#include<stdio.h>

#define MAX 500000

void sieveOfErastosthenes(int a[],long long int n)

{

for(long long int i=2;i<n;i++)

{

if(a[i]!=i)

continue;

for(long long int j=i;j<=n;j+=i)

{

if(a[j]==j)

a[j]=i;

}

}

}

int main()

{

int a[MAX];

for(long long int i=0;i<MAX;i++)

{

a[i]=i;

}

sieveOfErastosthenes(a,MAX);

long long int n;

printf("Enter the number\n");

scanf("%ld",&n);

printf("Prime Factorization of %ld:\n",n);

while(n!=0 || n!=1)

{

printf("%ld ",a[n]);

n/=a[n];

if(n==1)

break;

}

}