LAB ASSIGNMENT 15

Implement C programs for the following problem statements:

1. Find the Length of String using Pointers.

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

int string_ln(char*);

void main() {
  char str[20];
  int length;

  printf("\nEnter any string : ");
  gets(str);

  length = string_ln(str);
  printf("The length of the given string %s is : %d", str, length);
}

int string_ln(char*p) /* p= &str[0] */
{
  int count = 0;
```

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```
  while (*p != '\0') {
    count++;
    p++;
  }
  return count;
}
```

2. To read array of elements and print the value with the addresses.

```
#include <stdio.h>

int main()
{
   int arr[10];       //declare integer array
   int *pa;           //declare an integer pointer
   int  i;

   pa=&arr[0];        //assign base address of array

   printf("Enter 5 array elements:\n");
   for(i=0;i < 5; i++){
      printf("Enter element %02d: ",i+1);
      scanf("%d",pa+i);   //reading through pointer
   }
```

```
    printf("\nEntered array elements are:");
    printf("\nAddress\t\tValue\n");
    for(i=0;i<5;i++){
        printf("%08X\t%03d\n",(pa+i),*(pa+i));
    }


    return 0;
}
```

3. First string from the given array whose reverse is also present in the same array

Input: str[] = {“hi”,“geeks”, “apple”,“for”,”elppa”,“skeeg”} (geeks is first string having reverse string also)

Output: geeks

4. Create a new string by alternately combining the characters of two halves of the string in reverse.

Input : s = carbohydrates

Output : hsoebtraarcdy

Input : s = sunshine

Output : sennuish

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