Boolean addNewProduct(Product p) { … }

**Category partition design test**

Primary function: Function that adds a new product to the post office. This method should return true under these conditions:

* if the product is not already in the post office or in other words if the product is unique in the post office`s inventory;
* if the post office has available space in the inventory;
* if the product`s price is positive
* if the unity of the product is positive

Otherwise it returns false and has no effect in the post office.

Inputs: Product p to be added (p.name, p.price, p.currentquantity), PostOffice postoffice in cause

Output: Boolean value (result)

|  |  |  |
| --- | --- | --- |
| Variable | Category | Choice |
| p.name | Unique | p.name = some name not in postoffice.products |
|  | Not unique | p.name = some name in postoffice.products |
|  |  |  |
| p.price | Positive | p.price = 0, some price >= 0 |
|  | Negative | p.price = some price < 0 |
|  |  |  |
| p.currentquantity | Positive | p.currentquantity = 0, some price >= 0 |
|  | Negative | p.currentquantity = some price < 0 |
|  |  |  |
| postoffice | With space (size < Max\*) | Size<Max\* |
|  | Full (size == Max\*) | Size=Max\* |

\*2<=Max<=20