Name:Nandana Pramod
Roll no: 241801180
Exp no:3

Program 1:
```c
#include <stdio.h>
int main()
{
    int n;
    int count=0;
    scanf("%d",&n);
    int arr[]={1000,500,100,50,20,10,5,2,1};
    for (int i=0;i<9;i++)
    {
        if(n>arr[i])
        {
            count+=n/arr[i];
            n=n%arr[i];
        }
    }
    printf("%d",count);
}
```

Output:

	Input	Expected	Got	
✔	49	5	5	✔

Passed all tests! ✔

Program 2:
```c
#include <stdio.h>
void sort(int arr[], int n)
{
    for (int i = 0, j, temp; i < n-1; i++)
    {
        for (j = 0; j < n-i-1; j++)
        {
            if (arr[j] > arr[j+1])
            {
                temp = arr[j];
                arr[j] = arr[j+1];
```

```c
            arr[j+1] = temp;
        }
    }
}
}

int main()
{
    int g[30000], s[30000], n, m, i = 0, j = 0, count = 0;
    scanf("%d", &n);
    for (int k = 0; k < n; k++)
    {
        scanf("%d", &g[k]);
    }
    scanf("%d", &m);
    for (int k = 0; k < m; k++)
    {
        scanf("%d", &s[k]);
    }

    sort(g, n);
    sort(s, m);

    while (i < n && j < m) {
        if (s[j] >= g[i]) {
            count++;
            i++;
        }
        j++;
    }

    printf("%d\n", count);
    return 0;
}
```

Output:

	Input	Expected	Got	
✔	2	2	2	✔
	1 2			
	3			
	1 2 3			

Passed all tests! ✔

Program 3:
```c
#include <stdio.h>
#include <stdlib.h>
int compare(const void *a, const void *b)
{
    return (*(int*)a - *(int*)b);
}
int main()
{
    int n;
    scanf("%d", &n);
    int arr[n];
    for(int i = 0; i < n; i++)
    {
        scanf("%d", &arr[i]);
    }
    qsort(arr, n, sizeof(int), compare);
    long long sum = 0;
    for(int i = 0; i < n; i++)
    {
        sum += (long long)arr[i] * i;
    }
    printf("%lld\n", sum);
    return 0;
}
```

Output:

	Input	Expected	Got	
✔	5 2 5 3 4 0	40	40	✔
✔	10 2 2 2 4 4 3 3 5 5 5	191	191	✔
✔	2 45 3	45	45	✔

Passed all tests! ✔

Program 4:
```c
#include <stdio.h>
#include <stdlib.h>
int main()
{
    int n;
    scanf("%d", &n);
    int A[n], B[n];
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &A[i]);
    }
```

```c
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &B[i]);
    }
    for (int i = 0; i < n-1; i++)
    {
        for (int j = 0; j < n-1-i; j++)
        {
            if (A[j] > A[j+1])
            {
                int temp = A[j];
                A[j] = A[j+1];
                A[j+1] = temp;
            }
        }
    }
    for (int i = 0; i < n-1; i++)
    {
        for (int j = 0; j < n-1-i; j++)
        {
            if (B[j] < B[j+1])
            {
                int temp = B[j];
                B[j] = B[j+1];
                B[j+1] = temp;
            }
        }
    }
    long long sum = 0;
    for (int i = 0; i < n; i++)
    {
        sum += (long long)A[i] * B[i];
    }
    printf("%lld\n", sum);
    return 0;
}
```

Output:

	Input	Expected	Got	
✔	3 1 2 3 4 5 6	28	28	✔
✔	4 7 5 1 2 1 3 4 1	22	22	✔
✔	5 20 10 30 10 40 8 9 4 3 10	590	590	✔

Passed all tests! ✔