

# AI1103 : Assignment 2

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Download all python codes from

[https://github.com/Santosh-Dhaladhuli2003/AI1103/blob/main/Assignment%202/assignment\\_2.py](https://github.com/Santosh-Dhaladhuli2003/AI1103/blob/main/Assignment%202/assignment_2.py)

and latex codes from

<https://github.com/Santosh-Dhaladhuli2003/AI1103/blob/main/Assignment%202/Assignment%202.tex>

## 1 GATE EE 2013 QUESTION No. 61

What is the chance that a leap year, selected at random, will contain 53 Saturdays?

(A)  $\frac{2}{7}$  (B)  $\frac{3}{7}$  (C)  $\frac{1}{7}$  (D)  $\frac{5}{7}$

## 2 SOLUTION

There are 52 complete weeks in an year

$$\Rightarrow 52 \times 7 = 364$$

So, the 364 days will definitely have 52 Saturdays.

remaining days = 366 - 364

The 53<sup>rd</sup> Saturday can occur at the remaining 2 days.

$\therefore$  Probability of 53 Saturdays in a leap year =  $\frac{2}{7}$

The correct answer is **Option A**