OOD

Step 1: handle ambiguity

Make assumptions or ask for clarifying questions

Who is going to use it?

How is going to use it?

Step 2: define the core objects

Step 3: analyze relationship

Analyze relationships between the objects

Which objects are members of which other objects?

Do any objects inherit from any others?

Are relationships many-to-many or one-to-many?

Step 4: investigate actions

Consider the key actions that the objects will take and how they related to each other.

Design patterns

Singleton class

Factory method