```
Windows PowerShell
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PS E:\Programming assignments\DS> cd "e:\Programming assignments\DS\" ; if ($?) { gcc exp1ArrayInsertDel.c -o exp1ArrayInsertDel } ; if
($?) { .\exp1ArrayInsertDel }
Enter no. of elements to be stored in array: 5
Enter element no.1: 55
Enter element no.2: 78
Enter element no.3: 98
Enter element no.4: 58
Enter element no.5: 877
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1
Array:  55      78      98      58      877
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 2
Enter the element to add: 5
Enter position where element is to be added: 2
Successfully inserted :)
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1
Array:  55      5       78      98      58      877
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 2
Enter the element to add: 1
Enter position where element is to be added: 1
Successfully inserted :)
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1
Array:  1       55      5       78      98      58      877
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 2
Enter the element to add: 677
Enter position where element is to be added: 8
Successfully inserted :)
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1


Array:  1       55      5       78      98      58      877     677
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 3
Enter position of element is to be deleted: 4
Successfully deleted :)
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1
Array:  1       55      5       98      58      877     677
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 4
Size: 7
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 3
Enter position of element is to be deleted: 1
Successfully deleted :)
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 1
Array:  55      5       98      58      877     677
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 4
Size: 6
1. Display array      2. Insert element in array    3. Delete element from array    4. Show size of array    5. Exit
Your choice: 5
Bye
PS E:\Programming assignments\DS>
```

```c
                break;
            }
            for(int i=size; i>=position; i--){
                array[i] = array[i-1];
            }
            array[position-1]=el;
            size++;
            printf("Successfully inserted :)\n");
        }
        break;
    case 3:
        if(size==0){
            printf("Empty array!\n");
        }
        else{
            printf("Enter position of element is to be deleted: ");
            scanf("%d",&position);
            if(position>size){
                printf("invalid!\n");
                break;
            }
            for(int i=position-1; i<size-1; i++){
                array[i] = array[i+1];
            }
            size--;
            printf("Successfully deleted :)\n");
        }   break;
    case 4:
        printf("Size: %d\n",size);
        break;
    case 5:
        printf("Bye\n");
        break;
    default:
        printf("Invalid choice\n");
        break;
    }
}
}
```

Code :

```c
//Write a program for insertion and deletion of an element in an Array
at given position.
#include<stdio.h>
#define capacity 20
void main(){
    int array[capacity];
    int size, choice;
    int el, position;
    printf("Enter no. of elements to be stored in array: ");
    scanf("%d",&size);
    for(int i=0; i<size; i++){
        printf("Enter element no.%d: ",i+1);
        scanf("%d",&array[i]);
    }
    while (choice!=5)
    {
        printf("1. Display array\t");
        printf("2. Insert element in array\t");
        printf("3. Delete element from array\t");
        printf("4. Show size of array\t");
        printf("5. Exit\n");
        printf("Your choice: ");
        scanf("%d",&choice);
        switch (choice)
        {
        case 1:
            if(size==0){
                printf("Empty array \n");
            }
            else{
                printf("Array:\t");
                for(int i=0; i<size; i++)
                    printf("%d\t",array[i]);
                printf("\n");
            }
            break;
        case 2:
          if(size==capacity-1){
             printf("Array is full!\n");
          }
          else{
              printf("Enter the element to add: ");
              scanf("%d",&el);
              printf("Enter position where element is to be added: ");
              scanf("%d",&position);
              if(position>size+1){
                  printf("invalid position!\n");
```