30 June

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

# include<stdio.h>

# include<stdlib.h>

/\*This function divides a by greatest divisible

power of b\*/

int maxDivide(int a, int b)

{

while (a%b == 0)

a = a/b;

return a;

}

/\* Function to check if a number is ugly or not \*/

int isUgly(int no)

{

no = maxDivide(no, 2);

no = maxDivide(no, 3);

no = maxDivide(no, 5);

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

}

/\* Function to get the nth ugly number\*/

int getNthUglyNo(int n)

{

int i = 1;

int count = 1; /\* ugly number count \*/

/\*Check for all integers untill ugly count

becomes n\*/

while (n > count)

{

i++;

if (isUgly(i))

count++;

}

return i;

}

/\* Driver program to test above functions \*/

int main()

{

int n,i;

printf("Enter the number: ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

unsigned no = getNthUglyNo(i);

printf("%d ", no);

}

return 0;

}