# Homework: Test Levels and Test Types

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

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| --- | --- |
| **Test #1** | Check the battery size. It should comply with the AA standard. |
| **Test #2** | Check the battery label. Does it have everyting in the AA standard. |
| **Test #3** | Check the physical condition. Does it have any damages on it. |
| **Test #4** | Check the voltage with digital multimeter. Does it comply with the AA standard. |
| **Test #5** | Use external device as a test framework. Does it work with the battery. |

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

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| --- | --- |
| **Test #1** | Check the glass. Is it OK as expected. |
| **Test #2** | Check the metal part. Does it look OK as per the E10 standard. |
| **Test #3** | Check the internal lighting mechanism. Does it look OK. |
| **Test #4** | Check if the circuit can be closed with digital multimeter. |
| **Test #5** | Use external device as a test framework. Does it work with the light bulb. |
| **Test #6** |  |
| **Test #7** |  |
| **Test #8** |  |
| **Test #9** |  |
| **Test #10** |  |

## Unit Testing in the Software World: Age Checker

|  |  |
| --- | --- |
| **Test #1** | AgeChecker(3) 🡪 child |
| **Test #2** | AgeChecker(0) 🡪 child |
| **Test #3** | AgeChecker(-5) 🡪error |
| **Test #4** | AgeChecker(19.5) 🡪 teenager |
| **Test #5** | AgeChecker(65) 🡪elder |
| **Test #6** | AgeChecker(“ten”) 🡪error |
| **Test #7** |  |
| **Test #8** |  |
| **Test #9** |  |
| **Test #10** |  |
| **Test #11** |  |
| **Test #12** |  |
| **Test #13** |  |
| **Test #14** |  |
| **Test #15** |  |
| **Test #16** |  |

## Unit Testing in the Software World: Income Checker

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

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

|  |  |
| --- | --- |
| **Test #1** | Connect the battery directly to the light bulb with 1 wire one way. Check if it is working. |
| **Test #2** | Connect the battery directly to the light bulb with 1 wire the other way. Check if it is not working. |
| **Test #3** | Connect the battery directly to the light bulb with 2 wires one way. Check if it is working. |
| **Test #4** | Connect the battery directly to the light bulb with 2 wires the other way. Check if it is not working. |
| **Test #5** | Connect the battery directly to the light bulb with 3 wires and a switch one way with the switch on. |
| **Test #6** | Connect the battery directly to the light bulb with 3 wires and a switch one way with the switch off. Check if it is not working. |

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

|  |  |
| --- | --- |
| **Test #1** |  |
| **Test #2** |  |
| **Test #3** |  |
| **Test #4** |  |
| **Test #5** |  |
| **Test #6** |  |
| **Test #7** |  |
| **Test #8** |  |

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | child | teenager | adult | elder | negative |
| low |  |  |  |  |  |
| mid |  |  |  |  |  |
| high |  |  |  |  |  |
| negative |  |  |  |  |  |

## System Testing in the Real Life: Flashlight

|  |  |
| --- | --- |
| **Test #1** | With turned off flashlight, press the button and the flashlight turns on. |
| **Test #2** | With turned on flashlight, press the button and the flashlight turns off. |
| **Test #3** | Open the flashlight, change the batteries, close the flashlight. |
| **Test #4** | Open the flashlight. Leave it for 1 week. Check when it will turn off. |
| **Test #5** |  |
| **Test #6** |  |
| **Test #7** |  |
| **Test #8** |  |
| **Test #9** |  |
| **Test #10** |  |

## System Testing in the Real Life: Digital Scale

|  |  |
| --- | --- |
| **Test #1** |  |
| **Test #2** |  |
| **Test #3** |  |
| **Test #4** |  |
| **Test #5** |  |
| **Test #6** |  |
| **Test #7** |  |
| **Test #8** |  |

## System Testing in the Software World: Number Calculator

|  |  |
| --- | --- |
| **Test #1** | 5/… = *invalid input* |
| **Test #2** | …/7 = *invalid input* |
| **Test #3** | 0/7 = 0 |
| **Test #4** | 5\*6 = 30 |
| **Test #5** | 1-1 = 0 |
| **Test #6** | 3+12 = 15 |
| **Test #7** |  |
| **Test #8** |  |

## Acceptance Testing in the Real Life: Flashlight

|  |  |
| --- | --- |
| **Test #1** | With turned off flashlight, press the button 3 times consecutively. The flashlight should turn on. |
| **Test #2** | I want to replace the batteries. Open to check the type of the batteries. Close. |
| **Test #3** |  |
| **Test #4** |  |
| **Test #5** |  |
| **Test #6** |  |

## Acceptance Testing in the Real Life: Digital Scale

|  |  |
| --- | --- |
| **Test #1** |  |
| **Test #2** |  |
| **Test #3** |  |
| **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** |
| With turned off flashlight, press the button and the flashlight turns on. | Open the flashlight. Leave it for 1 week. Check when it will turn off. |
| With turned on flashlight, press the button and the flashlight turns off. |  |
| Open the flashlight, change the batteries, close the flashlight. |  |
|  |  |