264 Ugly Number

Date

Ugly no ⇒ positive integer whose prime factor 2,3 & 5

Ex a) I/P n=10

O/P ⇒ 12

Explⁿ ⇒ [1,2,3,4,5,6,8,9,10,12]

b) I/P ⇒ n=1 Explation ⇒ 1 has no prime factors

O/P ⇒ 1 all of its prime factor limited to 2,3 & 5

Solⁿ

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Class Solution {
public:
int nthUglyNumber(int n) {
 vector <long long> dp(n);
 dp[0] = 1;

 int i2=0, i3=0, i5=0

for(int i=1; i<n; i++){
   long long next2 = dp[i2] *2;
   long long next3 = dp[i3] *3;
   long long next5 = dp[i5] *5;

   long long nextUgly = min({next2, next3, next5});
     dp[i] = nextUgly;

   if (nextUgly == next2)  i2++;
   if (nextUgly == next3)  i3++;
   if (nextUgly == next5   i5++;
}
 return dp[n-1];
};
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