

Product	Specification / Req Id	Element tested	Result expected	Technical Test	OK / KO
Call Stack Application	3	Constructors of classes, Variables containing Java instances created and added to the Environment	Java instances created by calling Constructors, Instance and all of its Fields are recursively added to the Environment if they don't already exist in the Environment	Method Environnement.createVariable used with all the Constructors of the Classes Segment, Point, Point2 & Point3 that use different numbers of arguments of different types, Method addAttributesToInstances used on Variables created in the Environment	OK
	4	Fields of the Variables in the Environment can be modified	The value of the field of the instance contained in the root Variable having the Field will be modified. Moreover, the child Variable containing the previous value of the Field won't be linked anymore to the root Variable that had the Field. A link will be created between the root Variable having the Field and the child Variable containing the new value of the Field.	Methods changeAttribute, setAttributeNull & retireVariableMere of the Environnement Class used on Variables created in the Environment	OK
	4	Pointers in the Environment can be modified	If the Pointer is set to null, the link between the pointer and its previous value is deleted. If the new value is non null and has a type compatible with the pointer's declared type, the link between the pointer and its previous value is deleted and a link between the pointer and the new value is created.	Methods equalsPoigneeVariable & equalsPoigneePoignee of the Environnement Class used on pointers created in the Environment	OK
	5	Methods can be called on Variables of the Environment	The potential side effects are taken into account and the new instances that are potentially created after the method is called are added to the Environment if they don't already exist	Method Environment.callMethodUpon used on Variables created in the Environmment with the methods coded in the classes Segment, Point, Point2 & Point3. Methods linkedAttributes & addAttributesToInstances are used to remove and remake the links between the variable on which the method was called and its fields.	OK
	6	Whenever an operation is made by the user, the corresponding Java code is displayed	The String with the correct Java code appears as the last element in the list on the right-hand side of the screen and is highlighted	Different operations made through the GUI to check if the displayed code is correct. The names of the variables in the Environment are converted to their correct names with the trueVariableName Method of the class Environnement	OK
	7	Rewind time to return to a previous state of the memory	The current state of the Environment is put in quarantine when the first rewind occurs. Any previous state will be displayed with the correct previous values of the fields with primitive types. After each user operation, the current state of the Environment is cloned & stored and the time variable is incremented.	Method Environnement.varsContainField used on Variables of previous states of the Environment to assure that each field is linked to its single previous value. Methods cloneInstances & clonePile of the Environnement class, method cloneVariable of the Variable class and method cloneMemoryState of GUI class used to clone the current Environment and the values of the Variables.	OK

Product	Specification / Req Id	Element tested	Result expected	Technical Test	OK / KO
Call Stack Application	8	Only Variables of the Environment with types that have to be drawn will appear in the diagram	Whenever a variable with a type that must not be drawn is created, it doesn't appear on the diagram	Modifying the Config.XML file and creating Variables in the Environment with types that don't have to be drawn such as primitive types	OK
	9	Static Fields are correctly handled and displayed by the application	When a Field is static, all the Variables sharing that Field will be linked to the single Variable containing the value of the static Field	Modifying the classes Segment.java & Point.java to declare static fields, creating instances of Segment & Point in the Environment and using the Methods hasStaticField & refreshRelatedVariables of the Environnement class to create the links between the Variables sharing the static Field and the Variable containing the static Field's value.	OK
	10	XML configuration file specifying the classes to be drawn and the classes considered to be primitive	When the XML file is modified, the classes specified in the Environment are loaded into any Environment created	Class ParseurXML used with different XML configuration files to create Environments. Method Class.forName used with the names of the classes written in the XML configuration file	OK
	11	Vertices displayed in the diagram can be moved by the user	When the user clicks on a vertex, he will be able to change its placement and the links of the vertex with other vertices will follow the vertex being moved	Instances of the class DrawEnvironnementBis used with different Environments and stored on a JFrame to check that the links between pointers and variables and the links between the fields of variables and their values are displayed correctly. The value of every field with a primitive type must be correctly displayed on its vertex.	OK