Assignment No.2

Employee Information System

Name: Munajja Mujafar Dalimbkar
PRN: B25CE2011

Problem Statement:

Game Development
write a game development program that implements the Bubble Sort algorithm. The program will simulate a simple game where the player can input a set of numbers, and the numbers will be sorted using Bubble Sort to simulate a "level-up" scenario where the player's scores are sorted in ascending order.

CODE:

```
#include<iostream>
using namespace std;
int main()
{
int i,n,p,c,temp=0;
cout<<"\n\nEnter number of rounds: ";
cin>>n;
int player1[n];
int player2[n];
cout<<"Enter PLAYER 1 scores \n";
for(i=0;i<n;i++)
{
cout<<"Round "<<i+1<<" score: ";
cin>>player1[i];
}
for(p=0;p<n;p++)
{
 for(c=0;c<n-p-1;c++)
 {
 if(player1[c]<player1[c+1])
 {
 temp=player1[c];
 player1[c]=player1[c+1];
player1[c+1]=temp;
}
 }
}
```

```
cout<<"After sorting the scores of player 1 is:";
 for(i=0;i>player2[i];
}
for(p=0;pplayer2[0])
 {
cout<<"\n\n\t\t--------THE WINNER IS PLAYER 1--------";
}
Else
 if(player2[0]>player1[0])
{
cout<<"\n\n\t\t--------THE WINNER IS PLAYER 2--------";
}
else
{
cout<<"\n\n\t\t--------IT'S A TIE--------";
}
 return 0;
}
```

Output:

```
Enter number of rounds: 4
Enter PLAYER 1 scores
Round 1 score: 10
Round 2 score: 25
Round 3 score: 9
Round 4 score: 23
After sorting the scores of player 1 is:        25      23      10      9

Enter PLAYER 2 scores
Round 1 score: 10
Round 2 score: 20
Round 3 score: 9
Round 4 score: 10
After sorting the scores of player 2 is:        20      10      10      9

                --------THE WINNER IS PLAYER 1--------

------------------
(program exited with code: 0)

Press any key to continue . . .
```

Problem Statement:

Organizing Cards in a Hand:

Application: When playing card games, players often use an approach similar to insertion sort to organize their cards. They pick one card at a time and insert it into the correct position in their hand, maintaining a sorted sequence. Write a program that demonstrates how to organize (sort) cards in a hand using insertion sort

CODE:

```
#include<iostream>
using namespace std;
int main()
{
 int i,n;

 cout<<"\n\nEnter number of cards:";
 cin>>n;
 int card[n];
 for(i=0;i<n;i++)
 {
 cout<<"Enter card "<<i+1<<":";
 cin>>card[i];
 }
 int p,j,temp=0;
 for(p=0;p<n;p++)
 {
 temp=card[p];
 j=p-1;
 while(j>=0 && temp<card[j])
 {
 card[j+1]=card[j];
 j--;
 card[j+1]=temp;
 cout << "\nAfter inserting card "<< p + 1 << ": ";
 for (int k = 0; k <= p; k++)
 {
cout << card[k] << "\t";
 }
 }
 }
```

```
 cout<<"\n\nSorted cards are: ";
 for(i=0;i<n;i++)
 {
cout<<card[i]<<"\t";
 }
 return 0;
}
```

OUTPUT: