// File: NotificationService.java

public interface NotificationService {

void sendWelcomeEmail(String userEmail);

}

// File: UserService.java

public class UserService {

private final NotificationService notificationService;

public UserService(NotificationService notificationService) {

this.notificationService = notificationService;

}

public void registerUser(String email) {

// registration logic (skipped)

notificationService.sendWelcomeEmail(email);

}

}

// File: UserServiceTest.java

import org.junit.jupiter.api.Test;

import static org.mockito.Mockito.\*;

public class UserServiceTest {

@Test

void testSendWelcomeEmailIsCalled() {

// Arrange

NotificationService mockNotification = mock(NotificationService.class);

UserService userService = new UserService(mockNotification);

// Act

userService.registerUser("alice@example.com");

// Assert: verify that sendWelcomeEmail was called with correct argument

verify(mockNotification).sendWelcomeEmail("alice@example.com");

}

}

OUTPUT:

Test passed: sendWelcomeEmail was called with "alice@example.com"