

Module 1: Introduction to Software Testing

Demo Document

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Title:- Social Networking site- Account creation page

Demo 1- Statement

A MNC company ABC.NET is about to launch a social networking site and it has a requirement of account creation page. User will be allowed to access the site after creating account.

An IT company ABC.CORP gets the requirement from the Client and agrees to provide a Signup page.

In this demo, we go through different phases of SDLC and explain testing types with examples.

Requirement Collection: -

- 1) User Name input for account. First Name and Surname
- 2) Account credentials: - mobile/email address and password
- 3) Birthday: - DD/MM/YYYY (particular age group is allowed to create account based on this input)
- 4) Gender (M or F)
- 5) Signup Button (Submit action)
- 6) Hover wherever necessary for extra information

Design: - According to Client requirement statements, the pictorial representation of Signup page is done.

Development: - The programming language, libraries, databases, caching, framework will be decided by the development team.

Testing Phase: - Once the Signup page is ready. It is available on testing environment.

The final signup page looks like this. --->Image

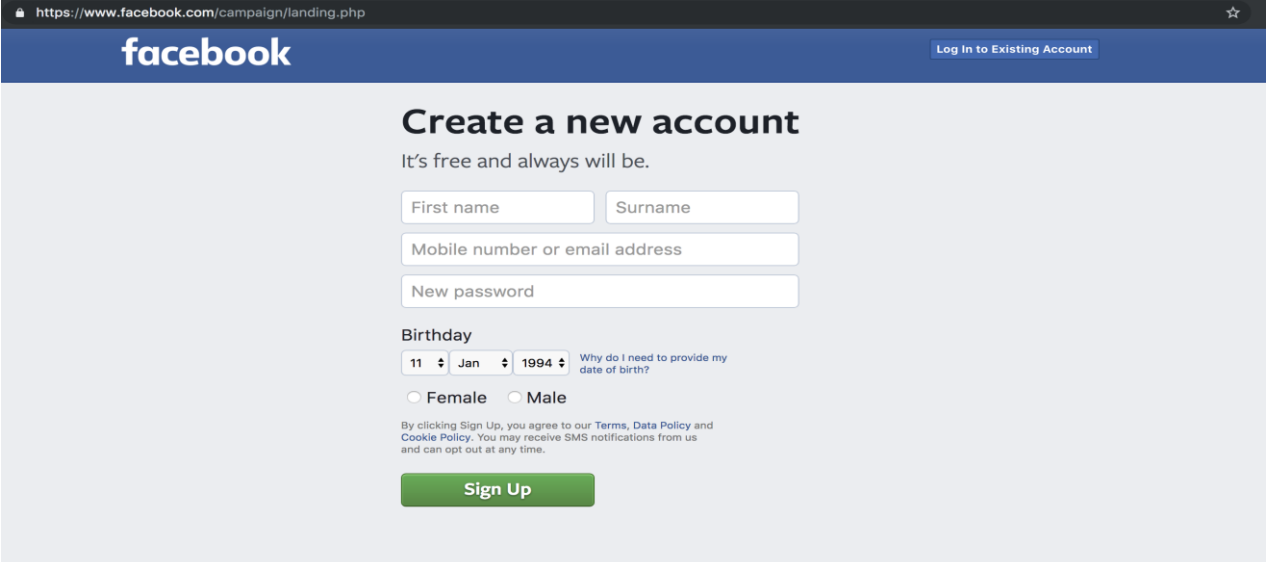
Test Web Page link:

<https://www.facebook.com/campaign/landing.php>

Solution

Topic 1: Smoke Testing

- a) Click on the test link and Verify that the application launches successfully.
Link provided should lead to the application landing page.



https://www.facebook.com/campaign/landing.php

facebook Log in to Existing Account

Create a new account

It's free and always will be.

First name Surname

Mobile number or email address

New password

Birthday

11 Jan 1994 Why do I need to provide my date of birth?

☐ Female ☐ Male

By clicking Sign Up, you agree to our [Terms](#), [Data Policy](#) and [Cookie Policy](#). You may receive SMS notifications from us and can opt out at any time.

Sign Up

- b) Verify Graphical User Interface(GUI) input fields. All web fields should be responsive and user entered input should get filled.

https://www.facebook.com/campaign/landing.php

facebook Log In to Existing Account

Create a new account

It's free and always will be.

Edward Thomas

9987654321

.....

Birthday

1 Jan 1981 Why do I need to provide my date of birth?

☐ Female ☒ Male

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Sign Up

English (UK) العربية مصرى বাংলা తెలుగు हिन्दी தமிழ் తెలుగు భాషा ગુજરાતી ਪੰਜਾਬੀ +

Sign Up Log In Messenger Facebook Lite Mobile Find Friends People Profiles Pages Page categories Places Games Locations
Marketplace Groups Instagram Local Fundraisers About Create ad Create Page Developers Careers Privacy Cookies AdChoices

Terms Account security Login help Help

Topic 2: Functional Testing

a) Perform Positive testing by providing valid inputs to test happy flow.

https://www.facebook.com/campaign/landing.php

facebook Log In to Existing Account

Create a new account

It's free and always will be.

Alex Newton

alexnewton@gmail.com

alexnewton@gmail.com

.....

Birthday

1 Jan 1981 Why do I need to provide my date of birth?

☐ Female ☒ Male

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b) Perform Negative testing by providing invalid inputs, for which application should return warnings and errors. Invalid inputs can be null values, invalid data type, extra characters, etc..

https://www.facebook.com/campaign/landing.php

facebook

Log In to Existing Account

Create a new account

It's free and always will be.

You'll use this when you log in and if you ever need to reset your password.

First name: Alex

Last name: Newton

Mobile number or email address

Password

Birthday

11 Jan 1994

Why do I need to provide my date of birth?

☐ Female ☐ Male

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Sign Up

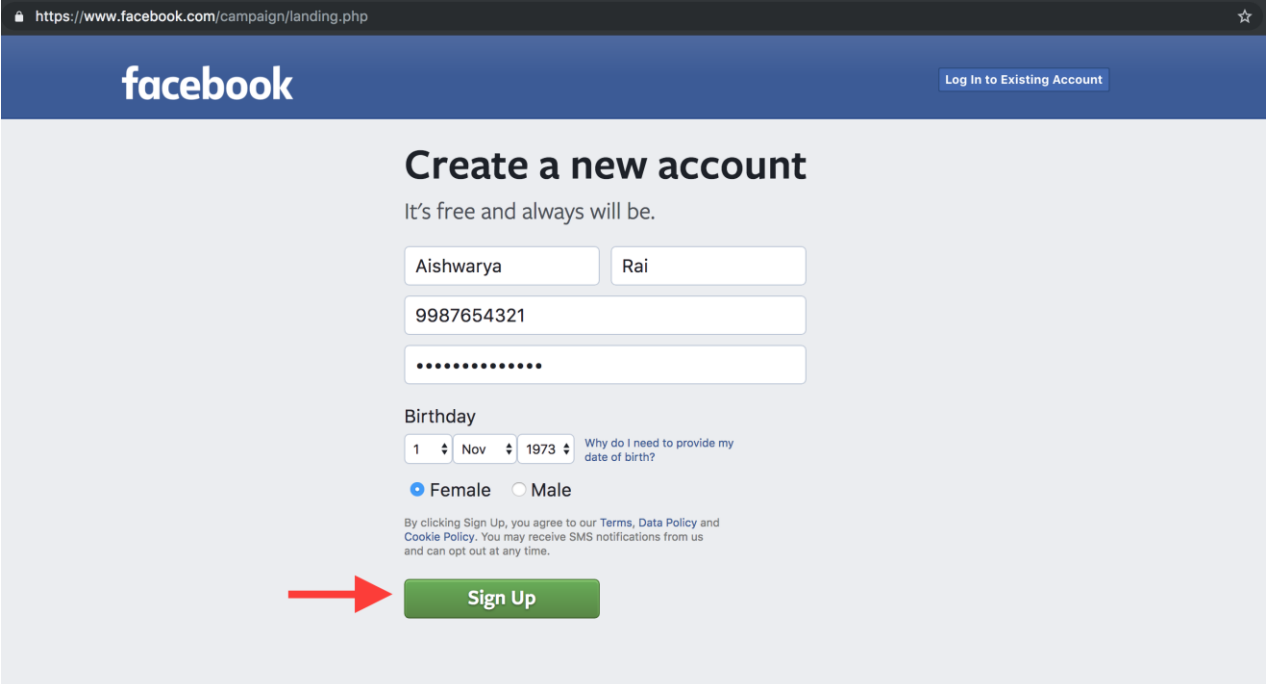
Topic 3: Sanity testing

After receiving the build from developer, which has minor changes in code or functionality, sanity testing is done to ensure that bugs fixes didn't cause new issues in existing application.

The goal is roughly test proposed functionality. If sanity fails, the build is rejected to save the time and costs involved in further testing.

As this is the first build provided by developer, sanity testing should be done for checking basic functionality.

Testing account creation after providing valid inputs and clicking on Submit/SignUp.



https://www.facebook.com/campaign/landing.php

facebook

Log In to Existing Account

Create a new account

It's free and always will be.

Aishwarya Rai

9987654321

.....

Birthday

1 Nov 1973 Why do I need to provide my date of birth?

☒ Female ☐ Male

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→ Sign Up

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Topic 4: Regression Testing

To make sure none of the new changes caused new bugs. In regression testing we should make sure no old bugs appear from the addition of new software modules over time.

Example:- If Login flow is built in second phase after SignUp page. Then in regression of the build, Signup functionality should be checked in regression testing.

Topic 5: Unit Testing

Testing performed on each single module or block of code during development by developer.

In front end user is calling link <https://www.facebook.com/campaign/landing.php>, internally it is calling to java class Signup, method createAccount

public static boolean createAccount(String firstName,String surName, String mobEmail, String password, Date birthDate, String gender)

Developer will do unit testing using JUnit/TestNg which will just validate this method creatAccount.

```
Assert.assetTrue(Signup.createAccount("Alex","Newton","alexnewton@gmail.com", "alex123","1981-01-01","Male"));
```

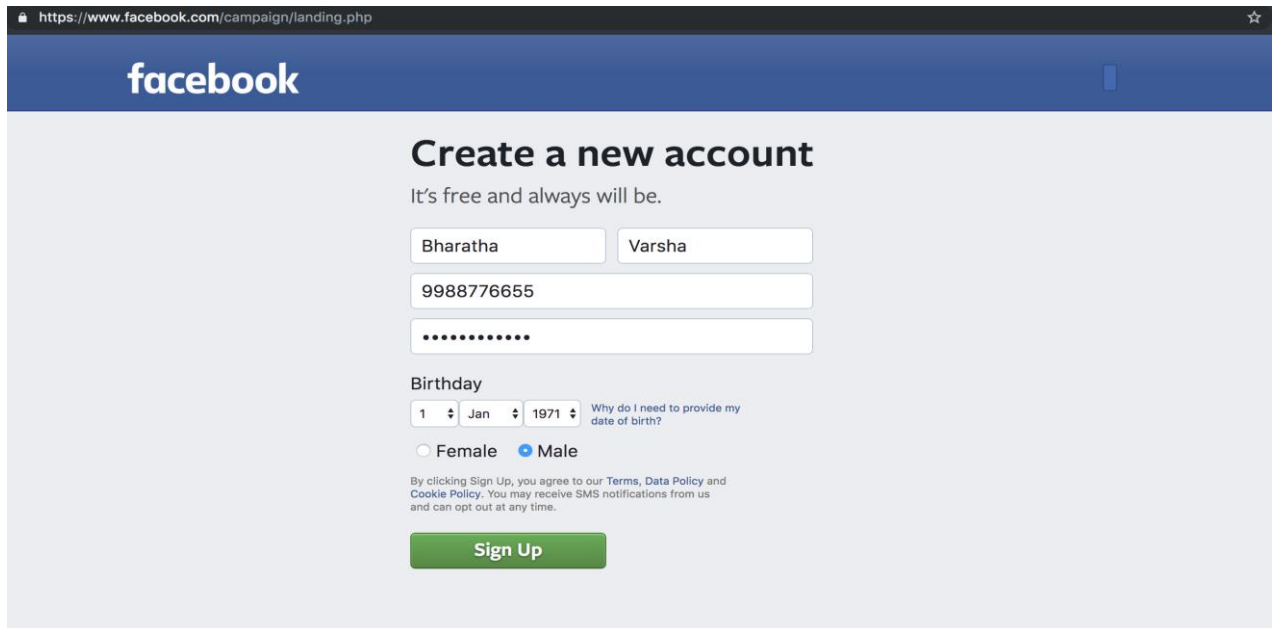
//If the method returns **true** for valid inputs then testcase is passed.

Topic 6: Integration Testing/ Interface Testing(API)

Integration Testing becomes necessary to verify that the software modules work in unity. It focuses mainly on the interfaces & flow of data/information between the modules.

SignUp module and user mail/mobile are two modules here.

a)Sign up of the user through website



https://www.facebook.com/campaign/landing.php

facebook

Create a new account

It's free and always will be.

Bharatha Varsha

9988776655

.....

Birthday

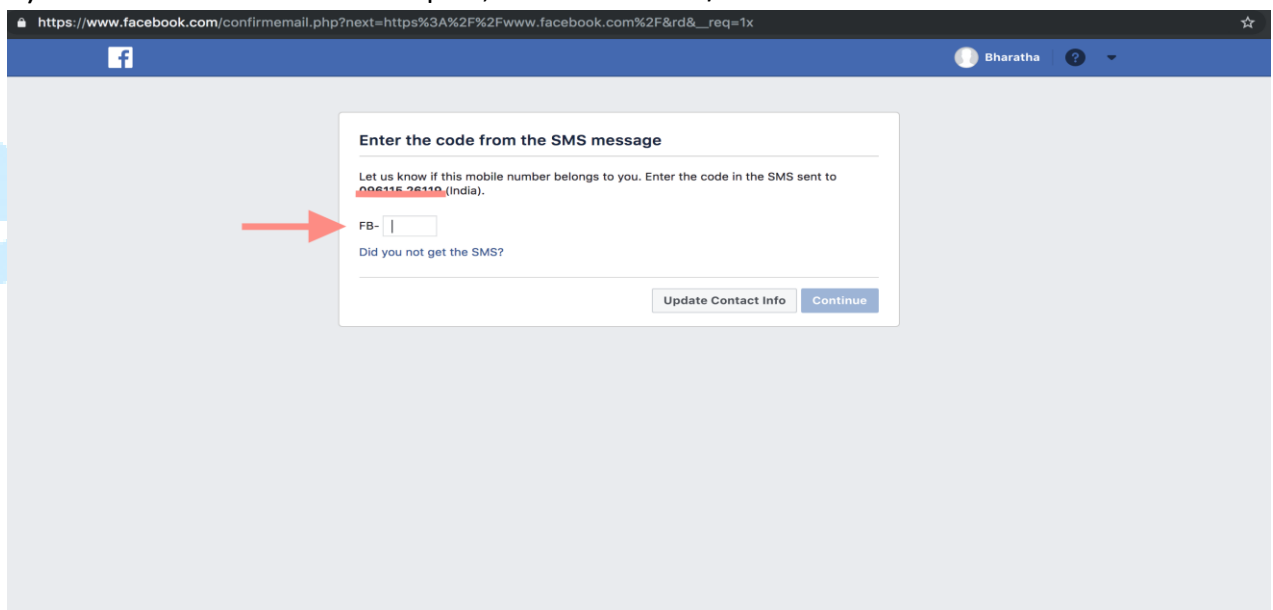
1 Jan 1971 Why do I need to provide my date of birth?

☐ Female ☒ Male

By clicking Sign Up, you agree to our [Terms](#), [Data Policy](#) and [Cookie Policy](#). You may receive SMS notifications from us and can opt out at any time.

Sign Up

b) After authentication of the inputs, verification mail/code is sent to user.



https://www.facebook.com/confirmemail.php?next=https%3A%2F%2Fwww.facebook.com%2F&rd&__req=1x

fb Bharatha

Enter the code from the SMS message

Let us know if this mobile number belongs to you. Enter the code in the SMS sent to **9988776655** (India).

FB-

[Did you not get the SMS?](#)

[Update Contact Info](#) [Continue](#)

c) Once after user authentication is done, successful account creation message is sent to user.

Topic 7: System Testing/End to End testing

Testing the fully integrated applications including external peripherals in order to check how components interact with one another and with the system as a whole.

Example:- After building of SignUp and integrating with social networking site, system testing should be carried out to test end to end flows.

- Site should be accessible after logging through created accounts.

- Notifications from site should be delivered to account.
- On Web and mobile apps sign-up and login should work as expected.

a) Testing of SignUp though web environment

The screenshot shows the Facebook 'Create a new account' page. The URL in the browser is <https://www.facebook.com/campaign/landing.php>. The page has a blue header with the Facebook logo. The main heading is 'Create a new account' with the subtext 'It's free and always will be.' Below this are input fields for 'First name' (containing 'Bharatha') and 'Last name' (containing 'Varsha'), a 'Phone number' field (containing '9988776655'), and a 'Password' field (masked with dots). There is a 'Birthday' section with a date picker set to '1 Jan 1971' and radio buttons for 'Female' and 'Male' (with 'Male' selected). A small text block below the birthday section states: 'By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.' At the bottom is a green 'Sign Up' button.

b) Testing of SignUp in app environment

This block contains a sequence of six screenshots illustrating the Facebook sign-up process in a mobile app environment. The first screenshot shows the login screen with fields for 'Email address or phone number' and 'Password', a 'Log In' button, a 'Forgotten Password?' link, and a 'Create New Account' button. The subsequent five screenshots show the steps of the sign-up process: 1. 'What's your name?' with fields for 'Bharatha' and 'Varsha' and a 'Next' button. 2. 'When's Your Birthday?' with a date picker set to '1 January 1971' and a 'Continue' button. 3. 'What's your gender?' with 'Female' and 'Male' options and a note 'You can change this later in your settings.' 4. 'What's your mobile number?' with a field containing 'IN +91 099 88 776655' and 'Next' and 'Use your Email Address' buttons. 5. 'Create a password' with a 'Password' field and instructions: 'Enter a combination of at least six numbers, letters and punctuation marks (like ! and &).' 6. 'Finish signing up' with a 'Sign Up' button and terms agreement text. The final state is 'Creating your account...' with a loading spinner.

Topic 8: User acceptance testing

Beta testing of the product done by the actual end users. The beta version of application will be given to users to use.

Example:- For some user Ids the app version is made available in the company internally. Employees feedbacks will be collected to know first set of end user impressions.

Topic 9: Non functional- Load/performance Testing

Load/Performance testing should be carried out on software, to evaluate performance under real life load constraints.

Example:- SignUp creation link will be hit by n number of users at a time for creation of accounts, then application should work as expected under more load also.

Topic 10: Non functional- Security testing

The application is safeguarded against deliberate and sudden attacks from internal and external sources.(malware)

Example:-

- Validation of APIs by passing some security breaking inputs , due to which internal code gives some unexpected outputs.
- Identifying network and system weakness if present.
- Checking that any redirections to internal APIs from exposed APIs.
- Verifying that the response from the exposed APIs should not have confidential data.
- Storing data and password of the accounts in encrypted format.

UI vs API testing

UI testing is performed by providing inputs directly in the site page and validating the behaviour.

API Testing is performed using tools where API is called by passing inputs and response is validated. **Postman** is one of the tool which is used for API testing.

url:- `http://{hostname}/{api_end_point}`

headers:- Content-type: application/json (type of content being passed in request)

http-method: POST

