# Sparse Matrix

## Sparse Matrix Representation (1)

```
#include<stdio.h>
typedef struct
{
        int row, col, val;
}sparse;
void disp(sparse *);

void disp(sparse a[])
{
        printf("row\tcol\tvalue\n");
        for(int i=0;i<=a[0].val;i++)
        {
printf("%d \t %d \t %d\n",a[i].row, a[i].col, a[i].val);
        }
}
```

# Sparse Matrix Representation (2)

```
int main ( )
{
        sparse s[20],d;                         int r,c,v,val;
        printf("Enter the no. of rows:\n");     scanf("%d",&s[0].row);
        printf("Enter the no. of cols:\n");     scanf("%d",&s[0].col);
        printf("Enter the no. of values:\n");   scanf("%d",&s[0].val);

        printf("Enter the elements of the sparse matrix:\n");
        for(int i=1;i<=s[0].val;i++)
        {
                printf("\nrow %d: ", i);          scanf("%d",&s[i].row);
                printf("\ncol %d: ", i);scanf("%d",&s[i].col);
                printf("\nvalue %d: ", i);        scanf("%d",&s[i].val);
        }
        disp(s);
}
```