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

int main(){
    /*Nama : Stevaldo Claudio
      NIM  : 32220105        */
    string temp;
    int tempInt , n;
    string item[] = {"Botol","Gunting","Buku","Spidol","Map"};
    int harga[] = {35000,8000,5000,28000,5500},
        terjual[] = {5,10,2,8,3};

    // Cetak Data
    cout << "\n\nData Sebelum diurutkan" << endl;
    cout << "---------------------------------------" << endl;
    cout << "Nama Item\tHarga(Rp)\tTerjual" << endl;
    n = 5;

    for(int i=0;i<n;i++){
        cout << item[i] << "\t\t" << harga[i] << "\t\t" << terjual[i] << "\t\t" << endl;
    }

    cout << endl;

    // Proses Sorting (Ascending Bubble Sort)
    for(int iteration =1;iteration<n;iteration++){
        for(int index=0;index<n-iteration;index++){

            if(item[index] > item[index+1]){ /* untuk Ascending menggunakan > dari , sedangkan Descending menggunakan < */
                temp = item[index];
                item[index] = item[index+1];
                item[index+1] = temp;

                tempInt = harga[index];
                harga[index] = harga[index+1];
                harga[index+1] = tempInt;
```

```
// Proses Sorting (Ascending Bubble Sort)
for(int iteration =1;iteration<n;iteration++){
    for(int index=0;index<n-iteration;index++){

        if(item[index] > item[index+1]){ /* untuk Ascending menggunakan > dari , sedangkan Descending menggunakan < */
            temp = item[index];
            item[index] = item[index+1];
            item[index+1] = temp;

            tempInt = harga[index];
            harga[index] = harga[index+1];
            harga[index+1] = tempInt;

            tempInt = terjual[index];
            terjual[index] = terjual[index+1];
            terjual[index+1] = tempInt;
        }

    }
}

// Cetak Data
cout << "\n\nData Setelah diurutkan (Bubble Sort Ascending)" << endl;
cout << "----------------------------------------" << endl;
cout << "Nama Item\tHarga(Rp)\tTerjual" << endl;

for(int i=0;i<n;i++){
    cout << item[i] << "\t\t" << harga[i] << "\t\t" << terjual[i] << "\t\t" << endl;
}
cout << endl;
```

```
// Cetak Data
cout << "\n\nData Setelah diurutkan (Bubble Sort Ascending)" << endl;
cout << "---------------------------------------" << endl;
cout << "Nama Item\tHarga(Rp)\tTerjual" << endl;

for(int i=0;i<n;i++){
    cout << item[i] << "\t\t" << harga[i] << "\t\t" << terjual[i] << "\t\t" << endl;
}
cout << endl;


// Descending Insertion Sort
int firstOutOfOrder , location , tempTerjual , tempHarga;
string tempItem;
//Proses Sorting
for(firstOutOfOrder=1;firstOutOfOrder<n;firstOutOfOrder++){
    tempTerjual  = terjual[firstOutOfOrder];
    tempHarga  = harga[firstOutOfOrder];
    tempItem  = item[firstOutOfOrder];
    location = firstOutOfOrder;
    /* untuk Ascending menggunakan > dari , sedangkan Descending menggunakan < gunakan pada bagian terjual[location-1] < / > tempTerjual */
    while(terjual[location-1] < tempTerjual && location >= 1){
        terjual[location] = terjual[location-1];
        harga[location] = harga[location-1];
        item[location] = item[location-1];
        location--;
    }
    terjual[location] = tempTerjual;
    harga[location] = tempHarga;
    item[location] = tempItem;
}
```

```
    // Cetak Data
    cout << "\n\nData Paling Laris (Insertion Sort Descending)" << endl;
    cout << "---------------------------------------" << endl;
    cout << "Nama Item\tHarga(Rp)\tTerjual" << endl;

    for(int i=0;i<n;i++){
        cout << item[i] << "\t\t" << harga[i] << "\t\t" << terjual[i] << "\t\t" << endl;
    }
    cout << endl;

    system("pause");
    return 0;
}
```

```
Data Sebelum diurutkan
-----------------------------------------
Nama Item       Harga(Rp)       Terjual
Botol           35000           5
Gunting         8000            10
Buku            5000            2
Spidol          28000           8
Map             5500            3


Data Setelah diurutkan (Bubble Sort Ascending)
-----------------------------------------
Nama Item       Harga(Rp)       Terjual
Botol           35000           5
Buku            5000            2
Gunting         8000            10
Map             5500            3
Spidol          28000           8


Data Paling Laris (Insertion Sort Descending)
-----------------------------------------
Nama Item       Harga(Rp)       Terjual
Gunting         8000            10
Spidol          28000           8
Botol           35000           5
Map             5500            3
Buku            5000            2

Press any key to continue . . .
```