COMPUTER SYSTEMS AND PROGRAMING

(Lab manual-7)

NAME: SAMEEN WASEEM

BATCH: ME-15

SECTION: A

CMS ID: 465064

<u>**SUBMITTED TO:**</u>

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TASK-1:

```cpp
1    #include<iostream>
2    using namespace std;
3    int main()
4    {
5    cout<<"SAMEEN WASEEM"<<endl;
6    cout<<"ME-15 (A)"<<endl;
7
8    //Take 10 integer inputs from user and store them in an array and print them on screen
9    cout<<"TASK-1"<<endl;
10   int a[10];
11   cout<<"enter 10 value to print"<<endl;
12   for(int i=0;i<10;i++){
13       cin>>a[i];
14   }
15   for(int j=0;j<10;j++){
16       cout<<a[j]<<",";
17   }
18   return 0;
19
20
21   }
```

OUTPUT:

```
SAMEEN WASEEM
ME-15 (A)
TASK-1
enter 10 value to print
1
2
3
4
5
6
7
8
9
10
1,2,3,4,5,6,7,8,9,10,
--------------------------------
Process exited after 33.81 seconds with return value 0
Press any key to continue . . .
```

TASK-2:

```cpp
1    #include<iostream>
2    using namespace std;
3    int main()
4    {
5    //Write a program to find the sum and product of all elements of an array with 5 integer elements.
6    cout<<"TASK-2"<<endl;
7    int a[5]={},b[5]={},x1=0,x2=0,x=0,y1=1,y2=1,y=1;
8    for (int i=0 ; i<5 ; i++){
9        cout<<"enter number for 1 array"<<endl;
10       cin>>a[i];
11   }
12   for(int j=0 ; j<5 ; j++){
13       cout<<"enter number for 2 array"<<endl;
14       cin>>b[j];
15   }
16   for(int i=0 ; i<5 ;i++){
17   x1 = x1 + a[i];
18   y1 = y1 * a[i];
19   }
20   for(int j=0; j<5 ; j++){
21   x2 = x2 + b[j];
22   y2 = y2 * b[j];
23   }
24   x = x1 + x2;
25   cout<<"x="<<x<<endl;
26   y = y1+ y2;
27   cout<<"y="<<y<<endl;
28   return 0;
29   }
```

OUTPUT:

```
TASK-2
enter number for 1 array
1
enter number for 1 array
2
enter number for 1 array
3
enter number for 1 array
4
enter number for 1 array
5
enter number for 2 array
1
enter number for 2 array
2
enter number for 2 array
3
enter number for 2 array
4
enter number for 2 array
5
x=30
y=240


--------------------------------
Process exited after 35.9 seconds with return value 0
Press any key to continue . . .
```

TASK-3:

```cpp
1    #include<iostream>
2    using namespace std;
3    int main()
4    {
5    // Print diamond pattern using a single array.
6    cout<<"TASK-3"<<endl;
7    int n;
8    cout<<"enter an odd value of row:"<<endl;
9    cin>>n;
10   int half = n/2;
11   char diamond[n];
12   for(int i=0 ; i<=half ; i++){
13       for(int j=0 ; j<n ; j++){
14           diamond[half+i]='*';
15           diamond[half-i]='*';
16           cout<<diamond[j];
17       }
18       cout<<endl;
19   }
20   for(int i=0 ; i<n ; i++){
21       diamond[i]='*';
22   }
23   for(int i=half ; i>=0 ; i++){
24       for(int j=0 ; j<n ; j++){
25           diamond[half+i]=' ';
26           diamond[half-i]=' ';
27           cout<<diamond[j];
28       }
29       cout<<endl;
30   }
31   return 0;
32   }
```

OUTPUT:

```
Enter an odd number of rows.
5
    *
  ***
*****
  ***
    *



-----------------------------------
Process exited after 1.923 second
Press any key to continue . . .
```