Project Report

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| --- | --- |
| Project Title | Plan, Design, Develop, and Test Report Application |
| Qualification Name (NICF) | Applied Degree in Software Engineering |
| Product Name | Design, develop and test the Community portal website |
| Module Name (NICF) | NICF-Application Implementation (SF) |

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| --- | --- | --- | --- |
| Student name | | Assessor name | |
| Ida Bagus Ketut Yoghantara | |  | |
| Date issued | Completion date | | Submitted on |
| 20 August 2022 | 22 August 2022 | | 23 August 2022 |
|  | |  | |
| Project title | Student Registration Form Development | | |

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| --- |
| Learner declaration |
| I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.  Student signature:  Date: 20 August 2022 |

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Project Background

ABC Jobs Pte Ltd as a website developer to develop a community portal for Software Developers. The Scope of the Project is to design a Community Portal Similar to Linkedin.com. Users will be able to register in the portal using the Registration Page. Users of the portal can search for other users using various parameters such as First Name, Last Name, Company Name, City & Country. Users will be able to view the Public Profile of users after searching them.

The portal allows users to login, request for forgotten password and update their profile information. The Scope of the project is to Plan, Design, Develop, and Test Report System for the community portal that have been created.

Project Objective

The Scope of the Project is to plan, create, schedule, and execute tests on the module  
project.

**Project outcomes and deliverables:**

* Briefly explain different types of testing which you will undertake
* Test Schedule Document
* Phase test plan
* Execute test scripts and verify the results
* Prepare a Project Report as per pre-defined template
* Prepare a Project Presentation as per pre-defined template
* Prepare a Testing Document

**Scope of the Project:**

* Features to be tested:  
  1. Registration  
  2. Login  
  3. Logout  
  4. Reset forgotten password  
  5. Search users
* Features which will not to be tested:  
  1. Posting job  
  2. Applying job  
  3. Send messages  
  4. Posting thread  
  5. Commenting thread

Tools & platform used

* **Project Libre**  
  Project Libre is a project management software company with both a free open-source desktop and an upcoming Clod version. Project Libre Cloud is in beta testing. Project Libre desktop is a free and open-source project management software system intended ultimately as a standalone replacement for Microsoft Project.
* **Microsoft Word**  
  Microsoft Word is a word processing software developed by Microsoft.
* **Microsoft Power Point**  
  Microsoft PowerPoint is a powerful slide show presentation program. It is a standard component of the company's Microsoft Office suite software, and is bundled together with Word, Excel, and other office productivity tools. The program uses slides to convey information rich in multimedia.

Task 1

Task Statement:

Write a brief requirement specification for the Report System.

Solution:

1. Functional Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| No | Requirements | Web Page/ Process | Field Detail |
| 1 | User can register on the register page | Registration | Input fields, button, hyperlink |
| 2 | User can login on the login page | Login | Logo, input fields, hyperlink, button |
| 3 | User can request reset forgotten password | Forgot Password | Logo, input field, hyperlink, button |
| 4 | User can logout from the website | Logout | Logo, button, hyperlink |
| 5 | User can search others user | Search Users | Logo, button, hyperlink, images, input fields |
| 6 | User can update their profile | Update Profile | Logo, button, hyperlink, input fields, images |
| 7 | User can view other user profile | User Profile | Logo, button, hyperlink, images, input fields |

1. Non-Functional Requirements

|  |  |  |
| --- | --- | --- |
| No | Requirements | Purpose |
| 1 | Performance | Define how well the application to accomplishes certain functions under specific conditions |
| 2 | Availability | Describe how likely the system is accessible for a user at a given point of time |
| 3 | Security aspect | Assures all data inside the system or its part will be protected against malware attack or unauthorized access |
| 4 | Database backup and recovery | To protect the database against data loss and reconstruct the database after data loss |
| 5 | Compatibility | Defines how a system can coexist with another system in the same environment. |
| 6 | **Localization** | Defines how well a system or its element falls in line with the context of the local market |
| 7 | Scalability | Assesses the highest workloads under which the system will still meet the performance requirements. |

1. Technical Requirements

Hardware

Minimum:  
 a. 2 CPU Cores  
 b. 2 GB Ram  
 c. Disk I/O subsystem applicable to a write-intensive database  
   
 Recommended:  
 a. 4 CPU Cores  
 b. 8 GB Ram  
 c. RAID10 or RAID 0+1 disk setup

Software

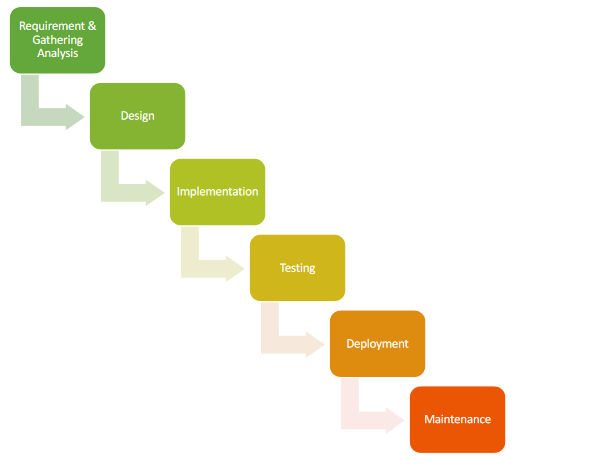
* Angular CLI
* Typescript
* Visual Studio Code
* MySQL
* PHP MyAdmin
* Apache
* MySQL Workbench
* Project Libre
* XAMPP
* Mozilla Firefox
* Google Chrome

Task 2

Task Statement:

Justify the chosen SDLC methodology with pro and cons

Solution:

**Waterfall Model**The waterfall model is a breakdown of project activities into linear sequential phases, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks. The approach is typical for certain areas of engineering design.  
****

1. **Requirement & Gathering Analysis**
2. Identify ABC Company as a client and stakeholder.
3. Arrange project kick off meeting and gather requirement from client and the stakeholders.
4. Gather the list project requirements from client.
5. **System Design**
6. List Of technical requirement
7. Hardware requirement
8. Software Requirement
9. Database Requirement
10. Prepare the prototype

* Business Process Diagram
* Wireframe
* Storyboard

1. Database Design

* Planning and System definition
* ER Diagram

1. **Implementation**

* Writing all the codes to make the website
* Creating database according to ER diagram
* The portal consists of the following Key pages (For Reference)
  + Community Portal Home Page
  + Registration Page
  + Registration Confirmation Page
  + Update Profile Page
  + Search Users Page
  + List Search Results
  + Public Profile Page
  + Registration Confirmation Email
  + Login Page
  + Forget Password Page
  + Design the Forget Password Confirmation Page

1. **Testing**

* Capture the test case document to perform testing
* Ensuring developed software solves the needs addressed and gathered during requirement gathering

1. **Deployment**

* Uploading all the files to the server
* Configuration of the server
* Beta testing by customer or client
* Sign-off by customer and final deployment in production environment

1. **Maintenance**

* Fix bugs
* Support and hand holding to application users

**Advantages using Waterfall Model:**

* Simple and easy to understand and use
* Phases completed on at time
* No Overlap of phases
* Works for smaller projects where requirement are well understood

**Disadvantages using waterfall Model:**

* Difficult to go back and change
* Not a good model for complex and object-oriented programming
* Poor model for long and ongoing projects
* Not suitable for project requirement having high chances of changing

Task 3

Task Statement:

1. Identify appropriate method to compute the testing schedule duration and prepare the test schedule Solution:

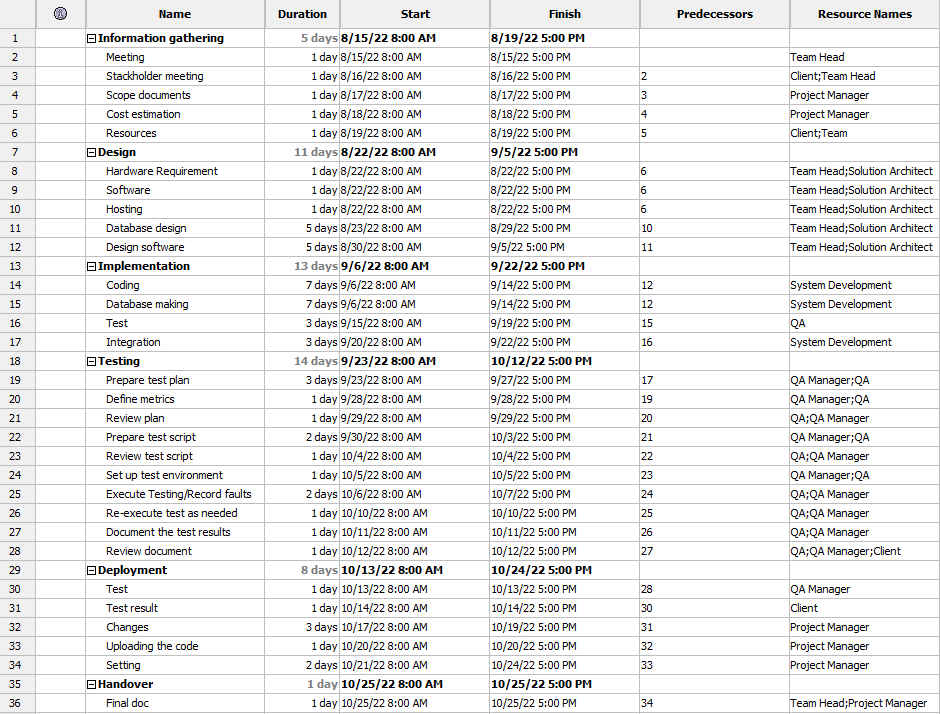
2. Project Plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | **Web page** | **Weighting** | **Functional Points (FP)** | **Total** |
| 1 | Registration | 3 | 5 | 15 |
| 2 | Login | 1 | 2 | 2 |
| 3 | Logout | 1 | 1 | 1 |
| 4 | Forgot Password | 3 | 5 | 15 |
| 5 | Search Users | 1 | 2 | 2 |
| 6 | Update user profile | 3 | 4 | 12 |
| 7 | View user profile | 1 | 2 | 2 |
|  | Total functional points | | | 46 |
|  | Estimated person hour/ FP | | | 2 |
|  | Total hours needed | | | 92 |
|  | Total days needed | | | 14 |

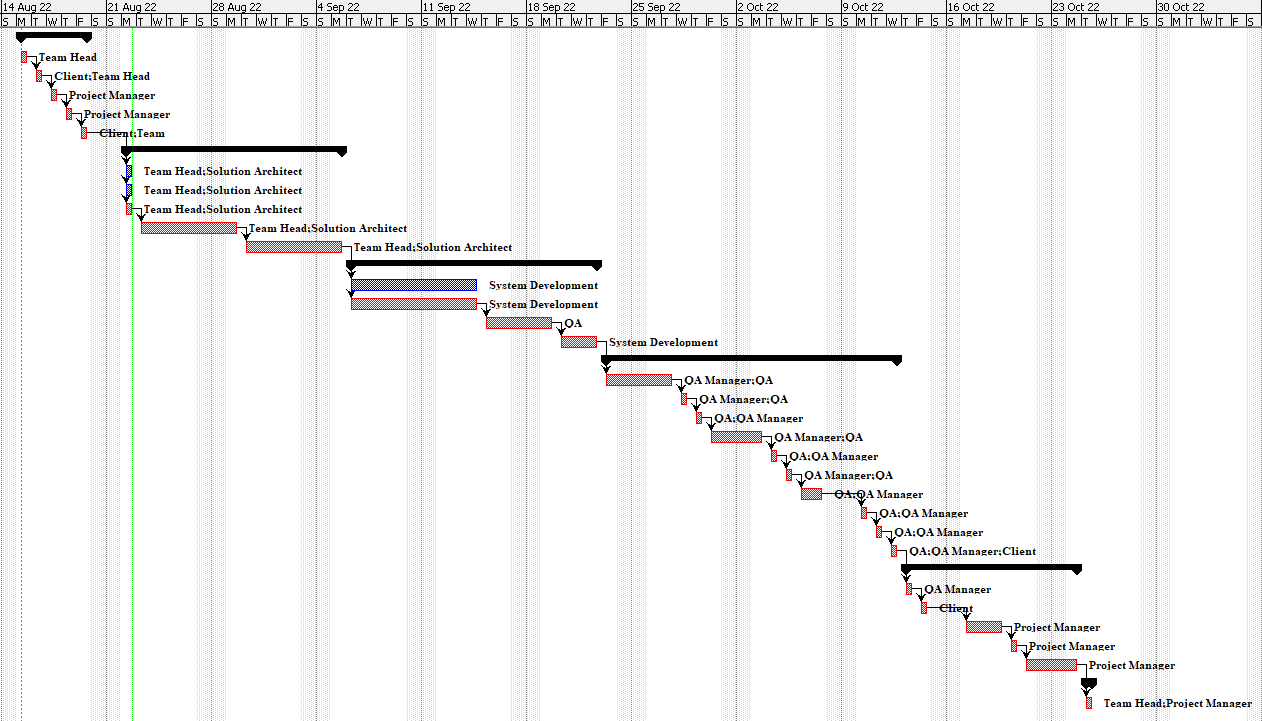
Test schedule:

|  |  |  |
| --- | --- | --- |
| Test Schedule ID: | TSCH01 |  |
| Product ID / Name: | ABC Jobs Community Portal |  |
| Product Version or Build: | 0.0.1 |  |
| Present Owner: | Ida Bagus Ketut Yoghantara | Software Engineer |
| Created On: | 20 August 2022 |  |
| Review On: | 21 August 2022 |  |
| Review By: | Alex Sulivan | QA Manager |
| Review Comments: | Good |  |
| Current Version: | 1.0 |  |
| Change Details: | Change password features |  |
| Current Status: | Complete |  |
| Signing Off Authority: | Ida Bagus Ketut Yoghantara | Software Engineer |

**Gantt Table**



**Gantt Chart**



1. Task 4

Task Statement:

Develop a Phase Test Plan for testing the application

Solution:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Task | Start | End | Person Days | Resource |
| 1 | Prepare Test Plan | 23 Sep 2022 | 27 Sep 2022 | 3 | QA Manager, QA |
| 2 | Define metrics | 28 Sep 2022 | 28 Sep 2022 | 1 | QA Manager, QA |
| 3 | Review plan | 29 Sep 2022 | 29 Sep 2022 | 1 | QA Manager, QA |
| 4 | Prepare Test Scripts | 30 Sep 2022 | 3 Oct 2022 | 2 | QA Manager, QA |
| 5 | Review Test Scripts | 4 Oct 2022 | 4 Oct 2022 | 1 | QA Manager, QA |
| 6 | Set up Test Environment | 5 Oct 2022 | 5 Oct 2022 | 1 | QA Manager, QA |
| 7 | Execute Testing/Record Faults | 6 Oct 2022 | 7 Oct 2022 | 2 | QA Manager, QA |
| 8 | Re-execute Test as Needed | 10 Oct 2022 | 10 Oct 2022 | 1 | QA Manager, QA |
| 9 | Document the test results | 11 Oct 2022 | 11 Oct 2022 | 1 | QA Manager, QA |
| 10 | Review Document | 12 Oct 2022 | 12 Oct 2022 | 1 | QA Manager, Client, QA |

1. Task 5

Task Statement:

Prepare the test scripts with use case, scenario, test description, pre-conditions, test data, and expected output

Solution:

Test scenario:

|  |  |  |  |
| --- | --- | --- | --- |
| Requirements | Test Scenario ID | Test Scenario | Number of test cases |
| Functional Testing | TS001-Unit testing | Ensure that user enters correct data in the registration page | 3 |
| TS002-UAT testing | 1. Check that a navigation menu is provided on each page and is consistent. | 3 |

**Scenario -1:- Unit Testing**

|  |  |
| --- | --- |
| Test Scenario | Ensure that user enters correct data in the registration page |
| TS001 |
| Test Cases | Unit Testing |
| TC001 | Check all the mandatory fields are entered |
| TC002 | Check the email-address validation working correctly |
| TC003 | Check post submission loading of thank you page |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario ID | Test Case ID | Test Case | Preconditions | Test Step | Test Data | Expected Results | Actual Results | Pass / Fail |
| TS001 | TC001 | Test Case 1 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Type www.abcjobs.com. 2. Click “Registration” in website home page linked to registration page. 3. Enter all the fields. 4. Click submit. | Email = [user@email.com](mailto:user@email.com)  Password=”abc123”  First name = test  Last name = user  Country = Indonesia  City = Bali | User should land to login page | As expected | Pass |
| Email =  Password=”abc123”  First name = test  Last name = user  Country = Indonesia  City = Bali | It will display error “Email is required” | As expected | Pass |
| TS001 | TC002 | Test case 2 | Open URL In browser | 1. Enter URL 2. Click on registration page 3. Enter all details 4. Enter submit button | Email = [user@email.com](mailto:user@email.com)  Password=”abc123” | It will display error “this email address has already been taken” | As expected | Pass |
| TS001 | TC003 | Test Case 3 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Type www.abcjobs.com. 2. Click “Registration” in website home page linked to registration page. 3. Enter all the fields. 4. Click submit. | Email = [user2@email.com](mailto:user2@email.com)  Password=”abc123”  First name = test  Last name = user2  Country = Indonesia  City = Bali | After successfully registering, the user will be redirected to thank you page | As expected | Pass |

**Scenario -2: - UAT Testing**

|  |  |
| --- | --- |
| Test Scenario | Check that a navigation menu is provided on each page and is consistent. |
| TS002 |
| Test Cases | UAT Testing |
| UAT01 | Check each hyperlink menu is loading correct page |
| UAT02 | Verify that user with valid email and password can login successfully |
| UAT03 | User can reset their forgotten password |

**Test cases: -**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario ID | Test Case ID | Test Case | Preconditions | Test Step | Test Data | Expected Results | Actual Results | Pass / Fail |
| TS002 | UATC01 | Check each hyperlink menu is loading correct page | The website is configured to Google chrome by Apache Server. | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter | Click on Home link  Click on Login link  Click on Jobs | Loaded Home page  Loaded Login page  Loaded List job page | As expected | Pass |
| TS002 | UATC02 | Verify that user with valid email and password can login successfully | The website is configured to Google chrome by Apache Server. | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter 3. Click login button 4. Enter email and password 5. Click login | Email = [user@email.com](mailto:user@email.com)  Password = abc123 | User successfully login into the website as User | As expected | Pass |
| TS002 | UATC03 | User can reset their forgotten password | The website is configured to Google chrome by Apache Server. | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter 3. Click login button 4. Click reset password 5. Enter email 6. Click submit | Email = user@email.com | Password recovery will be send to the email | As expected | Pass |