

#### **Phase 4:**

<b>Requirement (testing objective)</b>	<b>Test case</b>	<b>Output</b>	<b>Error finding (if?)</b>	<b>Change implemented</b>
<b>Staff Id</b>	Staff ali id 993999999	Please enter a valid 7-digits Id.	Input error	We have constructed an invalid exception class to inform the user.
<b>Remove/add a Staff to the staff List</b>	Added ralph and ali as a staff and removed mira.	Successfully added and removed from the staff list.	NIL	
<b>Print staff list</b>	Printed the staff list	Successfully printed the updated list	NIL	
<b>FA budget</b>	Income:70 0000 Expenses: 10 000	690 000	NIL	
<b>Salary value</b>	Salary value: 5000 Deduction:100 Addition: 90	5000	Error in calculation Expected value: 4990	Changed the parameters of deduction and addition. Now it takes the value of the salary and the value that needs to be added/ deducted.
<b>Generate student grade</b>	Student id: 1919191 Grade: 70	B	NIL	
<b>Staff list count</b>	Only 2 staff members in the list	2	NIL	

<b>Control users' access to the system</b>	<b>2018989</b>	<b>User 2018989 successfully added</b>	<b>NIL</b>	
<b>Control users' access to the system</b>	20150909	"Please enter a 7-digit id number instead of 20150909"	(id>7 digits) User won't be added among system users because only 7-digit id numbers are accepted for system users	We create a class <code>InvalidInputException</code> to detect such errors and throw it to ask for input correction and a valid id 7-digit number is added
<b>Control users' Exit from the system</b>	2018882	User is removed from users with access to the system	<b>NIL</b>	
<b>Control users' Exit from the system</b>	2017	"Please enter a 7-digit id number instead of 2017"	(id<7 digits) User won't be added among system users because only 7-digit id numbers are accepted for system users	We create a class <code>InvalidInputException</code> to detect such errors and throw it to ask for input correction and a valid id 7-digit number is added
<b>Check if a user is among the users allowed to access the system</b>	2015678(knowing that this user is allowed to access the system)	"User 2015678 exists"	<b>NIL</b>	

<b>Check if a user is among the users allowed to access the system</b>	2019876(knowing that this user is not allowed to access the system)	“User 2019876 does not exist”	NIL	
<b>Check if a user is among the users allowed to access the system</b>	20198811223	“please enter a valid 7-digit id number instead of 20198811223”	(id>7 digits) User won’t be added among system users because only 7-digit id numbers are accepted for system users	We create a class <code>InvalidInputException</code> to detect such errors and throw it to ask for input correction and a valid id 7-digit number is added
<b>Check if the system users want to report a certain problem</b>	(2019992,”No problem”)	“No problem to report”	NIL	
<b>Check if the system users want to report a certain problem</b>	(2013452,”has problem”)	“Problem successfully reported”	NIL	
<b>Check if the system users want to report a certain problem</b>	(2087812,Null)	“please enter a valid user status”	User status should be a string a valid string of characters and null or digits are not accepted	We create a class <code>InvalidInputException</code> to detect status input errors and throw it to ask for input correction and a valid status is added

<b>Change the id or credentials of system users</b>	User.setid(2018878)	Id succesfully set 2018878	NIL	
<b>Change the id or credentials of system users</b>	User.setname("User2")	user name is set to "User2"	NIL	
<b>Change the id or credentials of system users</b>	User.setname(Null)	Please insert a valid name	User name should be a valid string not digits or null	Place if statement that detects the type of the input name and the format is corrected
<b>Change the id or credentials of system users</b>	User.setphone(03123123)	User phone number is set to 03123123	NIL	
<b>Adding user to the financial aid</b>	2017123	User 2017123 successfully added	NIL	
<b>Adding user to the financial aid</b>	20171234	"Please enter a 7-digit id number instead of 20171234"	(id>7 digits) User won't be added among system users because only 7-digit id numbers are accepted for system users	We create a class InvalidInputException to detect such errors and throw it to ask for input correction and a valid id 7-digit number is added

<b>Removing user from the financial aid</b>	2017123	User 2017123 successfully removed	NIL	
<b>Removing user from the financial aid</b>	20171234	“Please enter a 7-digit id number instead of 20171234”	id>7 digits) User won’t be removed among system users because only 7-digit id numbers are accepted for system users	We create a class <code>InvalidInputException</code> to detect such errors and throw it to ask for input correction and a valid id 7-digit number is added
<b>Calculate the working hours of a user</b>	(2017123, 10, 30)	20 hours	NIL	
<b>Calculate the working hours of a user</b>	(2017123, 30, 10)	-20 hours	It is not logic to obtain -20 hours	We add an absolute function <code>Math.abs</code> to always get a positive number
<b>Absences record for a user</b>	(2017123,10,5)	exceeded absence limit	NIL	
<b>Absences record for a user</b>	(1231231,10,5) 1231231 is an id not available in the university and the financial aid	exceeded absence limit	The system will still calculate to absences record even if the id it not available	The system has to make sure that this id is available in the financial aid
<b>Check if the user has attended</b>	(2017123,array)	attended	NIL	
<b>Check if the user has attended</b>	(1231234,array) 1231234 is an id not available in the university and the financial aid	absent	The system will state that user is absent regardless if the id is available or not	The system has to make sure that this id is available in the financial aid
<b>Work tuition</b>	(2017123,10000)	8000\$	NIL	
<b>Check if the application is accepted or declined</b>	(2017123,array)	The application was accepted for this student	NIL	