DUY TÂN UNIVERSITY

International School

CAPSTONE PROJECT 1

CMU-SE-450 / CMU-IS-450 / CMU-CS-450

TEST PLAN DOCUMENT

Version 1.2

Date: 12 - Aug - 2020

SMART DASHBOARD APPLICATION

Submitted by

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Approved by

Capstone Project 1 - Mentor:

Name	Signature	Date

Binh, Thanh Nguyen _____ 14 - Dec- 2020

Name	Signature	Date

Huy, Truong Dinh _____

PROJECT INFORMATION		
Project Acronym	SDA	
Project Title	Smart Dashboard Application	
Project Web URL	https://sda-research.ml/	
Start Date	12 - Aug - 2020	
End Date:	15 - Dec - 2020	
Lead Institution	International School, Duy Tan University	
Project Mentor	PhD Binh, Nguyen Thanh; MSc Huy, Truong Đinh	
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DOCUMENT INFORMATION			
Document Title	Project Proposal		
Author(s)	Team C1SE.06		
Role	[SDA] Test Plan v.1.2		
Date	16 - Nov - 2020	File name	[SDA] Test_Plan_v1.2
URL	https://github.com/sdateamdtu2020/sda-documents		
Access	Project and CMU Program		

REVISION HISTORY

Version	Person(s)	Date	Description	Approval
Draft	Hoa, Vo	12 - Aug - 2020	Initiate document	x
1.0	All members	12 - Nov - 2020	Finish content of proposal	x
1.1	All members	13 - Nov - 2020	Update Scope Of Test	x
1.2	Tin, Pham	16 - Nov - 2020	Update task schedule	x

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1. QUALITY OBJECTIVES

Planning for the project Smart Dashboard Application testing, to ensure that the testing is done according to plan, implement fully the necessary requirements, high work efficiency and give the best product.

2. SCOPE OF TEST

2.1. FUNCTIONS

- **Drag & Drop**
    - Drag Widgets from the toolbar.
    - Drop Widgets to the mashup content dashboard.
- **Data Widgets**
    - Filter by year.
    - Filter by city.
    - Filter by multiple cities
    - Filter by multiple years.
- **Visualization Widgets**
    - Column Chart content.
    - Line Chart content.
    - Pie Chart content.
    - Map content.
- **Connect Data between Connected Widgets**
    - Fetch data from Data Widgets to Visualization Widget.
    - Fetch data from Data Widgets to Operator Widget and Visualization Widget.
- **Operators**
    - Merge data from multiple Data Widgets.
- **Connector**
    - Draw connector from a point of widget.
    - Draw connector that connects multiple widgets together.
- **Example**
    - Example content.

2.2. USER INTERFACE

- **Dashboard scene**
    - Navigation bar scene.
        - Logo
        - Group Button
            - New
            - User Guide
            - Example 1
            - Example 2
            - Example 3
    - Toolbar Scene.
    - Mashup Content scene.
    - Output log scene.
        - Properties
        - Widget Infos
        - Output log
- **Average Humidity scene**
    - Visualization widget in tree view.
    - Filter by city.
    - Visualization data by Column chart, Line chart.
- **Industry scene**
    - Visualization widget in tree view
    - Filter by city.
    - Filter by year.
    - Visualization data by Maps.

2.3. Databases

- **Staging Area Tables**
    - Extract data from CSV
    - Transform the data
    - Load data to the Staging Area Tables
        - Load data into Forest Source Data Staging
        - Load data into Population Source Data Staging
        - Load data into Industry Source Data Staging
        - Load data into Climate Source Data Staging
- **Fact Tables**
    - Load data into Forest Source Data Staging to Fact Forest

- ○ Load data into Forest Source Data Staging to Fact Population
- ○ Load data into Forest Source Data Staging to Fact Industry
- ○ Load data into Forest Source Data Staging to Fact Climate
- **Dimension**
  - ○ Dim Year
    - ■ Queries available values years in Fact tables but not duplicate
    - ■ Load the values into Dimension Year
  - ○ Dim City
    - ■ Queries available values City in Fact tables but not duplicate
    - ■ Load the values into Dimension City

2.4. RDF Data Cubes

- **Dimension**
  - ○ Dimension must have a label.
- **Measure**
  - ○ Measure must have a label.
- **Dataset**
  - ○ Dataset must have dimensions.
  - ○ Dataset must have at least one measure.
- **Data Structure Definition**
  - ○ Data Structure Definition must have dimensions.
  - ○ Data Structure Definition must have at least one measure.
- **Observation**
  - ○ Observation must have values.

3. TEST STRATEGY

We are using Black box testing due to fast lifecycle of project:

- Manual Test (Exploratory Testing).
- Acceptance Test.
- Functional Test (Function, UI).

4. TEST CRITERIA

- The Testing process finishes when 90% test cases passed status.
- Testing all test cases.
- The document will be delivered to the customer when finished sprint time.

5. TEST MANAGEMENT

5.1. TEAM

Full Name	Email	Phone number	Role
Hoa, Vo	hoavo.dng@gmail.com	0935.193.182	Scrum master
Tin, Pham Van	tinphamvan123@gmail.com	0932.535.175	Team member
Dong, Ky Huu	kyhuudong@gmail.com	0898.246.980	Team member
Kieu, Tran Thanh	thanhkieutran391@gmail.com	0358.583.251	Team member

5.2. COMMUNICATION TOOLS

- **Slack**: Report bugs, notify updates,…
- **Messenger**: Chat, discuss.
- **Discord**: discuss online.
- **Skype**: Contact, discuss with mentor Binh.
- **Gmail**: Contact, discuss with mentor Huy

5.3. TEST MANAGEMENT TOOLS

Purpose	Tool	Vendor/In-house	Version
Excel Sheet to track Test Plan and Test Case	Google Sheet	Google	Latest

6. RISKS & ASSUMPTIONS

6.1. RISKS

Risk	Definition	Probability	Severity	Mitigation Strategy
Scope Risk	A high numbers of modules	H	H	All team members join to test system Testing in each plan
Scheduling Risk	Testing projects are not efficiently or completely	M	M	Move the not finish part of module to the next sprint
Time management	Most of the time is for development, not for testing.	M	H	Overtime
Operation Risk	Ineffective processing, system failures, or unanticipated circumstance define operational risk	M	M	Estimate more time to testing and other issues

Probability		Severity	
L	Rarely happened.	L	Low damaged
M	Sometime happened	M	Medium damaged
H	Usually happened	H	Serious damaged

6.2. ASSUMPTIONS

Assumption to be proven	Impact of Assumption being incorrect	Owners
Network Available	Dropout network, unstable network	Network Providers

7. TEST SCHEDULE

No	Task Name	Duration (Hours)	Start	Finish	Resources
1	Test Sprint 1	30	Aug 12, 2020	Sep 10, 2020	
1.1	InfoSection test	8			Kieu
1.2	Navbar test	2			Kieu
1.3	Footer test	2			Kieu
1.4	Homepage test	6			Kieu
1.5	About page test	4			Kieu
1.6	Contact page test	4			Kieu
1.7	Toolbar test	4			Kieu
2	Test Sprint 2	64	Sep 11, 2020	Oct 10, 2020	
2.1	Validating transform process	10			Hoa
2.2	Validating load process	10			Hoa
2.3	Validating DW Structure	8			Hoa
2.4	Modal test	4			Kieu
2.5	User Guide test	4			Kieu
2.6	connector between 2 node test	8			Kieu
2.7	drag & drop node test	8			Kieu
2.8	Check data in Line Chart on humidity filter by city	12			Kieu
3	Test Sprint 3	24	Oct 11, 2020	Nov 9, 2020	
3.1	Check filter by year industry	8			Kieu
3.2	Check filter by city industry	8			Kieu
3.3	Check data industry in Maps	8			Kieu
4	Test Sprint 4	96	Nov 10, 2020	Dec 12, 2020	

4.1	Validating queries result	20			Dong
4.2	Validating loading process result	12			Dong
4.3	Validating Climate Observations	10			Hoa
4.4	Validating Climate Dimensions & Measures	10			Hoa
4.5	Validating Industrial Observations	10			Hoa
4.6	Validating Industrial Dimensions & Measures	10			Hoa
4.7	Check data industry in Maps	6			Kieu
4.8	Check filter by city in Temperature	8			Kieu
4.9	Check connector when merge temperature & industry	8			Kieu
4.10	Check data in Maps when merge temperature & industry	8			Kieu