

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.

