*1. The application allows a student to calculate his letter grade on the base on the grade out of 100 according to the rule:*

*The letter grade is A if the grade is not less than 88. If the grade is at least 80, then the letter grade is B. Letter C corresponds to at least 71, letter D – at least 62. Grade 50 is enough to be graded at E. All grades less than 50 correspond to F except of that less than 26, which is corresponds to FX letter grade.*

*Apply the EP and BVA techniques and specify test items in a table.*

|  |  |  |  |
| --- | --- | --- | --- |
| Equivalence Class | Test value EP | Boundary Values | |
| V | NV |
| A – 88-100 | 95 | 87,89,99 | 101 |
| B – 80-87 | 85 | 79,81,86,88 | - |
| C – 71-79 | 75 | 70,72,78,80 | - |
| D – 62-70 | 65 | 61,63,89,71 | - |
| E – 50-61 | 55 | 49,51,60,62 | - |
| F – 26-49 | 45 | 25,27,48,50 | - |
| FX – 1-25 | 15 | 2,24,26 | 0 |

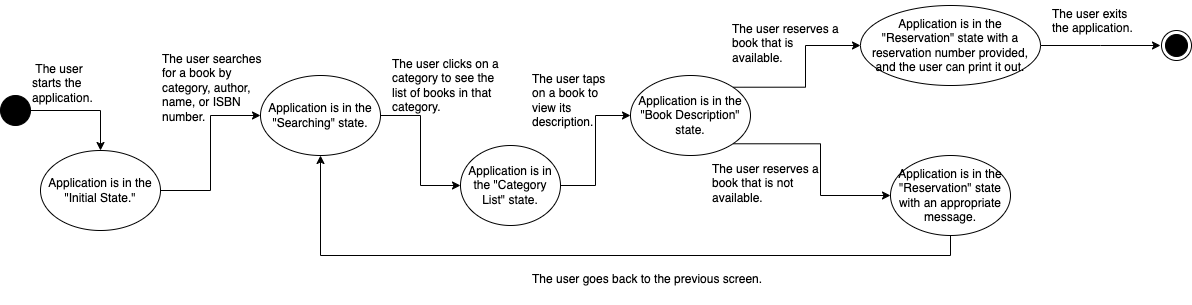
*2. The application allows a passenger to calculate the price of a ticket according to the rule: Ticket price is calculated as a base price decreased by a discount. The discount in percents is calculated as follows. If a passenger is registered on the site, he gets 5% discount. If he is takes a two-way ticket, the discount is 10%. If he takes two or more tickets, he gets additional 3% discount.*

*Apply the decision table technique and specify test items in a separate table.*

|  |  |  |  |
| --- | --- | --- | --- |
| Condition 1: Passenger Registered | Condition 2: Ticket Type (One-way/Two-way) | Condition 3: Number of Tickets | Action: Discount Calculation |
| Yes | One-way | 1 | 5% discount |
| Yes | One-way | 2 or more | 8% discount (5% + 3%) |
| Yes | Two-way | 1 | 10% discount |
| Yes | Two-way | 2 or more | 13% discount (10% + 3%) |
| No | One-way | 1 | 0% discount (no discount) |
| No | One-way | 2 or more | 3% discount |
| No | Two-way | 1 | 5% discount |
| No | Two-way | 2 or more | 8% discount (5% + 3%) |

*3. The application on a library terminal allows a user to find a book by various criteria (category, Author, name, ISBN number). Also there is a possibility to click on a category and see the list of books in this category. In both cases, a user can tap on the book and see the description of this book. On that page, he can reserve this book and receive a reservation number and print it out in case if the book is available, or, in other case, he gets appropriate message.*

*Apply the state-transition technique and specify the test scenarios.*

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