Assignment # 5

Pointers

1. What is the difference between static and dynamic allocation of memory. Explain with example.
2. Illustrate the use of this pointer with an example.
3. Differentiate between new and delete operators.
4. Explain self referential structures with example.
5. Differentiate between the following statements :
   (i)   int *ptr=new int(5);   and   int *ptr=new int[5];
6. Explain the relationship between arrays and pointers.
7. Predict the output of the following program :

    (i)
```
#include<iostream.h>
void main()
{
intmyarr[]={5,10,15,20,25};
int *p;
for(p=&myarr[0];p<=&myarr[4];p++)
            cout<<*p<<endl;
}
```

    (ii)
```
#include<iostream.h>
#include<ctype.h>
#include<string.h>
voidnewtext(char string[],int&pos)
{
        char *p=string;
        intlen=strlen(string);
        for(;pos<len-2;pos+=2,p++)
        {
        *(p+pos)=toupper(*(p+pos));
        }
}
void main()
{
        intloc=0;
        char Message[]="What a Show";
        newtext(Message,loc);
        cout<<Message<<'#'<<loc;
}
```

PROGRAMS
(Do all programs using pointers only)

(1) WAP to check whether a string is a palindrome or not.
(2) Write a menu driven program to swap two numbers using Call by Value, Call by reference and pointers.
(3) WAP that has a user defined function taking a string as an argument and finding the length ofthe passed string.