

EQUIVALENCE PARTITIONING

1. Make equivalence classes for the input variable for this method that accepts the numbers 1 - 1000: `public boolean isEven(int n)`

- a) 3 possible equivalence partitions exist:
- i. Below 1
 - ii. 1 to 1000 range
 - iii. Above 1000

Equivalence Classes (parameter int n)	public boolean isEven(int n)
$n < 1$	Invalid
$0 < n < 1001$	Valid
$1000 < n$	Invalid

2. Make equivalence classes for an input variable that represents a mortgage applicant's salary. The valid range is \$1,000 pr. month to \$75,000 pr. month

- a) 3 possible equivalence partitions exist:
- i. Below 1000
 - ii. Between 1000 and 75000
 - iii. Above 75000

Equivalence Classes (parameter s)	
$s < 1000$	Invalid
$1000 \leq s \leq 75000$	Valid
$75000 < s$	Invalid

3. Make equivalence classes for the input variables for this method: `public static int getNumDaysinMonth(int month, int year)`

- a) For month 3 equivalence partitions exist:
- i. Below 1
 - ii. Between 1 and 12
 - iii. Above 12
- b) For year 3 equivalence partitions exist (limited by int32 max):
- i. Below -2,147,483,647
 - ii. Between -2,147,483,647 and 2,147,483,647
 - iii. Above 2,147,483,647

Equivalence Classes (parameter m)	getNumDaysinMonth(int month, int year)
$m < 1$	Invalid
$0 < m < 13$	Valid
$12 < m$	Invalid
Equivalence Classes (parameter y)	getNumDaysinMonth(int month, int year)
$y < -2,147,483,647$	Invalid
$-2,147,483,647 \leq y \leq 2,147,483,647$	Valid
$2,147,483,647 < y$	Invalid

BOUNDARY VALUE ANALYSIS

1. Do boundary value analysis for equivalence partitioning exercise 1
2. Do boundary value analysis for equivalence partitioning exercise 2
3. Do boundary value analysis for equivalence partitioning exercise 3

Exercise	Invalid	Valid			Invalid
1	0	1	500	1000	1001
2	999	1000	37000	75000	75001
3	-2,147,483,648	-2,147,483,647	0	2,147,483,647	2,147,483,648

DECISION TABLES

1. Make a decision table for the following business case: No charges are reimbursed (DK: refunderet) to a patient until the deductible (DK: selvrisiko) has been met. After the deductible has been met, reimburse 50% for Doctor's Office visits or 80% for Hospital visits.
2. 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.

DECISION TABLES									
Deductible business case									
Condition									
Doctor office visit deductible met	t	t	f	f					
Hospital visit deductible met	t	f	t	f					
Action									
50% reimburse	y	y							
80% reimburse	y		y						
no reimburse				y					
Leap year business case									
Condition									
Year is divisible by 4	t	t	t	t	f	f	f	f	
Year is divisible by 4 and 100	t	t	f	f	t	t	f	f	
Year is divisible by 100 and 400	t	f	t	f	t	f	t	f	
Action									
Year is a leap year	y			y					
Year is not a leap year		y	y		y	y	y	y	