# TMap
# Lab Book

 

## Document Revision History

| Date | Revision No. | Author | Summary of Changes |
|---|---|---|---|
| JUNE 2016 | 1.0 | Radhika M | Post Integration Lab Book Creation |

 

# Table of Contents

*Document Revision History* 2
*Lab 1. Pairwise Testing* 4
*What is missing if Pair wise testing is applied?* 4
*1.2 For a selection function, three parameters play a role and of every parameter, there are 2 equivalence classes that must be tested:* 4
*1.3Study the parameters and equivalence classes below* 5
*Lab 2. Data Combination Test* 6
*2.1 Make a test design* 7
*2.2 Make a test design, up until physical test cases for testing the screen "your wishes" according to data combination testing technique.* 8
*Lab 3. Process Cycle Test* 9
*3.1 Create a process flow diagram for the withdrawal process.* 9
*3.2 Prepare the Path combinations for test depth level 2.* 9
*3.3 Prepare logical test cases. (Paths)* 9
*Lab 4. Data Cycle Test* 10
*4.1 Refer the CRUD Matrix for WOOF system.* 10

 

## Lab 1. Pairwise Testing

| | |
|---|---|
| Goals | • Learn to apply pairwise Testing |
| Time | 30 Min |

**What is missing if Pair wise testing is applied?**

| Weather | Height | Surface | Weight |
|---|---|---|---|
| Sunny | 0 ft | Pavement | 50 lbs |
| Sunny | 0 ft | Sand | 150 lbs |
| Sunny | 1 ft | Pavement | 100 lbs |
| Sunny | 2 ft | Pavement | 100 lbs |
| Sunny | 2 ft | Sand | 150 lbs |
| Rainy | 0 ft | Sand | 100 lbs |
| Rainy | 1 ft | Sand | 150 lbs |
| Rainy | 2 ft | Pavement | 50 lbs |
| Sunny | 1 ft | Pavement | 150 lbs |
| | | | |

a. Rainy 0ft Pavement 100lbs
b. Rainy 0ft Sand 50lbs
c. Sunny 1ft Sand 50lbs

**1.2 For a selection function, three parameters play a role and of every parameter, there are2 equivalence classes that must be tested:**

Gender: boy; girl

 

Colour of hair: black; blond
Length: 110; 112

| | Gender | Colour of hair | Length |
|---|---|---|---|
| 1 | Boy | Black | 110 |
| 2 | Boy | Blond | 112 |
| 3 | Girl | Black | 112 |
| 4 | - | - | - |

Which combination is missing in the table when the coverage type of pairwise testing is applied?
a. Boy, blond, 110
b. Boy, black, 112
c. Girl, blond, 110
d. Girl, black, 110

**1.3Study the parameters and equivalence classes below**

Country: INDIA, NL, USA

Food: Spicy, Sweet

Type: Breakfast, Lunch, Dinner

Applying Pairwise testing which values must be chosen for the last test case

| Country | Food | Type |
|---|---|---|
| India | Spicy | Breakfast |
| NL | Sweet | Lunch |
| USA | Sweet | Dinner |
| India | Spicy | Lunch |
| NL | Spicy | Dinner |
| USA | Sweet | Breakfast |
| India | Sweet | Dinner |
| NL | Spicy | Breakfast |
| USA | | Lunch |

A. Spicy
B. Sweet
**C.** Both

 

# Lab 2. Data Combination Test

| | |
|---|---|
| **Goals** | • Understand the scenario and apply the Data Combination Test |
| **Time** | 60 min |

### Description of the situation – Income Increase

We input the personal data of an individual in a screen then, System calculate on request the income of this person. Another function of the system determines the Insurance premium that corresponds the calculated income (Not part of this assignment)

### Determine Basic Income

To determine the basic income, we check that the person is 18 or older and has a job at the moment. If these conditions are not met, the basic income is 500 EURO. If the conditions are met, then we check that the person has a diploma and if he/she is older than 21. In that case, basic income is 1000 EURO. Otherwise, 750 EURO.

### Determine Income Increase

When the system has determined the basic income, it checks that the income increase applies to the person.

People who have worked longer than 3 years and there functional level is 6 or higher get 150 EURO extra (On top of the basic income). Is that not the case, then we look at the number of children: Those with two or more kids gets 100 EURO extra. All the rest get no income increase.

Note: it is impossible that a person younger than 18 have worked 3 years or that there functional level is 6 or higher.

### Assignment

 

**2.1 Make a test design, up to logical test cases, to test this calculation, according to data combination test.**

The agreement is that testing will be mid-heavy. That means that for each equivalence class at least one value has to be cover by a test case and that for two or more parameter pair all possible combination have to be tested. The pair of parameter are following:

- Age — Diploma
- No. of year worked — Functional Level

**Description of the situation – Holiday Booking**

Via an internet application a holiday can be booked. On the screen "Your Wishes "the possibilities are displayed: on the basis of the made main choices, on next screen a more detailed plan is shown, one or more concrete possibilities are looked at and possibly a holiday is booked after that.

This assignment concerns screens "Your Wishes". By means of drop down list on this Screen choices are made. From which different options are chosen.

Initially there are two dropdown list on the screen. In the first of the two lists choices can be made for destination Netherlands and Europe. By means of second list choices are made as far as the duration of holiday is concerned: one two or three weeks.

Once the selection is made in this list, the following choice list appears depending on the first two selections: one list for choosing between campaign and hotel, one list for the comfort level (Normal orLuxurious) and one list for the type transport (car, train or flight).

For a duration of three week only' campaign can be chosen, since the travel agent does not offer holiday of three week while staying in the hotel.

For accommodation in Netherland the travel agent only offers Car vacation.

If chosen for hotel then another list of choices is made for us. With this a choice is made for one or two bed room apartments.

 

If all choices are made, then a (Potential) customer can keep on clicking by means of button show result, to the next screen on which all possible holidays are shown that meet the initial criteria. This next screen is out of scope for this test.

**Assignment**

**2.2 Make a test design, up until physical test cases for testing the screen “your wishes” according to data combination testing technique.**

Invalid input does not have to be tested. For that a separate 'syntactic test’ is executed.
Testing should be done on average depth. The concrete demands are

- All possible combination of accommodation and comforts ought to be tested
- All possible combination of transport and destination ought to be tested

 

## Lab 3. Process Cycle Test

| | |
|---|---|
| **Goals** | • Understand the Scenario and apply Process Cycle Test |
| **Time** | 30 Min |

**Withdrawal of money from Bank.**

**Specifications:**

A lady 1.64m of height with dark hair (which is not her original hair) wants to withdraw money from her bank account. She uses her PIN pass on which she has a picture of her husband imprinted. She has a Cirrus pass, the only one that the machine accepts. She is not exactly sure about her Pin code so she hopes she remembered it correctly. She is getting old and forgetful. After 3 false attempts her pass will be blocked. She has a limit on her account of 1000 Euros. She can select to have a transaction ticket printed. After taking out the card and after that the money she can take out the transaction ticket.

Assignment:

**3.1 Create a process flow diagram for the withdrawal process.**

**3.2 Prepare the Path combinations for test depth level 2.**

**3.3 Prepare logical test cases. (Paths)**

 

# Lab 4. Data Cycle Test

| | |
|---|---|
| **Goals** | • Learn to apply Data Cycle Test |
| **Time** | 30 Min |

### 4.1 Refer the CRUD Matrix for WOOF system.

The Integrity Rules are also extracted from functional document for the assignment purpose.
Every Action (C, U, D) has to be followed by 2 checks (“R”)

Prepare the Logical Test case referring the CRUD Matrix and integrity rules:

CRUD Matrix WOOF System:

| Function/Entry | CITIZEN | REGISTER | AGE CATEGORY | FACTOR | TARIFF |
|---|---|---|---|---|---|
| Add personal Data | CR | | | | |
| Modify Personal Data | RU | | | | |
| View Personal Data | R | | | | |
| Approve/ Delete Personal Data | RUD | R | | | |
| Create/ Print Tax assessment Calculate Tax Amount | R | R | R* | R* | R* |
| Creating Tax\Register Data | | C | | | |
| | | | | | |
| Add Factor Data | | | R | CR | |
| Modify Factor Data | | | R | RU | |
| View Factor Data | | | | R | |
| Approve/Delete | | | | RUD | |

 

| | | | | | |
|---|---|---|---|---|---|
| Factor Data | | | | | |
| Report Factor Data | | | | R | |
| | | | | | |
| Add age group/Tariff | | | CR | | CR |
| Modify age group/tariff | | | RU | | RU |
| View age group/tariff | | | R | | R |
| Approve/ delete age group/tariff | | | RUD | R | RUD |
| Report Base Data | | | R | R | R |
| | | | | | |
| Report Tax Register | R | R | | | |
| Delete Tax Register | R | RD | | | |

*Because of 'Calculate tax amount'

Integrity Rules:

I1: A CITIZEN cannot be deleted as long as he has an entry in REGISTER.
I2: An AGE CATEGORY cannot be deleted as long as it has entry in FACTOR.
I3: A TARIFF cannot be deleted as long as it has entry in FACTOR.

CRUD Matrix:

| Entities > Function | Customer Type | Short Description | Long Description |
|---|---|---|---|
| Add Format Type | C | C | C |
| Modify Format Type | R | R, U | R, U |
| View Format Type | R | R | R |
| Delete Format Type | R, D | | |

Logical Test Cases:

Add Format Type — C — Add customer type
View format type — R— Read customer type

 

Add Format Type — C — Add short description
View format type — R — Read short description
Add Format Type — C — Add long description
View format type — R — Read long description
Modify format type — U — Update short description
View format type — R— Read short description
Modify format type — U — Update Long description
View format type — R — Read long description
Delete format type — D — Customer type cannot be deleted (IR)
View format type — R — Read Customer type

Name format — D — Delete Name format
Delete format type — D — Customer type deleted
View format type — R — Read Customer type — Deleted
View format type — R — Read short description — Deleted
View format type — R — Read long description - Deleted

 