ASSIGNMENT 16

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Q1. Write a program to display sum of an array.

Code:

```c
#include <stdio.h>

int main()
{
    int i, *ptr, sum=0, arr[5]={2,4,6,8,0};
    ptr = arr;

    for(i=0;i<5;i++)
    sum+=*(ptr+i);
    printf("Sum = %d",sum);
    return 0;
}
```

Output:

```
Sum = 20
```

Q2. Write a program to display sum of 2 numbers.

Code:

```c
#include <stdio.h>

int main()
{
    int a,b,sum,*p,*q;
    printf("Enter Number 1: ");
    scanf("%d",&a);
    printf("Enter Number 2: ");
    scanf("%d",&b);

    p=&a;
    q=&b;
    sum= *p + *q;

    printf("Sum of numbers: %d",sum);
    return 0;
}
```

Output:

```
Enter Number 1: 2
Enter Number 2: 4
Sum of numbers: 6
```

Q3. Write a program to swap 2 numbers.

Code:

```c
#include <stdio.h>

int main()
{
    int a,b,*p,*q,temp;

    printf("Enter Number 1: ");
    scanf("%d",&a);
    printf("Enter Number 2: ");
    scanf("%d",&b);

    printf("Before Swapping\na = %d\nb = %d\n", a, b);

    p=&a;
    q=&b;

    temp = *q;
    *q = *p;
    *p = temp;

    printf("After Swapping\na = %d\nb = %d", *p, *q);
    return 0;
}
```

Output:

```
Enter Number 1: 3
Enter Number 2: 5
Before Swapping
a = 3
b = 5
After Swapping
a = 5
b = 3
```

Q4. Write a program to display greater of 2 numbers.
Code:

```c
#include <stdio.h>

int main()
{
    int a, b, *p, *q;

    printf("Enter Number 1: ");
    scanf("%d",&a);
    printf("Enter Number 2: ");
    scanf("%d",&b);

    p = &a;
    q = &b;

    if(*p > *q)
    printf("Maximum number: %d", *p);
    else
    printf("Maximum number: %d", *q);
    return 0;
}
```

Output:

```
Enter Number 1: 5
Enter Number 2: 3
Maximum number: 5
```

Q4. Write a program to display the middle integer.

Code:

```c
#include <stdio.h>

int main()
{
    int data[5], *a, t, i, j;

    for (i = 0; i < 5; ++i)
    {
        printf("Enter number %d: ", i+1);
        scanf("%d", data + i);
    }
    for (i = 0; i < 5; ++i)
    {
        for (j = i + 1; j < 5; ++j)
        {
            if (data[i] > data[j])
            {
                t = data[i];
                data[i] = data[j];
                data[j] = t;
            }
        }
    }
    printf("\nAscending order:\n");
    for (int i = 0; i < 5; ++i)
    {
        printf("%d\t", data[i]);
    }

    a = data;

    printf("\nMiddle Number: %d\n", *(a + 2));
    return 0;
}
```

Output:

```
Enter number 1: 3
Enter number 2: 6
Enter number 3: 5
Enter number 4: 4
Enter number 5: 1

Ascending order:
1       3       4       5       6
Middle Number: 4
```