2. Write a C Program to generate first n Ugly Numbers Write a C Program to generate first n Ugly Numbers

Ugly numbers are those number whose prime factors are 2, 3 or 5. From 1 to 15, there are 11 ugly numbers 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15. The numbers 7, 11, 13 are not ugly because they are prime. The number 14 is not ugly because in its prime factor the 7 will come.

**Code:**

# include<stdio.h>

# include<stdlib.h>

int maxDivide(int a, int b)

{

while (a%b == 0)

a = a/b;

return a;

}

int isUgly(int no)

{

no = maxDivide(no, 2);

no = maxDivide(no, 3);

no = maxDivide(no, 5);

return (no == 1)? 1 : 0;

}

int getNthUglyNo(int n)

{

int i = 1;

int count = 1;

while (n > count)

{

i++;

if (isUgly(i))

count++;

}

return i;

}

int main()

{

unsigned no = getNthUglyNo(15);

printf("15th ugly no. is %d ", no);

getchar();

return 0;

}

**Output:**

