Pryshchepa Vladyslav, IP-11
Task 5
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.

Invalid	FX	F	E	D	C	B	A	Invalid
<1	1 - 25	26 - 49	50 - 61	62 - 70	71 - 79	80 - 87	88 - 100	>100

EP technique:

Test Case ID	Input (Grade)	Expected Output (Letter Grade)
1	-1	Error message "Invalid input"
2	5	FX
3	33	F
4	54	E
5	67	D
6	72	C
7	85	B
8	94	A
9	103	Error message "Invalid input"

BVA technique:

Test Case ID	Input (Grade)	Expected Output (Letter Grade)
1	0	Error message "Invalid input"
2	1	FX
3	2	FX
4	25	FX
5	26	F
6	27	F
7	49	F
8	50	E
9	51	E
10	61	E
11	62	D
12	63	D
13	70	D
14	71	C

15	72	C
16	79	C
17	80	B
18	81	B
19	87	B
20	88	A
21	89	A
22	99	A
23	100	A
24	101	Error message "Invalid input"

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.

Registered on site 5%	T	T	T	T	F	F	F	F
Two-way ticket 10%	T	T	F	F	T	T	F	F
2 or more tickets +3%	T	F	T	F	T	F	T	F
Total discount	13%	10%	8%	5%	13%	10%	3%	0%

1	The passenger is not registered on the site, does not buy a two-way ticket and does not buy two or more tickets.	Discount 0%
2	The passenger is not registered on the site, does not buy a two-way ticket and buys two or more tickets.	Discount 3%
3	The passenger is not registered on the site, buys a two-way ticket and does not buy two or more tickets.	Discount 10%
4	The passenger is not registered on the site, buys a two-way ticket and buys two or more tickets.	Discount 13%
5	The passenger is registered on the site, does not buy a two-way ticket and does not buy two or more tickets.	Discount 5%
6	The passenger is registered on the site, does not buy a two-way ticket and buys two or more tickets.	Discount 8%
7	The passenger is registered on the site, buys a two-way ticket and does not buy two or more tickets.	Discount 10%

8	The passenger is registered on the site, buys a two-way ticket and buys two or more tickets.	Discount 13%

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.