

Exercise 3

A: - When a class doesn't know what type of object it needs to create in advance.
- When a class wants its child classes to decide which object to create.
- When a class passes the responsibility of object creation to helper classes, and you want to control which helper class does the job.

B:

Participant	Description
Product	Defines the interface of objects the factory method creates.
ConcreteProduct	Implements the Product interface. Represents specific instances of the Product.
Creator	Declares the factory method that returns an object of type Product.
ConcreteCreator	Implements the factory method to return an instance of the specific ConcreteProduct.

C:

Factory Pattern Participant Program Name (from my code)

Product NumberList.java

ConcreteProduct IntList.java, DoubleList.java, HexList.java

Creator NumberFactory.java

ConcreteCreator The getNumberList method in NumberFactory.java that returns instances of IntList, DoubleList, or HexList.