Pointer Problem in C

Date:

Problem No-12.1: Write a program in C to add two numbers using pointers.

Source code:

```
#include <stdio.h>
int main()
{
  int fno, sno, *ptr, *qtr, sum,t;

  for(int i=1;i<=3;i++){

  printf(" Input the first number : ");
  scanf("%d", &fno);
  printf(" Input the second  number : ");
  scanf("%d", &sno);

  ptr = &fno;
  qtr = &sno;

  sum = *ptr + *qtr;

  printf(" Case %d: The sum of the entered numbers is - %d\n\n",i,sum);
  }

  return 0;
```

}

Sample INPUT:

2 5

7 8

9 5

Sample OUTPUT:

```
Input the first number : 2
Input the second  number : 5
Case 1: The sum of the entered numbers is - 7

Input the first number : 7
Input the second  number : 8
Case 2: The sum of the entered numbers is - 15

Input the first number : 9
Input the second  number : 5
Case 3: The sum of the entered numbers is - 14


Process returned 0 (0x0)   execution time : 14.178 s
Press any key to continue.
```

Problem no-12.2: Write a program in C to count the number of vowels and consonants in a string using a pointer.

Source code:

```
#include <stdio.h>

int main()

{

   char str1[50];

   char *pt;

   int  ctrV,ctrC;

   for(int i=1;i<=3;i++){

   printf(" Input a string: ");

   fgets(str1, sizeof str1, stdin);

   pt=str1;

   ctrV=ctrC=0;

   while(*pt!='\0')

   {

      if(*pt=='A' ||*pt=='E' ||*pt=='I' ||*pt=='O' ||*pt=='U' ||*pt=='a' ||*pt=='e' ||*pt=='i' ||*pt=='o'
||*pt=='u')

         ctrV++;

      else

         ctrC++; pt++;

   }

   printf(" Number of vowels : %d\n Number of consonants : %d\n",ctrV,ctrC-1);

   }

   return 0;

}
```

Sample INPUT:

Impossible

Unstoppable

Powerful

Sample OUTPUT:

```
Input a string: Impossible
Number of vowels : 4
Number of consonants : 6
Input a string: Unstappable
Number of vowels : 4
Number of consonants : 7
Input a string: Powerful
Number of vowels : 3
Number of consonants : 5

Process returned 0 (0x0)   execution time : 25.307 s
Press any key to continue.
```

Problem No-12.3: Write a program in C to show how a function returning pointer.

Source Code:

```
#include <stdio.h>
int* findLarger(int*, int*);
void main()
{
 int numa=0;
 int numb=0;
 int *result;
            for(int i=1;i<=3;i++){
   printf(" Input the first number : ");
   scanf("%d", &numa);
   printf(" Input the second  number : ");
   scanf("%d", &numb);

 result=findLarger(&numa, &numb);
 printf(" The number %d is larger.  \n\n",*result);
}
}
int* findLarger(int *n1, int *n2)
{
 if(*n1 > *n2)
  return n1;
 else
  return n2;
}
```

Sample INPUT:

6 9

2 9

8 2

Sample OUTPUT:

```
Input the first number : 6
Input the second  number : 9
The number 9 is larger.

Input the first number : 2
Input the second  number : 9
The number 9 is larger.

Input the first number : 8
Input the second  number : 2
The number 8 is larger.


Process returned 28 (0x1C)   execution time : 13.949 s
Press any key to continue.
```