# JUnit Exercise 1: Mocking and Stubbing

## User.java

public class User {  
 private String username, email;  
 public User(String username, String email) {  
 this.username = username;  
 this.email = email;  
 }  
 public String getUsername() { return username; }  
 public String getEmail() { return email; }  
}

## UserRepository.java

public interface UserRepository {  
 User findByUsername(String username);  
}

## UserService.java

public class UserService {  
 private UserRepository userRepository;  
  
 public UserService(UserRepository userRepository) {  
 this.userRepository = userRepository;  
 }  
  
 public String getUserEmail(String username) {  
 User user = userRepository.findByUsername(username);  
 return (user != null) ? user.getEmail() : null;  
 }  
}

## UserServiceTest.java

import org.junit.jupiter.api.Test;  
import static org.junit.jupiter.api.Assertions.\*;  
import static org.mockito.Mockito.\*;  
  
public class UserServiceTest {  
  
 @Test  
 void testGetUserEmail() {  
 UserRepository repo = mock(UserRepository.class);  
 when(repo.findByUsername("john")).thenReturn(new User("john", "john@example.com"));  
 UserService service = new UserService(repo);  
 assertEquals("john@example.com", service.getUserEmail("john"));  
 }  
  
 @Test  
 void testUserNotFound() {  
 UserRepository repo = mock(UserRepository.class);  
 when(repo.findByUsername("noone")).thenReturn(null);  
 UserService service = new UserService(repo);  
 assertNull(service.getUserEmail("noone"));  
 }  
}

## Screen shots

