Equivalence Partitioning

The shop has a special offer for people of age between 18 and 60. Here we can highlight next classes:
- Numbers <= 17
- Numbers >=60
- Numbers between 17 and 60
- Non-integer number
- Negative number
- Letters
- None value

Equivalence Partitioning			
ID	Feature to be tested	Steps	Expected result
1	Enter value <= 17	1.Input 17 into field	Error message is shown
2	Enter value 18	1.Input 18 into field	Accept message is shown
3	Enter value 59	1.Input 59 into field	Accept message is shown
4	Enter value <= 60	1.Input 60 into field	Error message is shown
5	Enter non-integer value 37,1	1.Input 37,1 into field	Error message is shown
6	Enter letters	1.Input abc into field	Error message is shown
7	Don't enter any value	1.Don't enter any value	Error message is shown
8	Enter negative value	1.Input -4 into field	Error message is shown

Boundary Values

According to this task we can highlight and test next boundary values:
- Number 17
- Number 18
- Number 19
- Number 59
- Number 60
- Number 61

Boundary value		
ID	Feature to be tested	Expected result
1	Enter value 17	Error message is shown
2	Enter value 18	Accept message is shown
3	Enter value 19	Accept message is shown
4	Enter value 59	Accept message is shown
5	Enter value 60	Error message is shown
6	Enter value 61	Error message is shown

Decision Table

A shop has a discount system for customers. There are conditions and discounts that can be received by customers. They must meet the following conditions:

- Discounts are available only to customers who made their first purchase at least 1 year ago.
- All members of the loyalty program have a 50 percent discount on their birthday.
- If the product is re-ordered by the same customer after the return, no discount is applied.
- When paying with a MasterCard, all customers receive a 10% discount.
- Discounts do not add up.

Conditions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Years	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
Return Order	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N
BirthdayDate	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N	Y	Y	N	N
MasterCard	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Actions	0%				50%		10%	0%	0%							

Conditions	1	5	7	8	9
Years	Y	Y	Y	Y	N
Return Order	Y	N	N	N	Y
BirthdayDate	Y	Y	N	N	Y
MasterCard	Y	Y	Y	N	Y
Actions	0%	50%	10%	0%	0%

Pairwise testing

We should determine the required number of tests in order to verify the operation of the application on the main mobile operating systems using different network connections and display orientations.

ID	OS	Network connections	Screen orientation
1	Android	Wi-fi	Portrait
2	Android	3G	Landscape
3	iOS	4G	Portrait
4	iOS	Wi-fi	Landscape
5	iOS	3G	Landscape
6	Windows	Wi-fi	Portrait
7	Windows	3G	Landscape
8	Windows	3G	Portrait
9	Windows	4G	Landscape
10	Android	4G	Portrait
11	Android	Wi-fi	Landscape

Use-case Diagram

Use-case diagrams are based on user stories. User Stories:

- As a user, I want to be able to register on a forum to get access to unpaid features, such as posts, blogs, and groups by interest after logging into the system.
- As a user, I want to be able to log in to the system.
- As a user, I want to be able to get access to paid content such as closed groups by interest and blogs of professionals after a successful subscription.
- As a user, I want to be able to cancel my subscription.
- As a user, I want to be able to log out of the system.
- As an administrator, I want to be able to approve users' registration.
- As an administrator, I want to be able to close user accounts.
- As an administrator, I want to be able to reopen the user account.
- As an administrator, I want to be able to temporarily ban users from the forum.
- As an administrator, I want to be able to permanently ban users from the forum.
- As an administrator, I want to be able to restrict users from writing posts or commenting on anything on the forum.
- As an administrator, I want to be able to give user moderator rights.