SPECIFICATION BASED TESTING TECHNIQUES EXERCISES SOLUTIONS

DECISION TABLES

EXERCISE: LEAP YEARS

Make a decision table for leap years

Leap year: Most years that are evenly divisible by 4 are leap years.
An exception to this rule is, that years that are evenly divisible by 100 are not leap years, unless they are also evenly divisible by 400, in which case they are leap years.

Conditions								
Divisible by 4	Y	Y	Y	Y	N	N	N	N
Divisible by 100	Y	Y	N	N	Y	Y	N	N
Divisible by 400	Y	N	Y	N	Y	N	Y	N
Actions								
Leap Year	X			X				
Not Leap Year		X						X
Impossible			X		X	X	X	

Conditions								
Divisible by 4	Y	Y	Y	Y	N	N	N	N
Divisible by 100	Y	Y	N	N	Y	Y	N	N
Divisible by 400	Y	N	Y	N	Y	N	Y	N
Actions								
	Leap Year	Not Leap Year	Impossible	Leap Year	Impossible	Impossible	Impossible	Not Leap Year

EXERCISE: CREDIT CARD DISCOUNT

When a customer is getting a credit card, the customer will then receive a discount percentage, based on being a new or an existing customer and having a loyalty card or a coupon

- If you are a new customer opening a credit card account, you will get a 15% discount on all your purchases today
- If you are an existing customer and you hold a loyalty card, you get a 10% discount
- If you have a coupon, you can get 20% off today (but it can't be used with the 'new customer' discount)

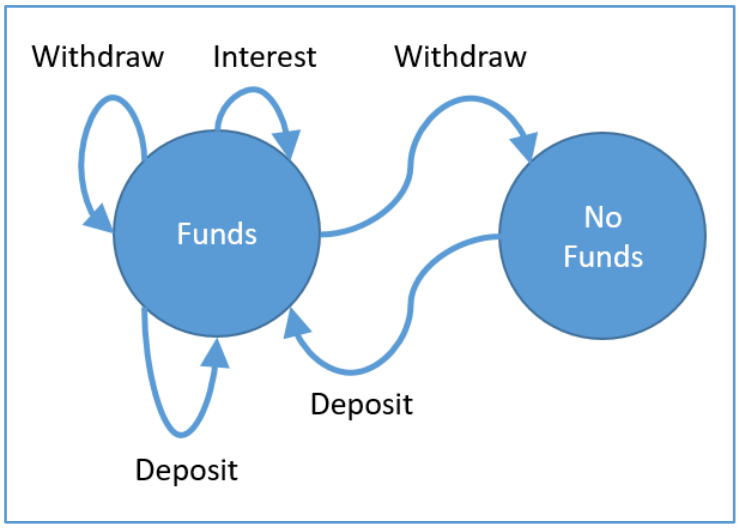
1. Create a decision table for credit card discount conditions and actions

Conditions								
New customer	T	T	T	T	F	F	F	F
Loyalty card	T	T	F	F	T	T	F	F
Coupon	T	F	T	F	T	F	T	F
Actions								
Discount	X	X	20	15	30	10	20	0

STATE TRANSITION MODEL

EXERCISE: ACCOUNT DEPOSIT WITHDRAW INTEREST

Create a state transition model for Account
Implement Account class with interest, deposit and withdraw methods
Create tests that cover multiple states and transitions



States: Funds / NoFunds
Transitions: Deposit Withdraw Interest
0 Switch coverage / 1 Switch coverage