数理逻辑（2025 春）作业 -02

1 编程题

用 Lean4 形式化课堂上的两个 *Sorites* 例子，将前面 $n-1$ 条前提作为 axioms，第 n 条命题（或其否定）作为 theorem 并证明它。

1.1 Illogical Babies

1. **Ax1**: Babies are illogical;

2. **Ax2**: Nobody is despised who can manage a crocodile;

3. **Ax3**: Illogical persons are despised.

4. **Prop**: Babies cannot manage crocodiles.

1.2 Kitty and Gorilla

1. **Ax1**: No kitten, that loves fish, is unteachable;

2. **Ax2**: No kitten without a tail will play with a gorilla;

3. **Ax3**: Kittens with whiskers always love fish;

4. **Ax4**: No teachable kitten has green eyes;

5. **Ax5**: No kittens have tails unless they have whiskers.

6. **Prop**: Kitten with green eyes will play with a gorilla?