# Homework: Software Quality Assurance Introduction

## Think Testing: Gas Station

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| **Problem #1** | The type of fuel is confused… |
| **Problem #2** | Battery dropped… |
| **Problem #3** | Electronics failure… |
| **Problem #4** | There is a mechanical problem… |
| **Problem #5** | The woman lost the key… |
| **Problem #6** | The key was stolen… |

## Think Testing: Tooth Brushing

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| **Step #1** | We take the paste and the toothbrush… |
| **Step #2** | We open the toothpaste… |
| **Step #3** | We put paste on the brush… |
| **Step #4** | We close the toothpaste… |
| **Step #5** | We put the brush in the mouth and rub the teeth with circular movements on each side, inside and outside… |
| **Step #6** | We spit… |
| **Step #7** | We rinse the oral cavity and spit it out… |

## Think Testing: 5 Kg Bag

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| **Test #1** | I place products that weigh less than 5 kilograms… |
| **Test #2** | I am placing products that weigh 4.9 kilograms... |
| **Test #3** | I place products that weigh 5.2 kilograms... |
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## Login Form UX Problems

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| **Problem #1** | The name is \*Your wonderful shop\*, no \*My wonderful shop\*… |
| **Problem #2** | First and foremost should be boxing forUsername… |
| **Problem #3** | Only one button is needed to enter…/ right aligned… |

## Weather Forecast Bug

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| **Mistake** | It did not convert the data to the correct unit of measurement… |
| **Bug (location)** | The bug in the code should be in the module / function, responsible for: … converting the data… |
| **Failure (symptoms)** | When the buggy code goes in production, it fails as follows: … wrong value is displayed… |

## Age Checking Machine

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| 1. There is a wrong condition set in the code / the system will not admit people who are exactly 18 years old… 2. Bug…   3.The result will lead to Bug… |

## Testing an Electric Water Kettle

### Test Scenario #1: Boil Water

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| Test case #1 | **Boil 1 liter of water 🡪 success** |
| Description | Pour 1 liter of water, start the kettle, and wait until it gets hot. |
| Steps | 1. Fill 1 liter of cold water in the kettle and close the boiler lid. 2. Plug the power base in the electrical network. 3. Plug the boiler into the power base. 4. Switch on the kettle. 5. Wait until the water gets hot and the kettle automatically switches off (2-3 minutes). |
| Expected results | The boiling process should complete in less than 4 minutes.  The water should get hot.  The kettle should automatically power off when the water gets too hot.  The kettle lid should stay closed. |

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| Test case #2 | **Boil an empty kettle 🡪 fail** |
| Description | Try to boil an empty kettle (no water inside) and make sure the boiling stops (automatically switches off) almost immediately after starting. |
| Steps | 1. We don’t put anything in the kettle. 2. Plug the power base in the electrical network. 3. Plug the boiler into the power base. 4. Switch on the kettle. 5. The the kettle automatically switches off (0.5 – 2 sec.). |
| Expected results | The boiling process should not start.  The kettle should automatically power off after 0.5 – 2 sec….  The kettle lid should stay closed. |

### Test Scenario #2: Lid Test

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| Test case #1 | **Open the lid 🡪 success** |
| Description | When the mechanical button is pressed, the lid opens. |
| Steps | 1.We press the mechanical button…  2.The lid opens. |
| Expected results | The lid is open. |

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| Test case #2 | Close the lid **🡪 fail** |
| Description | Close the lid by hand. |
| Steps | 1. Close the lid by hand. |
| Expected results | The lid does not close. |

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## Testing a Coffee Machine

### Test Scenario #1: Brew a Coffee

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| Test case #1 | **Brew a small coffee 🡪 success** |
| Description | Start the coffee machine, put water, put ground coffee in the outlet, and brew a cup of coffee. |
| Steps | 1. Power on the machine. 2. Put ground coffee blend in the coffee outlet. 3. Fill the water container to its max level. 4. Wait until the "hot water" indicator lights up. 5. Put an empty coffee cup under the coffee outlet. 6. Press the "brew small coffee" button. 7. Wait until the brew process finishes. |
| Expected results | The brew process should complete in less than 50 seconds.  The coffee cup should hold a hot small coffee (60 ml).  The machine should stay powered on.  The "hot water" indicator light could be on or off (both states are correct).  The machine should have enough water in its water container (it should not beep). |

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| Test case #2 | **Brew a coffee with no water 🡪 fail** |
| Description | Start the coffee machine, empty the water container, try to brew a cup of coffee, expect the coffee machine to start beeping to indicate that the water is not enough. |
| Steps | 1. Power on the machine. 2. Еmpty the water container. 3. Put ground coffee blend in the coffee outlet. 4. Wait the coffee machine to start beeping. |
| Expected results | The process does not start, a sound indication starts after 10 seconds. |

### Test Scenario #2: Machine On / Off

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| Test case #1 | **Switch off 🡪 check light indicator** |
| Description | The shut-off button is pressed, the indicator light turns off, regardless of whether the water is hot… |
| Steps | 1.After the machine has been turned on, we press Power OFF.  2. The indicator light turns off. |
| Expected results | The indicator light turns off, regardless of whether the water is hot… |

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| Test case #2 | **Switch on with no water 🡪 beeping** |
| Description | Switch on with no water, start beeping 10:10 sec… |
| Steps | 1. Swich on the mashine. 2. Start beeping 10:10 sec… |
| Expected results | Start indication that the water container is empty… |

**Test Scenario #3: Water no enough/not hot**

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| Test case #1 | **Water no enough 🡪 success** |
| Description | Start the coffee machine, try to brew a cup of coffee, expect the coffee machine to start beeping to indicate that the water is not enough. |
| Steps | 1. Power on the machine. 2. Put ground coffee blend in the coffee outlet. 3. Wait the coffee machine to start beeping |
| Expected results | The process does not start, a sound indication starts after 10 seconds. |

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| Test case #1 | **Water no hot 🡪 success** |
| Description | Start the coffee machine, try to brew a cup of coffee, hot water indicator no start. |
| Steps | 1. Power on the machine. 2. Put ground coffee blend in the coffee outlet. 3. Wait the hot water indicator to start. |
| Expected results | The process does not start, hot water indicator no start, because the water is cold. |