# Homework: Test Levels and Test Types

## Unit Testing in the Real Life: Testing a Battery

|  |  |
| --- | --- |
| Test #1 | Check the battery. It should comply with the “AA” size standard. |
| Test #2 | Use external flashlight to test the battery. |
| Test #3 | Check the battery voltage. Measure the voltage with digital multimeter. It should be near the specification 1.5V. |
| Test #4 | Check the physical condition of the battery. There should not be any damages. |
| Test #5 | Check the labels on the battery. They should be accurate with the specifications. |

## Unit Testing in the Real Life: Testing a Light Bulb

|  |  |
| --- | --- |
| Test #1 | Check the lightning. |
| Test #2 | Check the metal part. It should be E10 standard. |
| Test #3 | Use external device to test the bulb if it’s working. |

## Unit Testing in the Software World: Age Checker

|  |  |
| --- | --- |
| Test #1 | * AgeChecker(5) 🡪 child |
| Test #2 | * AgeChecker(19.5) 🡪 teenager |
| Test #3 | * AgeChecker(20) 🡪 adult |
| Test #4 | * AgeChecker(75.3) 🡪 elder |
| Test #5 | * AgeChecker(-5) 🡪 error |

## Unit Testing in the Software World: Income Checker

|  |  |
| --- | --- |
| Test #1 | * IncomeChecker(250) 🡪 low |
| Test #2 | * IncomeChecker(1000) 🡪 mid |
| Test #3 | * IncomeChecker(2300.70) 🡪 mid |
| Test #4 | * IncomeChecke (7000) 🡪 high |
| Test #5 | * IncomeChecke (-5) 🡪 error |

## Integration Testing in the Real Life: Lighting the Bulb

|  |  |
| --- | --- |
| Test #1 | Connect the battery to the bulb via 1 wire one way. Check if it’s working. |
| Test #2 | Connect the battery to the bulb via 1 wire the other way. Check if it’s not working. |
| Test #3 | Connect the battery to the bulb via 2 wires one way. Check if it’s working. |
| Test #4 | Connect the battery to the bulb via 2 wires the other way. Check if it’s not working. |
| Test #5 | Connect the battery to the bulb via 3 wires plus the switch turned on. Check if it’s working. |
| Test #6 | Connect the battery to the bulb via 3 wires plus the switch turned off. Check if it’s not working. |

## \* Integration Testing in the Software World: Ads

|  |  |
| --- | --- |
| Test #1 | Fill the login field to login and check if you are logged in the home page |
| Test #2 | Try to fill the login field with invalid credentials. You should be stopped from logging with error for wrong credentials. |
| Test #3 | Log in to your account. Log out from your account, it should log out you and you won’t be able to log in again until you fill the login field. |
| Test #4 |  |
| Test #5 |  |
| Test #6 |  |
| Test #7 |  |
| Test #8 |  |

## \* Integration Testing in the Software World: Credit Risk

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | child | teenager | adult | elder | error |
| low | 100% | 80% |  |  | error |
| mid | 100% |  |  | 44% | error |
| high | 100% |  | 19% |  | error |
| error | error | error | error | error | error |

## System Testing in the Real Life: Flashlight

|  |  |
| --- | --- |
| Test #1 | Turn the switch on and check it turns on |
| Test #2 | Turn the switch off and check it turns off |
| Test #3 | Change the battery of the flashlight |
| Test #4 | Disassemble the flashlight and replace the bulb |
| Test #5 | Turn the flashlight on and check when it will switch off |
| Test #6 | Measure the lightning distance. |
| Test #7 | Drop it and check if its working after that. |
| Test #8 | Put it into low and high temperatures and check how it’s working. |
| Test #9 |  |
| Test #10 |  |

## System Testing in the Real Life: Digital Scale

|  |  |
| --- | --- |
| Test #1 | Put weight on the scale and check if the scale measure correctly. |
| Test #2 | Replace the battery |
| Test #3 | Put weight on the scale and check if it’s automatically turning on. |
| Test #4 | Drop it and see what happens. |
| Test #5 |  |
| Test #6 |  |
| Test #7 |  |
| Test #8 |  |

## System Testing in the Software World: Number Calculator

|  |  |
| --- | --- |
| Test #1 | Write any numbers and click reset button. It should delete the numbers |
| Test #2 | Test 5\*1 |
| Test #3 | Test 5/1 |
| Test #4 | Test 6/2 |
| Test #5 | Test 0\*10 |
| Test #6 | Test 0/10 |
| Test #7 | Test 0\*0 |
| Test #8 | Test 0/0 |

## Acceptance Testing in the Real Life: Flashlight

|  |  |
| --- | --- |
| Test #1 |  |
| Test #2 |  |
| Test #3 |  |
| Test #4 |  |
| Test #5 |  |
| Test #6 |  |

## Acceptance Testing in the Real Life: Digital Scale

|  |  |
| --- | --- |
| Test #1 | Open the battery place and check the battery type |
| Test #2 | Check if the scale measures correctly |
| Test #3 | Check when put weight on the scale if its turning on |
| Test #4 |  |
| Test #5 |  |
| Test #6 |  |

## Acceptance Testing in the Software World: Number Calculator

|  |  |
| --- | --- |
| Test #1 |  |
| Test #2 |  |
| Test #3 |  |

## Functional and Non-Functional Tests: Flashlight

|  |  |
| --- | --- |
| Functional Tests | Non-Functional Tests |
| Turn the switch on and check it turns on | Put it into low and high temperatures and check how it’s working. |
| Turn the switch off and check it turns off | Turn the flashlight on and check when it will switch off |
| Change the battery of the flashlight |  |
| Disassemble the flashlight and replace the bulb |  |
| Measure the lightning distance. |  |
| Drop it and check if its working after that. |  |