

CS1530 LAB

ASSIGNMENT 2

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Q1. Insertion sort solution:

```

Ans: #include <iostream>
#include <cstring>
using namespace std;
struct player {
    char name[50];
    int score;
}
void Insertion-Sort (struct player *p, int n)
{
    int i, j, temp;
    for (i=1; i<n; i++)
    {
        temp = p[i].score;
        j = i-1;
        while (temp < p[j].score && j >= 0)
        {
            p[j+1] = p[j];
            --j;
        }
    }
}

```

What makes you happy?

#HappyCollegeDays


```
p[j+1] = p[temp];  
}
```

```
}
```

```
int main()
```

```
{
```

```
    struct player p[100];
```

```
    int n;
```

```
    cout << "Enter no. of players";
```

```
    cin >> n;
```

```
    cout << "Enter player details \n";
```

```
    for (int i=0; i<n; i++)
```

```
    {
```

```
        cout << "Name: ";
```

```
        cin >> p[i].name;
```

```
        cout << "Score: ";
```

```
        cin >> p[i].score;
```

```
    }
```

```
    Insertion_Sort(p, n);
```

```
    for (int i=0; i<n; i++)
```

```
    {
```

```
        cout << "Name: \t" << p[i].name << "\t";
```

```
        cout << "Score: \t" << p[i].score << "\n";
```

```
    }
```

```
    return 0;
```

```
}
```

Q2. Selection Sort solution

```
Ans: #include <iostream>
#include <string>
using namespace std;
struct player
{
    char name [50];
    int score;
}

void Selection_Sort (struct player *p, int n)
{
    int i, min, j;
    struct player temp;
    for (i=0; i<n-1; i++)
    {
        min=i;
        for (j=i+1; j<n; j++)
        {
            if (p[min].score > p[j].score)
                min=j;
        }
        temp = p[i];
        p[i] = p[min];
        p[min] = temp;
    }
}
```



```
int main ()  
{
```

```
    struct player p[100];
```

```
    int n;
```

```
    cout << "Enter no. of players";
```

```
    cin >> n;
```

```
    cout << "Enter player details";
```

```
    for (int i=0; i<n; i++)
```

```
    {
```

```
        cout << "Name: \t";
```

```
        cin >> p[i].name;
```

```
        cout << "Score: \t";
```

```
        cin >> p[i].score;
```

```
    }
```

```
    Selection-Sort (p, n);
```

```
    for (int i=0; i<n; i++)
```

```
    {
```

```
        cout << "Name: \t" << p[i].name << "\t";
```

```
        cout << "Score: \t" << p[i].score << "\n";
```

```
    }
```

```
    return 0;
```

```
}
```