Rules

(These are just guidelines for rules, not exact rules)

* Students of College of Engineering, Chengannur are only allowed to participate in this contest
* Coding section consists of debugging and coding.
* Equal amount of points(scores) are allotted to all questions
* Person with maximum point will be awarded …
* Programs can be coded via C or C++.
* C programs should have .c extension and ++ should have .cpp extension
* Programs compiled in turbo c++ or visual cpp are only allowed.
* You have to submit your answer by (date)
* Though you can refer other sources, copying of others codes are discouraged.
* Students having good points will be judged by efficiency of the program

1. Develop a program to find largest and second largest number of a given numbers without using an array. The program takes n number of values and it should find largest number out of n numbers, and it should find second largest too. This largest and second largest number in the given sequence of numbers is printed.

Input: n (number of elements), and each elements

Output: Largest and second largest of the given set of numbers

2. Write a program to print Pascal’s triangle in reverse order. Pascal’s triangle is of the form,

1  
 1 1  
 1 2 1  
 1 3 3 1

The program reads the number of rows to be printed, and then the program should print pascals triangle in reverse order, i.e, the program should have output as,

1 3 3 1  
 1 2 1  
 1 1  
 1

Input:No. of rows

Output: Pascals triangle upside down!

3. Develop a program to find sum of its digits continuously to reach in a single digit number. If given number is a single digit number, print the same number. If the given number is two digit number, these 2 digits are added up to form a new number. If new number is also a 2 digit number, then its digits are added to form another number. This process continues until it reaches a single digit number. Program should return this one digit value

Input: a integer number

Output: Single digit number produced by continuous addition of its digits

4. Write a program to read a sequence of numbers, and print progressive terms in it. i.e, Program reads a sequence of numbers. If a term is smaller than the previous term, it is neglected; otherwise it will be printed as output

Example: Input:7  
 1 3 5 7 2 7 8

Output: 1 3 5 7 7 8

Example 2: 6  
 5 7 2 1 4 5 5 0

Output: 5 7

Input: number of terms and sequence

Output: progressive sequence from given sequence

5. Develop a program to find anagrams of a given word. The program reads a string, and it finds various combination of the letters (anagrams) and prints it.

Input: String

Output: Set of anagrams

6.Develop a program to find perfect squares in given range of numbers. The program reads range of values, and it finds perfect square in the given range of values.

Input: lower range, upper range

Output: List of all perfect squares in given range of numbers

7. Write a program to print ascii value of any given character.

Input: character

Output: Ascii code of given character

8.Write a program to count words in a text file. The program reads file name, and then it counts words in that file.

Input: filename such as “Sample.txt”

Output: Number of words in that file.

9.Mr.A wants to read and print a matrix using pointer to pointer. Help him to correct errors

#include<stdio.h>

#include<conio.h>

void main()

{

int \*\*p,a,i,j,m,n;

p=&a;

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

for(i=0;i<m;i++)

for(j=0;j<n;j++)

scanf("%d",\*p+i+j;

for(i=0;i<m;i++)

for(j=0;j<n;j++)

printf("%d",\*p+i+j);

getch();

}

10. Mr. B wants to read a matrix using goto instructions.. Please help him to do his task

#include<stdio.h>

#include<conio.h>

void main()

{

int a[10][10],i=0,j,m,n;

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

a:

j=0;

b:

scanf("%d",a[i][j]);

if(j<n)

goto a;

if(i<m)

goto b;

for(i=0;i<m;i++)

for(j=0;j<n;j++)

printf("%d",a[i][j]);

getch();

}