// UserServiceTest.java

import org.junit.jupiter.api.\*;

import static org.junit.jupiter.api.Assertions.\*;

import static org.mockito.Mockito.\*;

@ExtendWith(MockitoExtension.class)

class UserServiceTest {

@Mock

private UserDAO userDao;

@InjectMocks

private UserService userService;

@Test

void testRegisterUser() {

User user = new User("testUser", "test@email.com", "password");

when(userDao.save(any(User.class))).thenReturn(user);

User result = userService.registerUser(user);

assertNotNull(result);

assertEquals("testUser", result.getUsername());

verify(userDao).save(user);

}

@Test

void testGetUserProfile() {

User user = new User("testUser", "test@email.com", "password");

when(userDao.getUser("testUser")).thenReturn(user);

User result = userService.getUserProfile("testUser");

assertNotNull(result);

assertEquals("test@email.com", result.getEmail());

}

}

// UserDAOTest.java

@ExtendWith(MockitoExtension.class)

class UserDAOTest {

@Mock

private Connection connection;

@InjectMocks

private UserDAO userDao;

@Test

void testSaveUser() {

User user = new User("testUser", "test@email.com", "password");

when(connection.prepareStatement(anyString())).thenReturn(mock(PreparedStatement.class));

User result = userDao.save(user);

assertNotNull(result);

assertEquals("testUser", result.getUsername());

}

}