DSL TUTORIAL 2

Name:	**Janhavi.R.Patil**
PRN:	**B24CE1056**
DIVISION:	**SY.1**
BATCH:	**C**
BRANCH:	**Computer Engineering**

TITLE: Bubble Sort and Insertion Sort

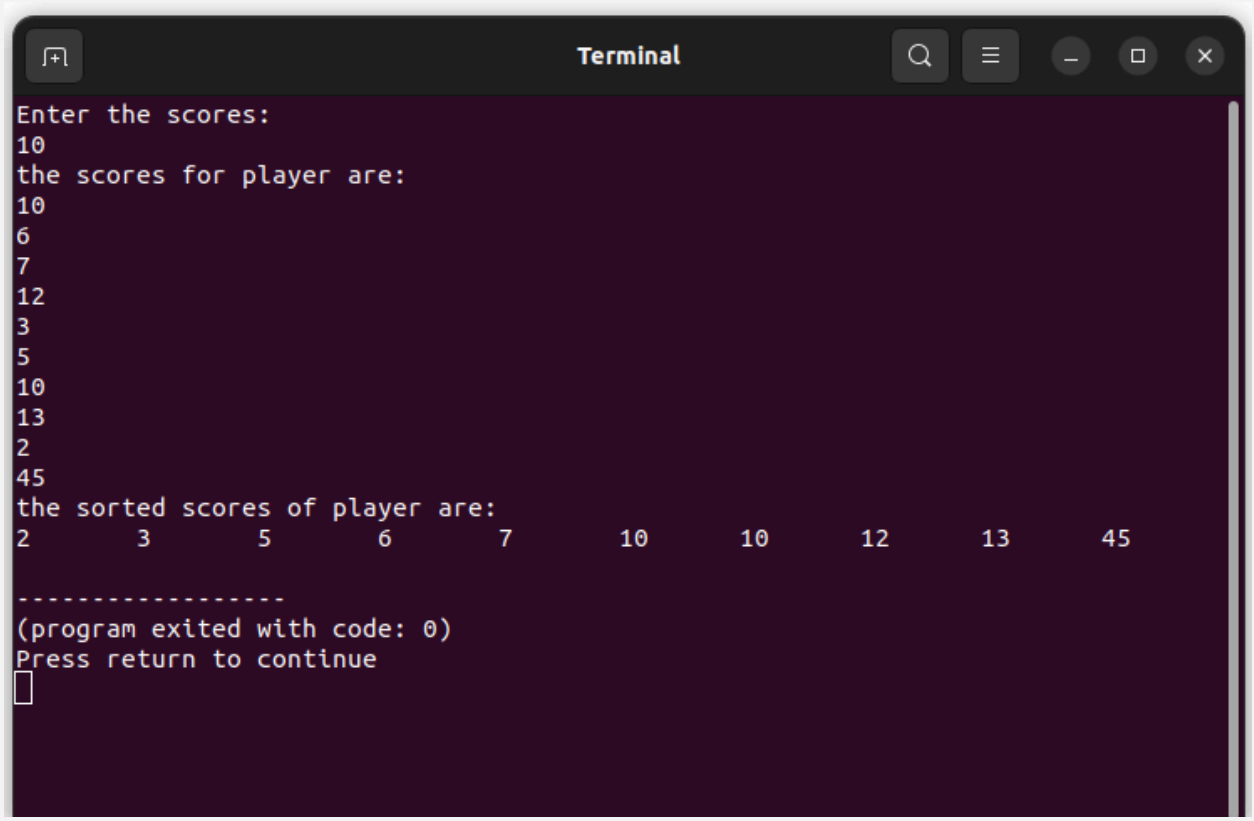
Part A:
Game Development:
write a game development program that implements the Bubble Sort algorithm. The program will simulate a simple game where the player can input a set of numbers, and the numbers will be sorted using Bubble Sort to simulate a "level-up" scenario where the player's scores are sorted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

CODE Part A:

```
#include<iostream>
using namespace std;

int main(){

      int player[10],n,temp;
      cout<<"Enter the scores:"<<endl;
      cin>>n;

      cout<<"the scores for player are:"<<endl;
      for(int i=0;i<n;i++){
            cin>>player[i];
      }

      for(int i=0;i<n;i++){
            for(int j=0;j<n-i-1;j++){
                  if(player[j]>player[j+1]){
                        temp=player[j];
                        player[j]=player[j+1];
                        player[j+1]=temp;
```

```
                        }
                    }
        }
        cout<<"the sorted scores of player are:"<<endl;
        for(int i=0;i<n;i++){
              cout<<player[i]<<"\t";

              }


        return 0;
}
```

OUTPUT PART A:



Part B:
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 Part B:

```
#include<iostream>
using namespace std;

int main(){
      int cards[10],n,i,j;
      int key;
      cout<<"enter the number of cards:"<<endl;
      cin>>n;

      cout<<"enter the  card numbers to sort:"<<endl;
      for(int i=0;i<n;i++){
            cin>>cards[i];
            }

for(int i=1;i<n;i++){

            key=cards[i];

            j=i-1;
            while(j>=0 && cards[j]>key){
                  cards[j+1]=cards[j];
                  j=j-1;

                  }
            cards[j+1]=key;

            }
      cout<<"the sorted cards are:"<<endl;
      for(int i=0;i<n;i++){

          cout<<cards[i];
          cout<<endl;
      }




      return 0;
```

```
    }
```

OUTPUT PART B: