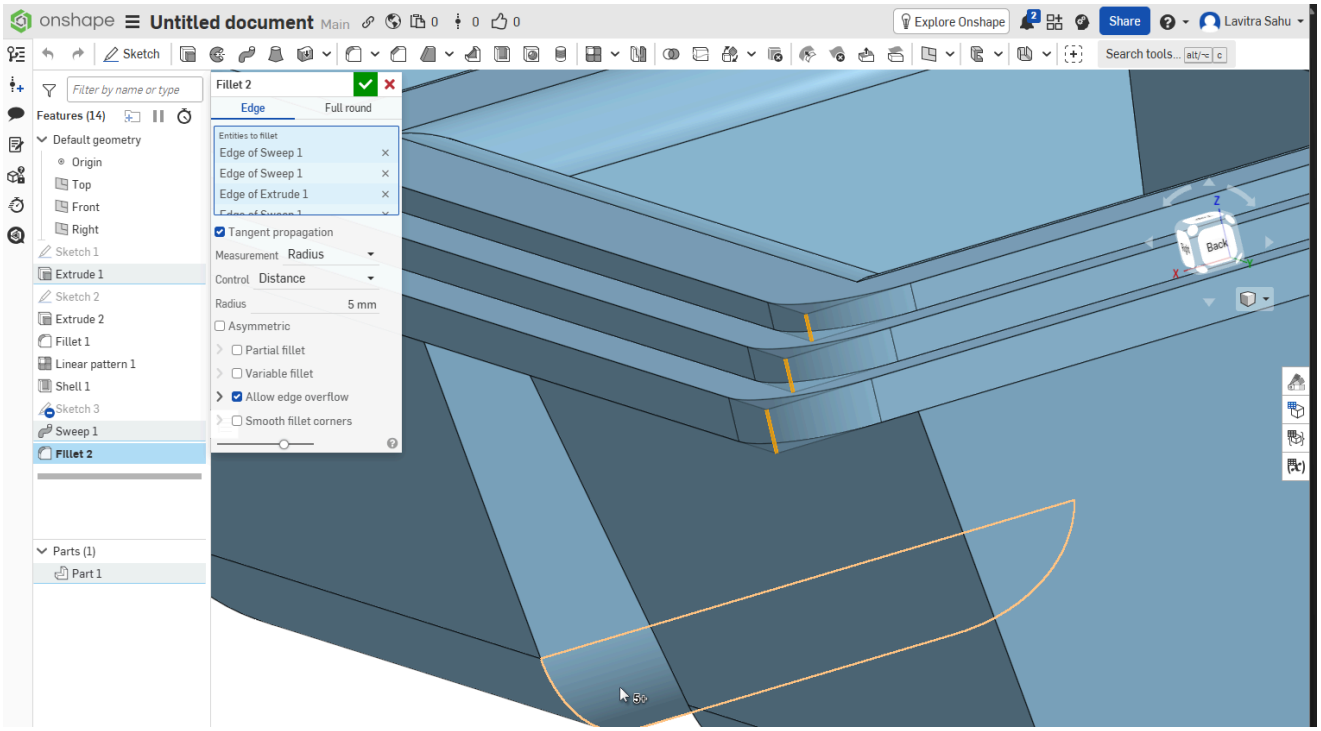
Step 11: Sweep the Profile



- Use the **Sweep tool**

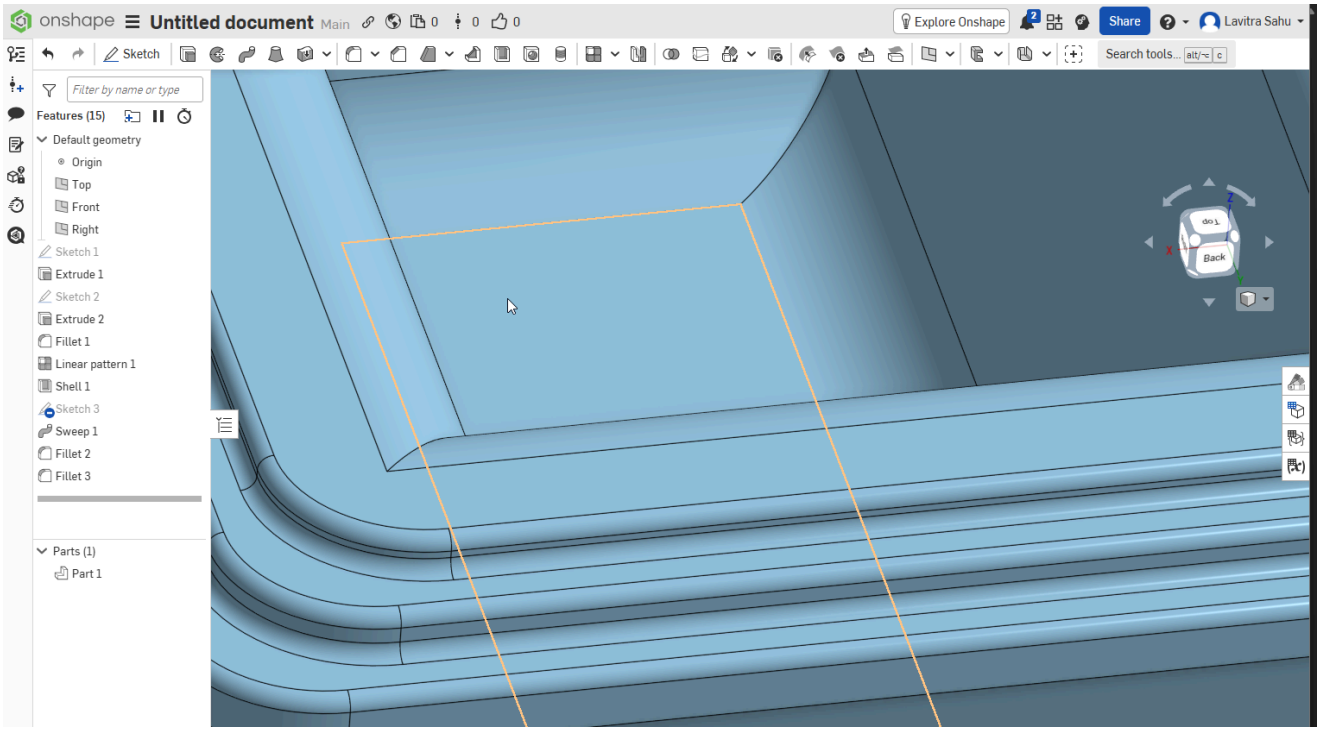
- Select the **L-shaped profile**
- Sweep it along the tray edge path

Step 12: Add Fillets



- Add fillets to the swept edges for smooth finishing

Step 13: Additional Fillets



- Add more fillets where required to improve ergonomics and appearance

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Done

You have successfully designed an **Ice Tray** using:

- Sketch and Extrude
- Drafted cuts
- Linear Pattern
- Shell
- Intersect, Sweep
- Multiple Fillets

This completes a practical **manufacturable ice tray model** in Onshape.