Syllogistek
Systems Private Limited

Assignment – Day 10

1. Implement Binary search using recursion in a program.

[Marks: 3]

2. Check if the input is a valid integer - Use exception

[Mark: 1]

3. Give a list of weight and value pairs for items and a bag with capacity.

Approach:
Calculate the maximum item value that can be carried in the bag.
Note - Items can be carried in parts/fraction.
Input
==========
Items as (value, weight) pairs
Items = [(60, 10), (100, 20), (120, 30))
capacity = 50;

Output
======
240

[Marks: 4]

4. Consider a sorted sequence of number with following pattern
   2^i × 3^j × 5^k

Approach:
Take input N from the user and output the Nth number in the sequence

[Marks: 5]