OpenMRS

What is OpenMRS?

OpenMRS is an open source H/FOSS project written in Java.

OpenMRS is a software platform and a reference application which enables design of a customized medical records system with no programming knowledge. It is a common framework upon which medical informatics efforts in developing countries can be built.

Team Alpha Centauri

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Test Case Template

1) Test Case ID
2) Requirement being tested
3) Class being tested
4) Method(s) being tested
5) Test input(s)
6) Expected outcome(s)
7) Class path
8) Driver name

Test Case Example

1) 00011
2) MRS-11: The method shall check to see if the list contains the specified object.
3) Allergies.java
4) Contains(Object o)
5) POLLEN
6) True
7) .:./project/src/api/target/classes
8) org.openmrs.TestCase00011

Testing Report

Test #	Requirement	class name	method name	input	output	expected output	pass/fail
00001	MRS-1: The form shall require the patient to have a name.	PersonName.java	setGivenName()	Nick	Nick	Nick	Passed
00002	MRS-2: The form shall require the patient to enter a valid age.	Person.java	setBirthDate()	04-11-1995	04-11-1995	04-11-1995	Passed
00003	MRS-3: The form shall require the patient to fill out a valid gender.	Person.java	setGender()	Male	Male	Male	Passed
00004	MRS-4: The form shall require the patient to enter a valid date.	FieldAnswer.java	setDateCreated()	10-27-2016	10-27-2016	10-27-2016	Passed
00005	MRS-5: The form shall require the patient to enter an emergency contact.	Relationship.java	setPersonB(Person personB)		true	true	Passed
00006	MRS-6: The method shall return null.	ProgramWorkflow.java	getState(Integer programWorkflowStateID)	-3	null	null	Passed
00007	MRS-7: The method shall return null.	ProgramWorkflow.java	getStateByName(String name)	" "	null	null	Passed
00008	MRS-8: Tests that an allergy has been added	Allergies.java	add(Allergy allergy)		true	true	Passed
00009	MRS-9: Removes an allergy from the end of the list	Allergies.java	remove(int index)		true	true	Passed
00010	MRS-10: Clears the list of allergies	Allergies.java	clear()		No known allergies	No known allergies	Passed
00011	MRS-11: Checks to see if the allergies list contains the specified object	Allergies.java	contains(Object o)	POLLEN	true	true	Passed
00012	MRS-12: Gives the index of the allergy in the allergies list	Allergies.java	indexOf(Object o)	0	0	0	Passed
00013	MRS-13: Will return false when the allergies list is not empty	Allergies.java	isEmpty()		false	false	Passed
00014	MRS-14: Will return True when the allergies list is empty	Allergies.java	isEmpty()		true	true	Passed
000015	MRS-15: The method shall return "" name and concept are both null.	Drug.java	getDisplayName()				Passed
00016	MRS-16: The care setting ID shall be updated to the ID entered.	CareSetting.java	setCareSettingId(Integer careSettingId)	100	100	100	Passed
00017	MRS-17: Given no input	Patient.java	toString()	13	Patient#13	Patient#13	Passed
00018	MRS-18: The method shall return the patient's ID number.	PatientIdentifierType.java	setPatientIdentifierTypeId(Integer patientIdentifierTypeId)	11113	11113	11113	Passed
00019	MRS-19: The method shall return the text given.	PatientIdentifierType.java	setFormat(String format)	example format	example format	example format	Passed
00020	MRS-20: The method shall return the weight.	RelationshipType.java	setWeight(Integer weight)	120	120	120	Passed
00021	MRS-21: The method shall return true.	Person.java	setDead(Boolean dead)	true	true	true	Passed
00022	MRS-22: The method shall return the visit ID.	VisitType.java	setVisitTypeId(Integer visitTypeId)	13	13	13	Passed
00023	MRS-23: The method shall return the visit number.	Visit.java	setID(Integer id)	13	Visit #13	Visit #13	Passed
00024	MRS-24: The method shall return () if getPersonName() is null.	User.java	getDisplayString()		(null)	(null)	Passed
00025	MRS-25: The method shall return "" if userID equals null.	User.java	serialize()				Passed

Our Project.

For our project, we picked an open-source software project and created an automated testing framework. This framework implements the test plan we created which tests 25 different test cases based on the OpenMRS code. Our framework runs on Ubuntu Linux operating system. The testing framework is invoked by one command:

./scripts/runAllTests.sh

Once invoked, the script accesses our testCase folder with the meta-data our framework uses to execute the test cases. A final report is printed out to display the test case number, the requirement being tested, the class name, the method name, the input, the output, the expected output, and the result of the test. After, we injected faults into the OpenMRS code to ensure that our test cases would fail and were really running. Once confirmed, we commented out our code in the OpenMRS code.

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