Assignment-14: Functions

1. Write a function to calculate the area of a circle. (TSRS)

2. Write a function to calculate simple interest. (TSRS)

3. Write a function to check whether a given number is even or odd. Return 1 if the number is even, otherwise return 0. (TSRS)

4. Write a function to print first N natural numbers (TSRN)

5. Write a function to print first N odd natural numbers. (TSRN)

6. Write a function to calculate the factorial of a number. (TSRS)

7. Write a function to calculate the number of combinations one can make from n items and r selected at a time. (TSRS)

8. Write a function to calculate the number of arrangements one can make from n items and r selected at a time. (TSRS)

9. Write a function to check whether a given number contains a given digit or not.

(TSRS)

10. Write a function to print all prime factors of a given number. For example, if the number is 36 then your result should be 2, 2, 3, 3. (TSRN)

1

#include<stdio.h>

int LCM\_of\_two\_number(int,int);

int main(){

int a,b;

printf("Enter any two number ");

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

printf("%d",LCM\_of\_two\_number(a,b));

return 0;

}

int LCM\_of\_two\_number(int a,int b){

int i;

for(i=a>b?a:b;i<=a\*b;i++)

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

return i;

break;

}

return 0;

}

2

#include<stdio.h>

int HCF\_of\_two\_number(int,int);

int main(){

int a,b;

printf("Enter any two number to find HCF ");

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

printf("%d and %d HCF is %d",a,b,HCF\_of\_two\_number(a,b));

}

int HCF\_of\_two\_number(int a,int b){

int h;

for(h=a<b?a:b;h>1;h--)

if(a%h==0&&b%h==0){

return h;

break;

}

return 0;

}

3

#include<stdio.h>

int is\_prime(int);

int main(){

int n;

printf("Enter any no. to check Prime or Not ");

scanf("%d",&n);

if(is\_prime(n))

printf("Prime");

else

printf("Not prime");

return 0;

}

int is\_prime(int n){

int i;

for(i=2;i<=n-1;i++)

if(n%i==0)

return 0;

return 1;

}

4

#include<stdio.h>

int is\_next\_prime(int);

int main(){

int n;

printf("Enter the any no. to find next prime no. ");

scanf("%d",&n);

printf("%d ",is\_next\_prime(n));

}

int is\_next\_prime(int n){

int x,i;

for(x=n+1;;x++){

for(i=2;i<x;i++){

if(x%i==0)

break;

}

if(i==x)

return i;

}

}

5

#include<stdio.h>

void is\_all\_prime\_no(int);

int main(){

int x;

printf("Enter the of terms ");

scanf("%d",&x);

is\_all\_prime\_no(x);

return 0;

}

void is\_all\_prime\_no(int n){

int l,i;

for(l=2;l<=n;l++){

for(i=2;i<l;i++){

if(l%i==0)

break;

}

if(i==l)

printf("%d ",i);

}

}

6

#include<stdio.h>

void is\_all\_prime(int,int);

int main(){

int l,u;

printf("Enter the starting no.");

scanf("%d",&l);

printf("Enter the ending position no.");

scanf("%d",&u);

is\_all\_prime(l,u);

}

void is\_all\_prime(int l,int u){

int j,i,x;

for(j=l;j<=u;j++){

for(i=2;i<j;i++){

if(j%i==0)

break;

}

if(i==j)

printf("%d ",i);

}

}

7

#include<stdio.h>

void fibonacci(int);

int main(){

int n;

printf("Enter the no. of terms ");

scanf("%d",&n);

fibonacci(n);

}

void fibonacci(int n){

int a=-1,b=1,c,i;

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

c=a+b;

a=b;

b=c;

printf("%d ",c);

}

}