

//q1)Input values into an array and display them

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

```
void
```

```
main(){int
```

```
arr[5];
```

```
for(int i=0;i<5;i++){
```

```
    printf("Enter the element in array:\n ");
```

```
    scanf("%d",&arr[i]);
```

```
}
```

```
printf("The elements are: ");
```

```
for(int i=0;i<4;i++){
```

```
    printf("%d",arr[i]);
```

```
}
```

```
}
```

Output-

Enter the element in array:

4

Enter the element in array:

8

Enter the element in array:

2

Enter the element in array:

5

Enter the element in array:

1

The elements are: 48251

//q2)Add all the elements of an array

```
#include<stdio.h>

void main(){
    int sum=0,arr[5];
    for(int i=0;i<5;i++){
        printf("Enter the element in array:\n ");
        scanf("%d",&arr[i]);
    }
    printf("The sum is: ");
    for(int i=0;i<5;i++){
        sum+=arr[i];
    }
    printf("%d",sum);
}
```

Output-

Enter the element in array:

4

Enter the element in array:

8

Enter the element in array:

5

Enter the element in array:

2

Enter the element in array:

1

The sum is: 20

//q3)Count the even and odd numbers in a array

```
#define SIZE 10
```

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

```
void main(){
```

```
    int arr[SIZE],i,even=0,odd=0;
```

```
    for(i=0;i<SIZE;i++){
```

```
        printf("Enter the value for arr[%d]: ",i);
```

```
        scanf("%d",&arr[i]);
```

```
        if(arr[i]%2==0){
```

```
            even++;
```

```
        }
```

```
        else{
```

```
            odd++;
```

```
        }
```

```
    }
```

```
    printf("Even Numbers = %d, Odd Number = %d\n",even, odd);
```

```
}
```

Output-

Enter the value for arr[0]: 2

Enter the value for arr[1]: 4

Enter the value for arr[2]: 5

Enter the value for arr[3]: 9

Enter the value for arr[4]: 6

Enter the value for arr[5]: 10

Enter the value for arr[6]: 1

Enter the value for arr[7]: 3

Enter the value for arr[8]: 6

Enter the value for arr[9]: 7

Even Numbers = 5, Odd Number = 5

//q4)Copy the elements of an array to another array

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

```
void main(){
```

```
    int a[5]={1,2,3,4,5};
```

```
    int b[5];
```

```
    for(int
```

```
        i=0;i<5;i++){b[i]=
```

```
        a[i];
```

```
    }
```

```
    printf("The Array b is: ");
```

```
    for(int i=0;i<5;i++){
```

```
        printf("%d ",b[i]);
```

```
    }
```

```
}
```

Ouput-

The Array b is: 1 2 3 4 5

//q5)Find the largest and smallest element in an array

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

```
void main(){
```

```
    int i,j,arr[5]={2,9,7,4,1};
```

```
    int large,small;
```

```
    large=small=arr[0];
```

```
    for(int i=0;i<5;i++){
```

```
        if(arr[i]<small){
```

```
            small=arr[i];
```

```
        }
```

```
        if(arr[i]>large){
```

```
            large=arr[i];
```

```
        }
```

```
    }
```

```
    printf("Smallest = %d , Largest = %d\n",small,large);
```

```
}
```

Output-

Smallest = 1 , Largest = 9

//q6)Reverse the elements of an array

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

```
void main(){
```

```
    int i,j,temp,arr[5]={2,9,7,6,5};
```

```
    for(i=0,j=4;i<j;i++,j--
```

```
        ){temp=arr[i];
```

```
        arr[i]=arr[j];
```

```
        arr[j]=temp;
```

```
    }
```

```
    printf("After reversing the array is: ");
```

```
    for(int i=0;i<5;i++){
```

```
        printf("%d ",arr[i]);
```

```
    }
```

```
    printf("\n");
```

```
}
```

Output-

After reversing the array is: 5 6 7 9 2

//q7)Convert a decimal number to binary number using array

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

```
void
```

```
main(){ int
```

```
arr[100];
```

```
int n, i=0,temp;
```

```
printf("Enter the number in decimal: ");
```

```
scanf("%d",&n);
```

```
while
```

```
    (n!=0){ arr[
```

```
        i]=n%2;
```

```
        n/=2;
```

```
        i++;
```

```
    }
```

```
    i--;
```

```
    printf("The binary equivalent is: ");
```

```
    for(;i>=0;i--){
```

```
        printf("%d",arr[i]);
```

```
    }
```

```
}
```

Output-

Enter the number in decimal: 68

The binary equivalent is: 1000100

```
//q8)Linear Search
#include<stdio.h>

void main()
{
    int arr[100];
    int n, i=0,temp,c;
    printf("ENTER THE NO OF ELEMENTS: ");
    scanf("%d",&n);
    printf("ENTER THE ELEMENT TO BE SEARCHED: ");
    scanf("%d",&temp);
    for(i=0;i<n;i++)
    {
        printf("Enter The Element: ");
        scanf("%d",&arr[i]);
    }
    for(i=0;i<n;i++)
    {
        if(arr[i]==temp)
        {
            printf("NO IS FOUND AT POSTION %d",i+1);
            c=1;
            break;
        }
    }
    if(c==1)
        printf("ELEMENT IS NOT FOUND");
}
```

Output-

ENTER THE NO OF ELEMENTS: 5

ENTER THE ELEMENT TO BE SEARCHED: 2

Enter The Element: 3

Enter The Element: 4

Enter The Element: 5

Enter The Element: 7

Enter The Element: 2

NO IS FOUND AT POSTION 5

H.W Questions

//p1)Insert an element to an array at a position. Position will be given by the user.

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

```
void main()
```

```
{
```

```
    int arr[100];
```

```
    int n, i,p,val;
```

```
    printf("ENTER THE NO OF ELEMENTS: ");
```

```
    scanf("%d",&n);
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        printf("Enter The Element: ");
```

```
        scanf("%d",&arr[i]);
```

```
    }
```

```
    printf("ENTER THE POSITION OF NEW ELEMENTS: ");
```

```
    scanf("%d",&p);
```

```
    printf("ENTER THE ELEMENTS: ");
```

```
    scanf("%d",&val);
```

```
    for(i=n-1;i>=p-1;i--)
```

```
        arr[i+1]=arr[i];
```

```
arr[p-1]= val;
for(i=0;i<n+1;i++)
{
    printf("%d, ",arr[i]);
}
}
```

Output-

ENTER THE NO OF ELEMENTS: 4

Enter The Element: 5

Enter The Element: 6

Enter The Element: 1

Enter The Element: 2

ENTER THE POSITION OF NEW ELEMENTS: 3

ENTER THE ELEMENTS: 9

5, 6, 9, 1, 2

//p2)Delete an element form array

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

```
int main ()
```

```
{
```

```
    int arr[100];
```

```
    int pos, i, num;
```

```
    printf (" \n Enter the number of elements in an array: \n ");
```

```
    scanf (" %d", &num);
```

```
    printf (" \n Enter %d elements in array: \n ", num);
```

```
    for(i=0;i<num;i++){
```

```
        printf("Enter The Element: ");
```

```
        scanf("%d",&arr[i]);
```

```
}  
printf( "The position of the array element to be delete: \n ");  
scanf (" %d", &pos);  
if (pos >= num+1) {  
    printf (" \n Deletion is not possible in the array.");  
}  
else{  
    for (i = pos - 1; i < num -1; i++)  
        {arr[i] = arr[i+1];  
    }  
    printf (" \n The resultant array is: \n");  
    for (i = 0; i< num - 1; i++) {  
        printf (" %d, ", arr[i]);  
    }  
}  
return 0;  
}
```

Output-

Enter the number of elements in an array:

4

Enter 4 elements in array:

Enter The Element: 5

Enter The Element: 2

Enter The Element: 4

Enter The Element: 1

The position of the array element to be delete:

2

The resultant array is:

5, 4, 1

Lab 7(Array)
Abhinav Anand

Section-B16

Roll-22052611