# Homework: Test Levels and Test Types

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

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| **Test #1** | Take a bulb 1.5 volts and check if the battery lighted the bulb up. |
| **Test #2** | Take a voltmeter or multimeter and check the voltage. It should be around 1.5 V. |
| **Test #3** | Check if the battery has no leakage,corosion or some bumps on the surface. Put it in water and check if there are any bubbles |
| **Test #4** | Check the battery visually  -check its length  -check its diameter |
| **Test #5** | Take a resistor or load meter and test a battery under a load to check if it meets its requirements |
| **Test #6** | Check how the battery performs at different temperatures and temperature conditions. Expose the battery to:  -10 degrees Celsius and check the voltage;  +45 degrees Celsius and check the voltage |
| **Test #7** |  |

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

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| --- | --- |
| **Test #1** |  |
| **Test #2** |  |
| **Test #3** |  |
| **Test #4** |  |
| **Test #5** |  |
| **Test #6** |  |
| **Test #7** |  |
| **Test #8** |  |
| **Test #9** |  |
| **Test #10** |  |

## Unit Testing in the Software World: Age Checker

|  |  |  |
| --- | --- | --- |
| **#** | **Test Description** | **Pass / Fail** |
| **Test #1** | AgeChecker(5) 🡪 child | Pass |
| **Test #2** |  |  |
| **Test #3** |  |  |
| **Test #4** |  |  |
| **Test #5** |  |  |
| **Test #6** |  |  |
| **Test #7** |  |  |
| **Test #8** |  |  |
| **Test #9** |  |  |
| **Test #10** |  |  |

## Unit Testing in the Software World: Income Checker

|  |  |  |
| --- | --- | --- |
| **#** | **Test Description** | **Pass / Fail** |
| **Test #1** | IncomeChecker(250) 🡪 low | Pass |
| **Test #2** |  |  |
| **Test #3** |  |  |
| **Test #4** |  |  |
| **Test #5** |  |  |
| **Test #6** |  |  |
| **Test #7** |  |  |
| **Test #8** |  |  |
| **Test #9** |  |  |
| **Test #10** |  |  |

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

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

## \* 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

Input ranges and respective credit risk:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **child** | **teenager** | **adult** | **elder** | **negative** |
| **low** | 100% |  |  |  |  |
| **mid** |  |  |  |  |  |
| **high** |  |  |  |  |  |
| **negative** |  |  |  |  |  |

Test cases with execution results:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Test Description** | **Age group** | **Income group** | **Result** | **Pass / Fail** |
| **Test #1** | CreditRisk(age: 35, income: 2300) 🡪 37% | adult 🡪 10% | mid 🡪 30% | 37% | Pass |
| **Test #2** |  |  |  |  |  |
| **Test #3** |  |  |  |  |  |
| **Test #4** |  |  |  |  |  |
| **Test #5** |  |  |  |  |  |
| **Test #6** |  |  |  |  |  |
| **Test #7** |  |  |  |  |  |
| **Test #8** |  |  |  |  |  |
| **Test #9** |  |  |  |  |  |
| **Test #10** |  |  |  |  |  |

## System Testing in the Real Life: Flashlight

|  |  |
| --- | --- |
| **Test #1** |  |
| **Test #2** |  |
| **Test #3** |  |
| **Test #4** |  |
| **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 Description** | **Pass / Fail** |
| **Test #1** | Calculate(5, +, 10) 🡪 15 | Pass |
| **Test #2** | Calculate(2000000000000, +, 5) 🡪 2000000000005 | Fail |
| **Test #3** | Calculate(10x, +, man) 🡪 invalid input | Fail |
| **Test #4** |  |  |
| **Test #5** |  |  |
| **Test #6** |  |  |
| **Test #7** |  |  |
| **Test #8** |  |  |
| **Test #9** |  |  |
| **Test #10** |  |  |
| **Test #11** |  |  |
| **Test #12** |  |  |
| **Test #13** |  |  |
| **Test #14** |  |  |
| **Test #15** |  |  |
| **Test #16** |  |  |
| **Test #17** |  |  |
| **Test #18** |  |  |
| **Test #19** |  |  |
| **Test #20** |  |  |

## Acceptance Testing in the Real Life: Flashlight

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

## Acceptance Testing in the Real Life: Digital Scale

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

## Acceptance Testing in the Software World: Number Calculator

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

## Functional and Non-Functional Tests: Flashlight

|  |  |
| --- | --- |
| **Functional Tests** | **Non-Functional Tests** |
|  |  |
|  |  |
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|  |  |