1. Equivalence partitioning and Boundary value analysis

In a system designed to work out the tax to be paid: An employee has $1000 of salary tax free. The next $500 is taxed at 10%. The next $4000 is taxed at 22%. Any further amount is taxed by 40%. Salary cannot be larger than $6000.

Equivalence Partitioning:

Invalid	Valid for 10%	Valid for 22%	Valid for 40%	Invalid
<=1000$	1001-1500$	1501-5500$	5501-6000$	>=6000$
600	1200	3300	5700	6100

Boundary Values:

Invalid	Valid for 10%	Valid for 22%	Valid for 40%	Invalid
<=1000$	1001-1500$	1501-5500$	5501-6000$	>=6000$
0 1000	1001 1500	1501 5500	5501 6000	6001

2. Decision tables

You take a loan in a bank. The bank gives you loan application, where you can enter the amount of the monthly re-payment or the number of years you want to take to pay it back (the term of the loan). You should infill only one of the proposed fields. If you enter both, then you will get an error message.

Causes (Inputs)	R1	R2	R3	R4
amount of the monthly re-payment field	Y	N	Y	N
the number of years field	N	Y	Y	N
		Effects (Outputs)		
Success	+	+	-	-
Error	-	-	+	+

1) Enter amount of the monthly re-payment
2) Enter the number of years
3) Fill both fields
4) No fields filled

3. State transition

Customer chooses Arabica coffee from coffee machine. He selects specific sort of coffee (in this case Arabica), and enters money. If not enough money is entered, then machine will ask to enter more. If amount of money is ok, then machine will start doing coffee. If Arabica coffee is available, then customer will get coffee and his change in a minute. If there is no selected sort of coffee, then customer will get proper message and his money back.