**Assignment The usefulness of testing - The Testaurant**

A project for a new software solution goes through several phases. Before even a line of code is written, it is first determined what problem or customer demand the new software is supposed to solve. Once this is clear, programming will be started and the code is also tested. Testing happens in several stages of software development and is carried out by different people or organisations. The reason software is tested is risk management and quality control.

Testing is not something that is only done in ICT. Other new products or projects are also subjected to various tests in, for example, the development of consumer products, the construction of buildings, bridges and tunnels, and the production of food.

The following assignment aims to introduce you to some concepts related to software testing and make you understand the usefulness of testing.

1. Read through all the concepts below.

2. Read the text 'The Testaurant'

3. Combine the concepts with the different situations and people in The Testaurant. Use the form on the last page to do this.

**Concepts**

**Finding** - A finding is an observed difference between the expectation or prediction and the actual outcome.

**Bug** - A bug is an error in a computer programme or website that causes it to perform its function not, or not entirely) according to specifications.

**User acceptance test** - The user acceptance test is a test performed by prospective user(s) in an environment as similar as possible to the true production environment, the purpose of which is to demonstrate that the developed system meets the user's needs/requirements.

**Environment-related finding** - A finding that occurs in a specific environment.

**Security Test** - A test to determine the security of a test object. This test often focuses on data security.

**Stakeholders** - stakeholders, individuals or organisations that have an interest in the developed application.

**Stress/load testing** - The stress test measures at what load the performance of the test object will drop dramatically. Load testing checks whether and how the test object continues to perform at normal and maximum expected utilisation. With stress and load testing, you test the performance of a test object.

**System test** - A system test is a test performed by the supplier of the application in a (well-controllable) laboratory environment to demonstrate that the developed system or parts of it meet the functional and non-functional specifications and the technical design.

**Test basis** - The test basis is the information that defines the desired system behaviour.

**Test object** - The (part of the) information system to be tested.

**Test environment** - A test environment is a composition of components such as hardware and software, interfaces, environment data, management tools and processes in which a test is performed.

**Unit test** - The unit test is a test performed by the developer in the development environment to demonstrate that a unit meets the requirements set out in the technical specifications.

**Unit integration test** - The unit integration test is a test performed by the developer in the development environment, the purpose of which is to demonstrate that a logical group of units meets the requirements set out in the technical specifications.

**Usability Test** - A test to determine the userfriendlyness and usability of a test object.

**Unit test** - The unit test is a test performed by the developer in the development environment to demonstrate that a unit meets the requirements set out in the technical specifications.

**Unit integration test** - The unit integration test is a test performed by the developer in the development environment, the purpose of which is to demonstrate that a logical group of units meets the requirements set out in the technical specifications.

**Usability Test** - A test to determine the userfriendlyness and usability of a test object.

Source: T. Koomen, L van der Aalst, B. Broekman en M. Vroon, TMap Next voor resultaatgericht testen, 7de editie ’s-Hertogenbosch: Uitgeverij Tutein Nolthenius, 2010.

https://nl.wikipedia.org/wiki/Belanghebbende\_(organisatie)

https://nl.wikipedia.org/wiki/Bug\_(technologie)

**The Testaurant**

A new restaurant opened in Rotterdam last winter. Business is going well and it is expected that many guests will come again in the summer. As the restaurant has a large outdoor terrace and the weather forecast is good, the restaurant owner expects many salads to be ordered at lunch. There are already a number of salads on the menu, but no caesar salad yet. The restaurant owner asks the chef to come to him for a talk and says he would like a Caesar salad on the menu. The cook asks what the restaurant owner expects from a Caesar salad, what ingredients should it contain? The restaurant owner mentions the following list of ingredients:

Lettuce

Tomatoes

Cucumber

Egg

Croutons

Dressing

The chef also wants to know how big the salad should be and the restaurant owner indicates that it should be a meal salad.

The chef goes into the kitchen to work on the task. He orders the ingredients needed to put the salad together from the supplier. When the ingredients are delivered, he checks them for freshness. He smells the tomatoes and squeezes them, he checks that the lettuce is nice and green and crunchy and he checks the expiry date of the eggs. For the dressing, he needs the following ingredients:

Egg yolks

Mustard

Garlic

Lemon juice

Anchovy paste

Worcestershire sauce

Parmesan cheese

He also ordered these ingredients from the supplier. He adds all the ingredients for the dressing together. For this, he uses a recipe he has looked up, but he also draws on his own expertise and experience. When the dressing is ready, the chef tastes it. He thinks the dressing is not fresh enough yet, so he adds some more lemon juice and tastes it again. Now it does taste good. Next, the chef makes a salad with the lettuce, tomatoes, cucumber, egg, croutons and dressing. Now the chef tastes the salad as a whole with all the ingredients. He also has the salad tasted by other kitchen staff. They note that the taste of egg is not noticeable and that there should be more egg in the salad. The chef would also like the salad to be tried by the serving staff so that he also has an idea of what customers will think of it. He asks the staff to pay particular attention to taste, whether the salad is easy to eat and whether the salad looks appetising. The employees taste the salad and find it tastes good, but the amount of lettuce and the fact that the leaves are large makes them find it difficult to eat. The cook decides to put less lettuce in the salad and tear the leaves.

Now that the salad has been reviewed by several parties, the menu can be adjusted and customers can start ordering the salad in the restaurant or on the terrace. The next day is a sunny day and the restaurant has received many reservations for lunch. The first five salads are ordered and eaten by guests. Then a group of 15 arrives, 10 of whom order the caesar salad. The cook had not taken into account so many orders at once and it takes the kitchen a very long time to serve the salads all at once. The guests are not satisfied and the chef decides to make more preparations in the future to be able to serve more quickly in case of large groups. Meanwhile, on the terrace, a group of four colleagues has sat down, two of whom order the caesar salad. These are served and a few minutes later, the cook hears one of the guests call out, "Waiter, there's a fly in my salad!". The chef is sure the fly was not in it in the kitchen yet, but replaces the dish for the guest anyway.

The next morning, all the restaurant staff are busy preparing for the day when the doorbell rings. It is the inspector from the Food Inspection Department coming to inspect the kitchen. He wants to know what dishes are new on the menu and what ingredients are going into the salad. He checks that all the ingredients are fresh and that they are kept hygienically. He also checks that the kitchen is hygienic so that no unhealthy bacteria can get on the dishes. The inspector is satisfied and approves the kitchen including the salad.

That day, the salad is ordered several times again and the kitchen is better prepared for this. The addition of the new dish to the menu is successful and the restaurant owner is happy with the result.

Fill in the persons and items of the Test restaurant under the different terms below

**Finding**: The taste of the egg is not noticeable in the Caesar salad, there should be more egg to balance out the taste

**Bug:** The fly

**User acceptance test:** The staff tasting the salad each time to make sure it’s as they wish.

**Environment-related finding:** Not enough preparation so they couldn’t serve everyone fast.

**Security Test:** Making sure the kitchen is safe and clean to use.

**Stakeholders:** The owner of the restaurant.

**Stress/load testing:** Test how much salad they can make in x time so they can serve x people.

**System test**: Check the entire process of salad making.

**Test basis:** The recipe and the ingredients provided by the owner

**Test object**: The salad?

**Test environment**: The kitchen, the dining area

**Unit test**: Checking the quality of the ingredients

**Unit integration test**: Making sure every ingredient has a purpose and that they work together

**Usability Test**: If the end result is good and meets expectations. If it’s a good salad.