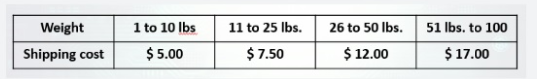
**B**oundary **V**alue **A**nalysis, **E**quivalence **P**artitioning and

# **BVA**

## Exercise 1

You are testing a scale system that determines shipping rates for a regional web-based auto parts distributor. Due to regulations, shipments cannot exceed 100 lbs. You want to include boundary value analysis as part of your black-box test design. Which values you should test?



**Solution:**

0,1,10,11,25,26,50,51,100,101

## Exercise 2

Postal rates for ‘light letters’ are 25p up to 10g, 35p up to 50g plus an extra 10p for each additional 25g up to 100g. Which test inputs (in grams) would be selected using boundary value analysis?

**Solution: Boundary value**

10,11,50,51,75,76,100,101

## Exercise 3:

If you are T-Mobile customer with package “Standard package”, for voice calls you make you have the possibility to pay different charges per minute in different periods of the day. When you make calls in period from 08:00:00 in the morning until 18:30:00 in the afternoon ('the rush hour'), you pay charge 0.1305 euro per minute plus 0.08333-euro startup fee (startup fee is fixed amount applied to every call regardless of the duration). You will pay same startup fee with cheaper prices 0.0764 euro per minute if you make calls in period 18:30:00 – 00:00:00 and period 00:00:00 – 08:00:00

**Solution:**

(08:00:00 – 18:29:59) – 0,1305 + 0.08333

(18:30:00-07:59:59) – 0,08333 + 0.0764

Треба да се тестираат (7:59:59, 08:00:00 I 18:29:59, 18:30:00)

# EP

## Exercise 1

In a system designed to work out the tax to be paid: An employee has £4000 of salary tax free. The next £1500 is taxed at 10% the next £28000 is taxed at 22%. Any further amount is taxed at 40% Define the valid and invalid partitions.

**Solution:**

(- ∞ -0) invalid

(0-4000) valid

(4001-5500) – 10% tax valid p

(5501-33500) –22%tax valid p

33501 above – 40% valid p

## Exercise 2

In a program statement that accepts only one choice from among 10 possible choices, numbered 1 through 10 define the valid partition.

**Solution:**

All whithin 1 to 10 is a valid partition

## Exercise 3

If you are T-Mobile customer with package “Standard package”, for voice calls you make you have the possibility to pay different charges per minute in different periods of the day. When you make calls in period from 08:00:00 in the morning until 18:30:00 in the afternoon ('the rush hour'), you pay charge 0.1305 euro per minute plus 0.08333-euro startup fee (startup fee is fixed amount applied to every call regardless of the duration). You will pay same startup fee with cheaper prices 0.0764 euro per minute if you make calls in period 18:30:00 – 00:00:00 and period 00:00:00 – 08:00:00

**Solution:**

(08:00:00 – 18:29:59) – 0,1305 plus 0.08333 valid

(18:30:00-07:59:59) – 0,08333 + 0.0764 valid

# **DT**

## Exercise 1 – Upload Form

Consider a dialogue box which will ask the user to upload photo with certain conditions like:

* You can upload only '.jpg' format image
* File size less than 32kb
* Resolution of image 137\*177.

If any of the conditions fails the system will throw corresponding error message stating the issue and if all conditions are met photo will be updated successfully.

**Solution:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | jpg | jpg | jpg | jpg | Not.jpg | Not.jpg | Not.jpg | Not jpg |
| size | Less than 32kb | Less than 32kb | More then 32 | More then 32 | Less than 32 | Less than 32 | More then 32 | More then 32 |
| resolution | 137\*177 | Not 137\*177 | 137\*177 | Not 137\*177 | 137\*177 | Not137\*177 | 137\*177 | Not 137\*177 |
|  | Photo updated successfully | error | error | error | error | error | error | error |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| File Format | Y | Y | Y | Y | N | N | N | N |
| File Size | Y | Y | N | N | Y | Y | N | N |
| Resoulution | Y | N | Y | N | Y | N | Y | N |
| Result | Photo updated successfully | Not correct resolution | Photo size not 32 kb | Photo size not 32 kb and not correct resolution | Photo not jpg file format | Not jpg file format and not correct res | Photo not jpg file format and not 32 kb | Photo not jpg, not 32 kb and not correct res |

## Exercise 2 – Billing Cycle of Telecom Operator

Within billing system, a product sold to a customer can have following type of product charges:

* Activation Charge (**AC**) – AC is applied on the bill for the month when product is purchased;
* Monthly Recurring Charge (**MRC**) – MRC is applied every month after the month when product was sold;
* Cancelation Charge (**CC**) – CC is applied on the bill on the month when product was canceled.

Each of the charges can be zero or nonzero. During monthly billing process, invoice is produced for the customer where total product charge is calculated as a sum of the three charge types (whatever charge applicable for particular month) Depending on purchase or cancelation date of the product different total product charge is applied for the customer.

**Solution:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1st month | 1st month | 2nd month or 3rd … | Last month |
| AC | **Y** | **Y** | **N** | **N** |
| MRC | **N** | **N** | **Y** | **Y** |
| CC | **N** | **Y** | **N** | **Y** |
| Invoice charge | **AC** | **AC + CC** | **MRC** | **CC + MRC** |