```
1) Aim: puragram to point fibonacci servies
         decumsion.
  Porgoon:
  # include ¿staio.hs
  int fibonacci (intn) &
        if (n <= 1)
    netunn fibonacci (n-1) + fibonacci (n-2);
                                  (0 + hrmony 1 95
  void Ponintfilomacci sonies (int count) &
      foor (int i=0; ix count; i++) {
      posint (" " d", fibonacci (i));
                                 hi) prosofowel of
  int main 17 2
      points (" Enter the number of terms: ");
  int count;
   sconf (" 1/2 d" & count );
      points (" fibonacci series: ");
      point Fibonocciseries (count);
      onelian o;
  Algorithm: (" copyright with sog o mates") White
  2. Define a mecunsive function fibonacci (n) that takes an
  integer in as input and onetworks the nth fiboracci number
 3. The base cases foor the necuosion one:
   * it'n' is o, oretuen o.
  4. otherwise, ne cursively call I faboracci (n-1) and fiboracci (n-
* it 'n' is 1, oreturn 1.
  5. iterate from 0 to 'num-terms-1' and point the Fibonaci nuber
                                             toon index
```

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3) mujes a backen to cuer
   Amstrong on rot using orecrosive function.
   Aim: Poragram to check the given number is
       Amstorang on not using onecupisive
   Paragram:
   #include ¿stdio.hs
   int power cint base, int exponent) &
   #include ( math. h)
      if (exponent ==0)
        evelum base* power (base, exponent - 1);
        metan 1;
   int is Asimstonorg (int num, int assignat num, int num Digits)?
       else
         if (num == 0)
          oretwon confirmation ==0;
      int sum = power ( digit , num Digits) + is Asmstrong (num) to
                   Original Digits)
      onetion sum == conigi ral Num;
    n
                                        a midan-
    ind main () &
   posints (" Enten a positive integen: ");
      scont ("',d", & numbern):
       int numbigits = log 10 (number) +1,7
       if (is Ammstanog (number, number, num Digits))
          points (" ", d is an Asimstonorg number, in" number);
            perint? (" 7,d is not an Asimstoning number, number)
don to metuon o;
```

Algorithm: 2 Define a precupsive function that takes the two argument. the number to be cheked and the number of digit in 3. The base case from the onecrosion is when 'number' 180 +. Add the onesult to the onetwork value of the treatisive call with 'number' divided by 10 and 'num Digits' 5 in the main paragram, take the input number from the 6 calucate the number of digits in the input number 7-call the accumive function is Amstrong, with the input number and the number of digits. 8 compose the enesalt with the configured input number. if they are equal, the number & an Asimilaring number otherwise, it is not. I () = > (one of 11 o => (now) to Input: - X=153 Room working Was ") thing output: 153 is an Asimstrong number. suggest the patent and post tott (des) by asibout account a miles and and have pure the pure of colored and is a equal to a ordinar of asthe are A cycle (0.50 33 600, no biorismosas i simallo + d gd sidicialle 'a and chrismen of

and the present of the energine is when he was said out a

a quetro con distante o

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8. worke a Paragram to find the creb of two numbers
  Ain: - Poragram to find the one of two
  mecunsive factorization.
   numbers. using oneconsive
  Porogramm' - Marine Mill and Marine Marine
                    a this cost of the
  int gcd - onecoursive (int a, intb) &
                highlight restraint - the those withours
      if (b==0)
netion and what mapping when will me
       ve onetion gcd_ oneconsive (b, a1.b);
  else
to by the proback & waters wowers all that the
  int main() & explain of apples of the states
point (" Enter two positive integers.");
      scanf (" 1.d", & num 1, num 2);
      if (num1 <= 0 11 num2 <= 0) {
     point (" Both numbers must be positive integerin");
     oretwin to; produced and est toples
   29.
  Algorithm: 1. stood.
 2. Define a mecunsive function 'gcd (a,b)' that take two
  integers 'a' and b' as input and metuon their GCD
 3 if b is equal to 0, orelion o' as the orch.
 4. otherwise, oreconsively call 'gcd (b, a7.6)' where axb &
  the memoindo when 'a' divisible by b
 5. The base case food the onecursion is when 'b' become
  o, in which case, onetwon 'a'
```

6. Stop.

```
4 write a program to get the largest element on arrival.
# include xstdio-hs
 int find largest (int anorty, int n) &
   "if ( n==0) 8 10 01 100 5000 poor 100th 100
points (" Array & empty - in"); it is to the
  on presonetion - willy a made has egreen more
                   explores most neithern complete
int larget; aorso];
  foor (int i=1; izn; itt) of tol out of ([1] mes)
 if (avoici) > longest) &
      largest = aon [];
                               " lugar" mades a
   neturn largest; per Al diff etc) our store
       int armay [] = {10, 5, 7, 15, 3, 8, 20],
       int size = size of (away) / size of (away [0]);
       int largest_element = findlargest (away, size);
       if largest_ element = find largest (avoig, size);
       if ( longest_ element !=-1) {
         porint ("The largest element in the averay, largester)
```

2 Begin with defining a function 'findleanget' that takes on integer away 'awar' and its size in' as, inpt. s. check if the away is embpty if 'n' is 'o, point an even message and onelum a value indicating an + iterate though the away from the second demand (non [1]) to the last element (and (n-1)) 5. After iterating through the entire armay, larget will contain the langest element. [13 mos stapped] 6. Return 'Longest' aprille aguter Input: an [5] = {16, 14, 29, 17,6} 7. stop. 8 (alon Ja output: largest element is 29 if langest closest that largest county size (6 if (stongest, element !==1) for 2=n -: tugne output: factorial of 5 18 120

```
6 wonite a posseprem to find the Poctouries of a number.
  Aim: Paragram to find the fictionial of a number using one cursion
      using one cunsion
  Paragram !-
   #linclude estdio.hx
  unsigned long long factorial (int n) &
        if (n==0)
          netunn 1;
        onetuon nx factorial (n-1);
       else
      4
  int main () &
      int num;
      unsigned long long fact;
      point " enter a non-negative integer: ");
      scart ("7,d", 2 num);
        if (num co) }
          bould ( " Esouron ")
          oneton 1;
      fact = factorial (num);
      points ( " tactorial of "od = ", lluin", num, fact );
              2. void well function with argument (int num)
    onetwo no;
  Algorithm: - 1. stoot
              3. it num:0 seturn, else seturn from (num) to (n)
               4. NOW Keep int num ()
              5. Assing value s
              6. Point the factorial
               7.66p.
```

support: - stor = "ABCD"

output: - stor = "ABCD"

3 (n fair)

(1-1) 100

```
6 write a progress for to copy one storing to.
 Aim: To Round a Ponagram to copy one storing to
 Arathen using Recounsiion
  Another storing using Recounsion.
 Alogovithm:
 2. use void function copystoling Assign two files source,
  destination to copy the storing from source to
 3. Destination: sounce use the copy stoning ()
 4. int main() use and point the source and storing
 5. stop.
 code :-
 void copystoning ( chan't sounce, chan't destination)
       of ( * somuce = , 10, ) {
           * destination: '10';
         a oction o;
        # destination = * source;
         copystoning ( souncet1, destination+1).
  int main ()
       chan source []: "Hello"
       chan pestination [50];
      copystoning (sounce, destination);
       point ("%s", source)
       posint ("165", destination)
       vietuonin o;
       4
```

```
7 write a Brogram to Reverse the storing using Reccuosion
  Am: To Point the Revense of a storing using Reccursion
   method.
  Algarithm:
 2. Take the wold ( well) function Name Revenue inspect
  ston, int, int
  s. if stoot > = end metion else.
  4. chan temp: ston (stoot); ston (stoot) - stor (end); ston(or
      and call the function Revorse (chan; int, int)
  5. Take the int main () &
  6. Porint the stor.
  7 onetworn the function.
  8. stop.
   CODE: # include (stdio.h)
            # include Lating. h>
      void oneverse (chan* stor, int stort, int end) &
        if (start > = end) &
           onetwon;
       chan temp: ston (stort);
            stor [stant] = stor [end];
            storcend] = temp;
       oneverse (stor, stortti, end-1); 3
         choo oto [] = "hellow woorld";
    int main (78
         oneverse (stor, o, storlen(stor)-1);
         porint ("" s" stor);
               andwar o;
              3
```

" ABCD" Input :ston = output: stor: "OCBA" over the most prints I grilrote kgos 911 93 But 100 320003 3993 torray

Input: - n=10 output: 2,3,5,4. 4900 3200039 3.000/1 noitino Throng with Charley total . 9810 11/1/1/1/1000/00 Denoving

int nun=20; if (find Poilme (num)) posinte (" " al & a Posime number ", num) story bold nothing rodnon suiscussing posint (" " d & not a Posime number", num) Rod " Slobinov netuono; all 1000 of loops & yours uniting nout "1" as large & such mourse nods will be olderwip & a) comon 22007 bons not sout the state output !-17 is posime number (min this) union to (1 semin 11 oss min

(Mos outs

NOTO THE PRICE SON int main () if (is Point (num)) Posime number in ", num); ¿ print ("1.d isa tronds exceptive function when Acept per se bound (,, 194 A vot a bound vompen ru " vom) eve o " Who value and without a 4. Mow, decide the bose condition of the Energy networn of the coop of large 21 whow man sall - 3 miles and i at large it outer men set to a 6 keep calling the furtion successful with the snput :- " malayalam" the tops yellow. output: - sits a pallindonome. Edoubles soulon 15 4 dollars abulant (mun dais) graing &i lood is the states (1== may 4 0== may) 91 : autor folie; (12 mon) 9;

* Sam 1

```
10 write a Program from to check it storing is
 pallindrome on not using Recounsion.
 Aim: a Poragram to check given storing is
   pallindonne an not.
 Algorithm:
 2. if the storing has one on zero chanecters, it is
 3. if the final and last character of the storing
 unequal its not a pallindrome.
 4. Recursily, check if the storing that excludes the
 first and lost charecter is pallindoome.
 s. Stop.
 Program:
 # include 2statio.b)
   bool func (choon * stor, int stord, int end) &
          3 (stood >= end) &
            oretion time;
           4
        if (stor (stool) ; = stor [end]) ;
           metuon false; 4
     vietus furc (stor, stad+1, end-1); }
 int main cos
      chan stor [100];
       earl ("", s") frame;
       int leangth = staten (stan);
    19 ( func (stor, 0, length -1)) }
       portrof(" ",s", ston);
```

posints (" ".s" is not a parlindrome", sto geled to the state of neturno; Jon 100 9 17 ACUS COD SUO LON BLAD and sond tent of mo smosbailing a ton and aspolate atoms that excludes the morehalling 21 retornes to & (has too troops to