

Assignment - 13

1. #include <stdio.h>
 int sum(int);
 int main()

{

int x, k;
 printf("Enter a number \n");
 scanf("%d", &x);
 k = sum(x);
 printf("Sum is %d", k);
 return 0;

3

int sum(int)
{ int s;
 if (n == 1)
 return 1;
 else
 {
 s = n + sum(n-1);
 return s;

3

3

2. #include <stdio.h>

int sum(int);

int main()

{ int x, k;

printf("Enter a number \n");
 scanf("%d", &x);

```
K = Sum(x);  
printf("Sum is %d", K);  
return 0;
```

3

```
int sum (int n)
```

5

```
int s;  
if (n == 1)  
    return 2;
```

else

{

```
s = 2*n + sum(n-1);  
return s;
```

3

3

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

```
int sum(int);
```

```
int main()
```

6

```
int x, k;
```

```
printf("Enter a Number \n");
```

```
scanf("%d", &x);
```

```
k = sum(x);
```

```
printf("Sum is %d", k);
```

```
return 0;
```

3

int sum (int m)

{

int s;

if (m == 1)

return 1;

else

{

s = (2*m - 1) + sum(m-1);

return s;

}

3

4- #include <stdio.h>

int sum (int);

int main()

{

int x, k;

printf("Enter a number\n");

scanf ("%d", &x);

k = sum(x);

printf ("Sum is %d", k);

return 0;

}

int sum(int n)

5

int s;

if (n == 1)

return 1;

else

{

$s = n * n + \text{sum}(n-1)$;

return s ;

{

}

5 #include <stdio.h>

int sum(int) ;

int main()

{

int x, K ;

printf("Enter a number\n") ;

scanf("%d", &x) ;

K = sum(x) ;

printf("Sum is %d", K) ;

return 0 ;

{

int sum(int m)

{

int s ;

if (m / 10 == 0)

{

return m ;

{

else

{

$s = m \% 10 + \text{sum}(m / 10)$;

return s ;

{

{

6 #include <stdio.h>
int fact (int);
int main ()

S

```
int x, k;  
printf("Enter a number \n");  
scanf("%d", &x);  
k = fact(x);  
printf("Factorial is %d", k);  
return 0;
```

3

int fact (int n).

S

```
int s = 1;  
if (n == 0 || n == 1)  
    return 1;
```

else

S

```
s = n * fact(n-1);  
return s;
```

3

3

8 - #include <stdio.h>
int fib(int);
int main ()

S

```
int, i, n, k;  
printf("Enter a number \n");  
scanf("%d", &n);
```

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

{

```
    k = fib(i);
```

```
    printf("%d", k);
```

}

```
return 0;
```

}

```
int fib(int m)
```

{

```
if(m==1 || m==2)
```

```
    return 1;
```

else

```
    return (fib(m-1) + fib(m-2));
```

}

```
#include <stdio.h>
```

```
int HCF(int, int);
```

```
int main()
```

{

```
int x, y;
```

```
printf("Enter two Numbers\n");
```

```
scanf("%d %d", &x, &y);
```

```
printf("HCF is %d", HCF(x, y));
```

```
return 0;
```

}

```
int HCF(int a, int b)
```

{

```
if(a==b)
```

```
    return a;
```

```
if (b%a == 0)  
    return a;  
if (a%b == 0)  
    return b;  
if (a > b)  
    return (HCF(a%b, b));  
else  
    return (HCF(a, b%a));
```

3