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Test Plan, Test Design Specifications and Test Cases
Version 1.0

CENG 408
Innovative System Design and Development II

Curious Cam for Video Lecture Recording Environment

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1. INTRODUCTION

1.1 Version Control

Version No	Description of Changes	Date
1.0	First Version	March,13 2018

1.2 Overview

The Curious Cam for Video Lecture Recording Environment is a hardware based project. For this reason, test cases are designed to test a software system and hardware systems. The optimal values are based of the working environment of the camera.

1.3 Scope

This document encapsulates the test plan of the use cases, test design specifications and the test cases correspond to test plan.

1.4 Terminology

Acronym	Definition
GUI	Graphical User Interface
UWP	User Web Page
SAWP	System Administration Web Page
CS	Camera System

2. FEATURES TO BE TESTED

This section lists and gives a brief description of all the major features to be tested. For each major feature there will be a Test Design Specification added at the end of this document.

2.1 GUI (Graphical User Interface)

In this project, User Interface constituents are used. The UI part is divided into seven parts which are Register Page, Login Page, Add Video Record, List Previous Video Record, See Video Gallery Page, Video Upload Page and Exit. Each part of the UI contains smaller sections, and in this project panel, button, search, and so on. It includes testing the functionality of the UI components used. If no account exists, the participant must be logged in to the account. Then the participant fills in his / her information. Then the participant who wants to reach anything clicks on the button. If the dataset is to be uploaded, click on the corresponding button and the system waits for the data to be uploaded. If the participant wishes to view the data sets, click on the list data set button and the system will display all registered data sets on the screen.

2.2 User Web Page (UWP)

User can after login in to the system; s/he will be able to watch the previous recordings.

2.3 System Administrator Web Page (SAWP)

This part includes controls of Administrator Interface. It includes Login, Camera View page, Video Gallery page, Video Upload page and Exit. The admin shall edit dataset and edit user information.

2.4 Camera System

Since the system uses a large portion of the Raspberry-Pi3's CPU, the CPU is quickly reaching high temperatures. As the CPU temperature increases, the image processing speed drops. To prevent high temperature, an aluminum heat sink and a fan are used on the CPU. In order to maximize the efficiency of the system, the system must be used at room temperature. The camera that we use to record images has 5MP, 3.6mm lens size and f / 2.9 apertures. The system should be used in an environment where the user's face and body are bright. Also, the quietness of the environment is a factor that allows video recording to be performed with full efficiency. these reasons affect the camera record quality and should be tested for this reason.

3. ITEM PASS/FAIL CRITERIA

The general rule for making a decision when a test case passes is merged, with Dev and Master, which is branched off via GitHub.

3.1 Exit Criteria

- 100% of the test cases are executed
- 95% of the test cases passed
- All High and Medium Priority test cases passed

4. REFERENCES

[1] Group16_SRS_100, March 13, 2018
[2] Group16_SDD_100, March 13, 2018

5. TEST DESIGN SPECIFICATIONS

5.1 Graphical User Interface (GUI)

Sub features to be tested

5.1.1.1 Register (GUI.RG)

The participant can indicate his/her personal information to login the system.

5.1.1.2 Login (GUI.LG)

 The participant has to login the website system by entering email and password.

5.1.1.3 List Previous Video Recording (GUI.LV)

 The participant can list dataset. The system automatically brings up the information of all documents and documents.

5.1.1.4 Search (GUI.SRC)

The participant can search the word he/she wants to see in all website.

5.1.1.5 Exit (GUI.EXT)

The participant can leave this system with Exit button.

Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
GUI.RG.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.RG.01	3.1	H	Enter a valid a user email and password.
GUI.RG.02	3.1	H	Enter a invalid user email.

TC ID	Requirements	Priority	Scenario Description
GUI.LG.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.LG.01	3.1	H	Enter a valid a user email and password.
GUI.LG.02	3.1	H	Enter a invalid user email.

TC ID	Requirements	Priority	Scenario Description
GUI.LV.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.LV.01	3.1	H	The video record list shows the information of the record set and when it was uploaded.

TC ID	Requirements	Priority	Scenario Description
GUI.EXT.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.EXT.01	3.1	H	Select completely the Exit Button. User can completely leave this page

TC ID	Requirements	Priority	Scenario Description
GUI.SRC.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.SRC.01	3.1	H	Select search button and write a word. After selecting, appropriate words will be displayed.

5.2 System Administrator Web Page (SAWP)

Sub features to be tested

5.2.1.1 Login (SAWP.LG)

The admin has to login the web application system by entering email and password

5.2.1.2 Edit Recorded Video Set (SAWP.ED)

The admin can add and list added recorded video sets.

5.2.1.3 Exit (SAWP.EXT)

The admin can Select completely the Exit Button and completely leave this page.

Test Cases

Here list all the related test cases for this feature

Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
SAWP. LG.01	3.2	H	Enter a valid user email and password.
SAWP. LG.02	3.3	H	Enter a valid email and password.

TC ID	Requirements	Priority	Scenario Description
SAWP.ED.01	3.2	H	Admin will select and edit which information user wants to edit and then click on the "Save" button.

TC ID	Requirements	Priority	Scenario Description
SAWP.EXT.01	3.2	H	Select completely the Exit Button. Admin can completely leave this page.

5.3 Main Page (GUI.MAIN)

This page that is shown to the user just after the application is run.

5.3.1 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
GUI.MAIN.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
GUI.MAIN .01	3.2.2.1	H	Press on the Profile button
GUI.MAIN .02	3.2.2.1	H	Press on the Settings button

GUI.MAIN .03	3.2.2.1	H	Press on the Record button
GUI.MAIN .04	3.2.2.1	H	Press on the Files button
GUI.MAIN .05	3.2.2.1	H	Press on the Controller button

5.4 Profile Management

5.4.1 Sub Features to be tested

5.4.1.1 Update User Information (PM.INFO)

The user can save or update his or her personal information.

5.4.1.2 Update User Photo (PM.PHOTO)

The user can select an image as his or her photo in the application. The user can select it from hard drive of capture from the camera.

5.4.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
PM.INFO.xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
PM.INFO.01	3.2.2.2	L	Enter a name, surname, email and instutition. After that, open the page again see if the changes are performed.

TC ID	Requirements	Priority	Scenario Description
PM.PHOTO. xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
PM.PHOTO. 01	3.2.2.2	L	Select an image from the hard drive by pressing on the "Open" button and see if it's saved as user photo by reopening the page.
PM.PHOTO. 02	3.2.2.2	L	Get an image from the camera by pressing on the Capture button and see if it's saved as user photo by reopening the page.

5.5 Video Recording

5.5.1 Sub Features to be tested

5.5.1.1 Recording (VR.REC)

The user can save start, stop, pause and continue recording.

5.5.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
VR.REC..xx	*Give corresponding requirement no*	*High or Medium or Low*	*A brief description*
VR.REC.01	3.2.2.3	H	Press on the Start button to start video recording
VR.REC.02	3.2.2.3	H	Press on the Stop button to stop or quit recording
VR.REC.03	3.2.2.3	H	Press on the Pause button to wait recording
VR.REC.04	3.2.2.3	H	Press on the Continue button to continue paused recording

6. Detailed Test Cases

6.1 GUI.MAIN.01

TC_ID	GUI.MAIN.01
Purpose	Opening the Profile Management page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-
Procedure	[A01] Open the Main page
	[A02] Press on the Profile button
	[A03] Observe the Profile page appears.
Cleanup	Go back to the Main Page

6.2 GUI.MAIN.02

TC_ID	GUI.MAIN.02
Purpose	Opening the the Settings page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-
Procedure	[A01] Open the Main page
	[A02] Press on the Settings button
	[A03] Observe the Setting page appears.
Cleanup	Go back to the Main Page

6.3 GUI.MAIN.03

TC_ID	GUI.MAIN.03

Purpose	Opening the Video Recording page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-
Procedure	[A01] Open the Main page
	[A02] Press on the Record button
	[A03] Observe the Video Recording Page appears.
Cleanup	Go back to the Main Page

6.4 GUI.MAIN.04

TC_ID	GUI.MAIN.04
Purpose	Opening the File Management page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-
Procedure	[A01] Open the Main page
	[A02] Press on the Files button
	[A03] Observe the Files Management Page appears.
Cleanup	Go back to the Main Page

6.5 GUI.MAIN.05

TC_ID	GUI.MAIN.01
Purpose	Opening the Camera Controller page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-

Procedure	[A01] Open the Main page
	[A02] Press on the Controller button
	[A03] Observe the Camera Controller Page appears.
Cleanup	Go back to the Main Page

6.6 GUI.MAIN.06

TC_ID	GUI.MAIN.01
Purpose	Opening the About Us page
Requirements	3.2.2.1
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	Main Page should open
Setup	-
Procedure	[A01] Open the Main page
	[A02] Press on the About button
	[A03] Observe the About Us Page appears.
Cleanup	Go back to the Main Page

6.7 PM.MAIN.01

TC_ID	PM.INFO.01
Purpose	Entering user textutal informaiton.
Requirements	3.2.2.2
Priority	Low
Estimated Time Needed	5 Minutes
Dependency	GUI-MAIN.01
Setup	-Profile Management page is open
Procedure	[A01] Open the Profile Management page
	[A02] Enter a name, surname, email and instutition
	[A03] Go back to the Main page
	[A04] See is the information is correct
	-
Cleanup	Go back to the Main Page

6.8 PM.PHOTO.01

TC_ID	PM.PHOTO.01
Purpose	Selecting user photo from hard drive.
Requirements	3.2.2.2
Priority	Low
Estimated Time Needed	5 Minutes
Dependency	GUI-MAIN.01
Setup	Profile Management page is open
Procedure	[A01] Open the Profile Management Page
	[A02] Press on the Browse button
	[A03] Select an image file from hard drive
	[A04] See if the image is uploaded
	[A05] Go to the Main Page
	[A06] Open the Profile Management Page again
	[A04] See if the displayed image is correct
	-
Cleanup	Go back to the Main Page

6.9 PM.PHOTO.01

TC_ID	PM.PHOTO.01
Purpose	Capturing user photo from camera
Requirements	3.2.2.2
Priority	Low
Estimated Time Needed	5 Minutes
Dependency	GUI-MAIN.01
Setup	Profile Management page is open
Procedure	[A01] Open the Profile Management Page
	[A02] Press on the Capture button
	[A03] Take a picture with the camera
	[A04] See if the capatured image is uploaded
	[A05] Go to the Main Page

	[A06] Open the Profile Management Page again
	[A07] See if the displayed image is correct
	-
Cleanup	Go back to the Main Page

6.10   VR.REC.01

TC_ID	VR.REC.01
Purpose	Starting video recording
Requirements	3.2.2.3
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	GUI.MAIN.03
Setup	Video recording should not be started in any way
Procedure	[A01] Open the Video Recording Page
	[A02] Press on the Start/Record button
	[A03] Observe is if the live video appears on the screen and recording starts
	-
Cleanup	Go back to the Main Page

6.11   VR.REC.02

TC_ID	VR.REC.02
Purpose	Stopping video recording
Requirements	3.2.2.3
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	GUI.MAIN.03
Setup	Video recording must bein either continuing or paused mode
Procedure	[A01] While the video recording is on or paused
	[A02] Press on the Stop button
	[A03] Observe is if the live video freeze on the screen and recording stops
	[A04] Look for the file just generated and preview the video
	-
Cleanup	Go back to the Main Page

6.12   VR.REC.03

TC_ID	VR.REC.03
Purpose	Pausing video recording
Requirements	3.2.2.3
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	GUI.MAIN.03
Setup	Video recording must be in continuing mode
Procedure	[A01] While the video recording is on or paused
	[A02] Press on the Pause button
	[A03] Observe is if the live video freeze on the screen and recording paused
	-
Cleanup	Go back to the Main Page

6.13   VR.REC.04

TC_ID	VR.REC.04
Purpose	Continueing video recording
Requirements	3.2.2.3
Priority	High.
Estimated Time Needed	<1 Minute
Dependency	GUI.MAIN.03
Setup	Video recording must be in paused mode
Procedure	[A01] While the video recording is paused
	[A02] Press on the Continue button
	[A03] Observe if the freeze video go alive and recording continue
	-
Cleanup	Go back to the Main Page

6.14