# NUnit Hands-On Lab 8 - Solutions

## Testing Exception Scenarios in UserManagerLib

The `CreateUser` method in `UserManagerLib` must handle different types of exceptions:  
- `NullReferenceException`: When PANCardNo is null or empty  
- `FormatException`: When PANCardNo is not exactly 10 characters long

## Test Scenarios

[Test]  
public void CreateUser\_NullOrEmptyPANCardNo\_ThrowsNullReferenceException()  
{  
 var userManager = new UserManagerLib.UserManager();  
 Assert.That(() => userManager.CreateUser(null), Throws.TypeOf<NullReferenceException>());  
 Assert.That(() => userManager.CreateUser(""), Throws.TypeOf<NullReferenceException>());  
}

[Test]  
public void CreateUser\_InvalidLengthPANCardNo\_ThrowsFormatException()  
{  
 var userManager = new UserManagerLib.UserManager();  
 Assert.That(() => userManager.CreateUser("ABCDE"), Throws.TypeOf<FormatException>());  
 Assert.That(() => userManager.CreateUser("ABCDEFGHIJK"), Throws.TypeOf<FormatException>());  
}

[Test]  
public void CreateUser\_ValidPANCardNo\_CreatesUserSuccessfully()  
{  
 var userManager = new UserManagerLib.UserManager();  
 var user = userManager.CreateUser("ABCDE12345");  
 Assert.That(user, Is.Not.Null);  
 Assert.That(user.PANCardNo, Is.EqualTo("ABCDE12345"));  
}