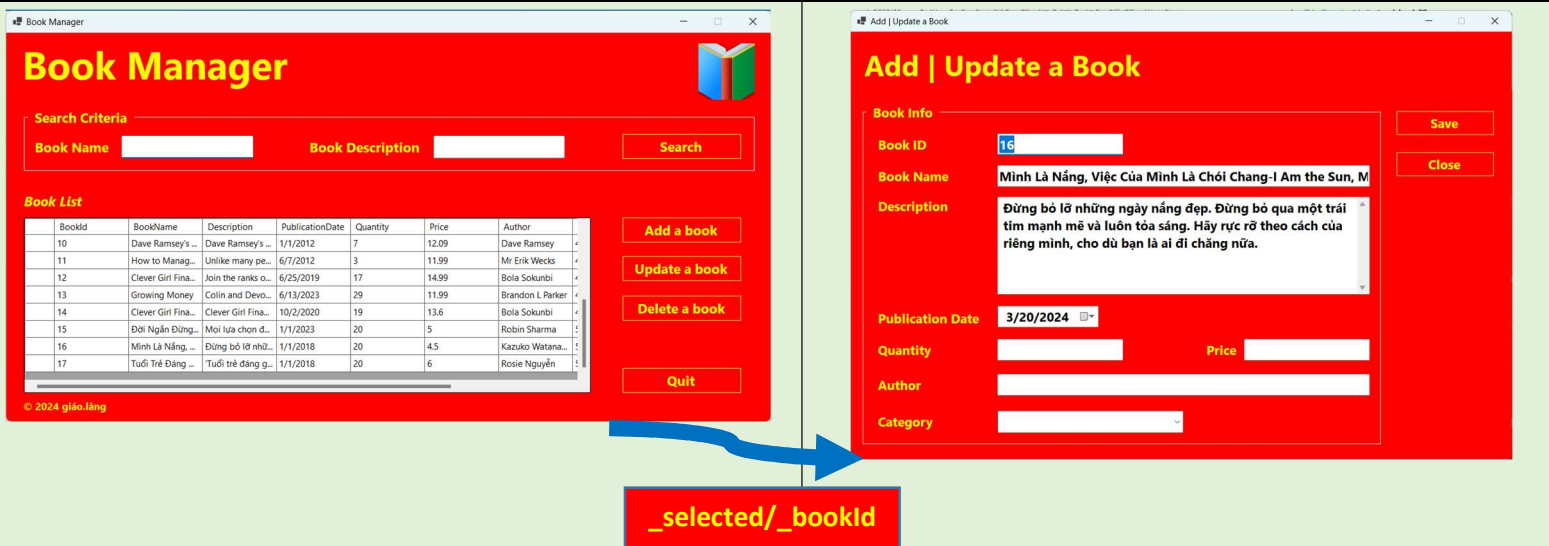


Windows Forms App – 3-layer Architecture



```
public class BookManagerMainForm : Form
{
    private Book _selected = null;
    private BookService _service = new();

    private void btnCreate_Click(...)
    {
        BookDetailForm f = new();
        f.ShowDialog();
        //No book is passed, show empty form
    }

    private void btnUpdate_Click(...)
    {
        BookDetailForm f = new();
        f.SelectedBook = _selected;
        f.ShowDialog();
        //Pass selected book to show in Detail form
    }

    private void BookManagerMainForm_Load(...)
    {
        //do something when this form is opened
        dgvBookList = _service.GetAllBooks();
        //fill grid
        ...
    }
}
```

```
public class BookDetailForm : Form
{
    private Book SelectedBook { get; set; } =
        null; //VIP, default is NEW MODE
    private BookService _service = new();
    private BookCategoryService _cate = new();

    private void BookDetailForm_Load(...)
    {
        //Do something when this form is opened
        cboBookCategory.DataSource = _cate;

        if ( != null) //EDIT MODE
        {
            txtBookId.Text = SelectedBook.BookId;
            //fill other tag here...
        }
    }

    private void btnSave_Click(...)
    {
        Book b = new Book()
        {
            BookId = txtBookId.Text;
            BookName = txtBookName.Text;
            ...
        }
        if (SelectedBook == null)
            _service.AddBook(b);
        else
            _service.UpdateBook(b);
    }
}
```

```
public class BookService
{
    private BookRepository _repo = new();

    public List<Book> GetAllBooks()
    {
        return _repo.GetBooks();
    }
}
```

```
public class BookRepository
{
    private MyDbContext _dbContext;

    public List<Book> GetBooks()
    {
        _dbContext = new();
        return _dbContext.Books.ToList();
    }
}
```