```csharp
1  using DatabaseConnect.Entities;
2  using Microsoft.EntityFrameworkCore;
3
4  namespace DatabaseConnect
5  {
6      public class Context : DbContext
7      {
8          public Context(DbContextOptions DbCfg) : base(DbCfg)
9          {
10         }
11         // Simple
12         public DbSet<Book> Books { get; set; }
13         public DbSet<Author> Authors { get; set; }
14         public DbSet<User> Users { get; set; }
15         public DbSet<UType> UTypes { get; set; }
16         public DbSet<Checkout> Checkouts { get; set; }
17         public DbSet<Reservation> Reservations { get; set; }
18         // Relationships
19         public DbSet<AuthorBook> AuthorBook_rel { get; set; }
20         public DbSet<UserUType> UserUType_rel { get; set; }
21
22
23         protected override void OnModelCreating(ModelBuilder modelBuilder)
24         {
25             modelBuilder.Entity<AuthorBook>()  // Composite Key for AuthorBooks
26                 .HasKey(ab => new { ab.BookID, ab.AuthorID });
27
28             modelBuilder.Entity<AuthorBook>()  // One to many AuthorBooks.Book to ⮑
                 Book
29                 .HasOne(ab => ab.Book)
30                 .WithMany(b => b.AuthorBooks)
31                 .HasForeignKey(ab => ab.BookID);
32
33             modelBuilder.Entity<AuthorBook>()  // One to many AuthorBooks.Author ⮑
                 to Author
34                 .HasOne(ab => ab.Author)
35                 .WithMany(a => a.AuthorBooks)
36                 .HasForeignKey(ab => ab.AuthorID);
37
38             modelBuilder.Entity<UserUType>()  // Composite Key
39                 .HasKey(ut => new { ut.UserID, ut.UTypeID });
40
41             modelBuilder.Entity<Book>()
42                 .Property(a => a.DeweyDecimal)
43                 .HasDefaultValue("n/a");
44
45             modelBuilder.Entity<Book>()
46                 .Property(a => a.FicID)
47                 .HasDefaultValue("n/a");
48
49             modelBuilder.Entity<Book>()
50                 .Property(a => a.DeweyDecimal)
```

```
51                     .HasDefaultValue("n/a");
52
53             modelBuilder.Entity<AuthorBook>()
54                 .Property(ab => ab.AuthorID)
55                 .HasDefaultValue(3);
56
57         }
58     }
59 }
60
```