**More on functions in C Language**

**Assignment – 11**

**1.** **#include<stdio.h>**

**int lcm(int,int);**

**int main()**

**{**

**int a,b,l;**

**printf("ENTER FIRST NO=");**

**scanf("%d",&a);**

**printf("ENTER SECOND NO=");**

**scanf("%d",&b);**

**l=lcm(a,b);**

**printf("LCM OF %d AND %d=%d",a,b,l);**

**return 0;**

**}**

**int lcm(int a,int b)**

**{**

**int l,i,count=0;**

**for(i=1;i<=a && i<=b;++i)**

**{**

**if(a%i==0 && b%i==0)**

**count=i;**

**l=(a\*b)/count;**

**}**

**return l;**

**}**

**2.** **#include <stdio.h>**

**long gcd(long, long);**

**int main() {**

**long x, y, hcf, lcm;**

**printf("Enter two integers\n");**

**scanf("%ld%ld", &x, &y);**

**hcf = gcd(x, y);**

**lcm = (x\*y)/hcf;**

**printf("Greatest common divisor of %ld and %ld = %ld\n", x, y, hcf);**

**printf("Least common multiple of %ld and %ld = %ld\n", x, y, lcm);**

**return 0;**

**}**

**long gcd(long x, long y) {**

**if (x == 0) {**

**return y;**

**}**

**while (y != 0) {**

**if (x > y)**

**x = x - y;**

**else**

**y = y - x;**

**}**

**return x;**

**}**

**3.** **#include<stdio.h>**

**int prime(int);**

**int main()**

**{**

**int a,p;**

**printf("ENTER A NO=");**

**scanf("%d",&a);**

**p=prime(a);**

**if(p==0)**

**printf("NO IS PRIME=%d",a);**

**else**

**printf("NO IS NOT PRIME=%d",a);**

**return 0;**

**}**

**int prime(int a)**

**{**

**int i;**

**for(i=2;i<=a/2;i++)**

**{**

**if(a%i!=0)**

**continue;**

**else**

**return 1;**

**}**

**return 0;**

**}**

**4.** **#include <stdio.h>**

**int prime(int n1);**

**int prime(int n1)**

**{**

**int r;**

**while(1)**

**{**

**n1++;**

**r=0;**

**for(int i=2;i<n1;i++)**

**{**

**if(n1%i==0)**

**r++;**

**}**

**if(r==0)**

**{**

**break;**

**return n1;**

**}**

**}**

**}**

**int main()**

**{**

**int n1;**

**printf("ENTER A NO=");**

**scanf("%d",&n1);**

**printf("NEXT PRIME NO IS=%d",prime(n1));**

**return 0;**

**}**

**5.** **#include <stdio.h>**

**#include<stdbool.h>**

**int Prime(int);**

**int main()**

**{**

**int n ;**

**printf("ENTER VALUR FOR N=");**

**scanf("%d",&n);**

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

**{**

**if (Prime(i))**

**printf("%d ", i);**

**}**

**return 0;**

**}**

**int Prime(int n)**

**{**

**if (n == 1 || n == 0)**

**return false;**

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

**{**

**if (n % i == 0)**

**return false;**

**}**

**return true;**

**}**

**6.** **#include <stdio.h>**

**#include <stdbool.h>**

**int prime(int);**

**int main()**

**{**

**int n1, n2, s;**

**printf("ENTER START INTERVAL FOR PRIME No=");**

**scanf("%d", &n1);**

**printf("ENTER END INTERVAL FOR PRIME No=");**

**scanf("%d", &n2);**

**while (n1 <= n2)**

**{**

**s = prime(n1);**

**if (s)**

**{**

**printf("%d ", n1);**

**}**

**n1++;**

**}**

**return 0;**

**}**

**int prime(int n1)**

**{**

**int r = 0;**

**for (int i = 2; i <= n1; i++)**

**{**

**if (n1 % i == 0)**

**{**

**r++;**

**}**

**}**

**if (r == 1)**

**return 1;**

**else**

**return 0;**

**}**

**7.** **#include <stdio.h>**

**void fibo(int);**

**int main()**

**{ int a;**

**printf("ENTER RANGE=");**

**scanf("%d",&a);**

**Fibo(a);**

**return 0;**

**}**

**void Fibo(int n)**

**{**

**int f1 = 0, f2 = 1;**

**if (n< 1)**

**return 0;**

**printf("%d ", f1);**

**for (int i = 1; i < n; i++) {**

**printf("%d ", f2);**

**int next = f1 + f2;**

**f1 = f2;**

**f2 = next;**

**}**

**}**

**9.** **#include<stdio.h>**

**void sq(int);**

**int main()**

**{**

**int a;**

**printf("ENTER A NO TO KNOW ITS SQUARE=");**

**scanf("%d",&a);**

**sq(a);**

**return 0;**

**}**

**void sq(int a)**

**{**

**int c;**

**c=a\*a;**

**printf("SQUARE OF ENTERED NO IS=%d",c);**

**}**

**10.** **#include<stdio.h>**

**int sumfac(int);**

**int fact(int n)**

**{**

**int i,fact=1;**

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

**fact=fact\*i;**

**return fact;**

**}**

**int main()**

**{**

**int i,sum=0;**

**for(i=1;i<=5;i++)**

**{**

**sum=sum+fact(i)/i;**

**}**

**printf("%d",sum);**

**return 0;**

**}**