```
Assign ment-13
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O write a recursive function to calculate sun of pirst N natural no.

```
# include < s+dio.4>
     ind surs ( int m);
     int main ()
 of int n;
  prints ("Enter n values"))
 Scart ("1-d", 72);
 printf ("Id", sum(2));
   return 0;
ent sum (int n)
   ent mi;
   u(m>0)
   m= n+ sum (n-1);
```

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return m;

```
write a sursive function to calculate
sun of first N odd natural numbers.
   IT include < s + dio. 1>
       int sun ( it n);
       ent main ()
   prints (" enter n value");
   Scarf ("-1-d", 94)>
  print( " / d", sum(n));
      return 0;
  int sum ( int m)
    U(m>0)
   M=(2*M-1)+ pw.(M-1);
    return M;
```

o write a recursive function to calculate pur of first is even natural no. # include <5+dio.4> ent seurs (int m); int main () it n; prints (" Enter the no")" Scart (" Yd; 81); printt ("/d", sum (")); return 0; ent sum (vit m) it (m > 0) M = 2*n + sum(n-1); return M;

(10) write a recursive function to calculate sum of test quare of first is natural # include 25+dis. 1> ent sum (int m); int main () ent ni printl(" fd", 7") privtt ("Enter n value"); Scar ("1.d", 9n); printf (" /d", sum(n)); return 0; int sur (int m) int my U(n>0) cete M= M*M + MUN(M-1); return m;

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```
@ write a recursive function to calculate
 sur et digits of ai given no.
    # include estelio. 1>
       int sur ( int a);
        int main ()
   of ent ";
   prints (" Enter u value");
  scar (" .f.d", 8m);
   prints (" /-d", sum ("));
      return 0;
   int sum (vit n)
   int m;
    il (m>0)
  ) ME Sum (m/10) + M 1/.10;
   return M;
```

```
write a recursive function to calculate
factorial of a giver so.
     # include es +dio.1>
         ent fort (vt ");
         int main ()
    of int n;
 prints ("Exter " value");
Scart ( 'Id', 9:)?
 prints (" I'd", fact("));
   return 0;
   ent fat ( int ")
    U(m==1)
     return 1;
     return (n-1)*n;
```

write a recursive function to Calculate HCF of two given so. # include cs+did.1> int main () int HOF (int a); inty) ; int main!) int a, b, c; prints (" Enter a and & values"); Scart (" Y.d. Y.d. Ya, FA); put (td of (ard) print(" /d", HCF(a, b)); else \$ c= a; a=b; A=0; print(" /d", HCF(9,8)); returno; ind HCF (int x, int y) if (n/y==0) return y;

terms of fil on acci series. # include 25+did. 6> int fil (int m); ent main() f int n; prints ("arter "value"); scart (' 1.d', 9n); for (wit i = 0; i <= n; i++) print(" 1.d", fib(i)); return 0; int fil (int ") U (M== 0 | M==1) return n; return fib(n-1) + fib(n-2);

return holly, noly);

wrete a recursive function to print a

O write a program inc to count the digits of a given no. using recursion. # include (54 dio. 1) int co(int m); int main () } unt n'; n value"); prints (" Enter ≠n)7 Scar (" 1-d", print (1 d; Co(@x)); returno; int co (int m) u(m==0) return count; return (((n/10),+1)) 10 A Mily to a state of

write a program in c to columbte the power of any no using secursion. # include astolio. h> int power (int, int) int rais () int n, y; privily (" Enter u and y"); scart ("Id Id", 9", 7%); prints ("1.d", power (n,y)); return 0; int power (int base, int emp) id (7==0) return 1; return power (base, emp-1) * sase;