## 1<sup>st</sup> QUESTION ANS

```
#include <iostream>
#include <string>
using namespace std;
class Player {
private:
  string name;
  int level;
  int experience;
public:
  Player(): name("Unknown"), level(1), experience(0) {}
  Player(string n, int l, int exp): name(n), level(l), experience(exp) {}
  Player(const Player &p) {
    name = p.name;
    level = p.level;
    experience = p.experience;
  }
  void displayProfile() {
    cout << "\nPlayer Profile: " << endl;</pre>
    cout << "Name: " << name << endl;
    cout << "Level: " << level << endl;</pre>
    cout << "Experience Points: " << experience << endl;</pre>
 }
};
```

```
// main program strts from here
int main() {
  string name;
  int level, experience;
  // Taking input from the user
  cout << "Enter player name:";</pre>
  getline(cin, name);
  cout << "Enter player level: ";</pre>
  cin >> level;
  cout << "Enter player experience points: ";</pre>
  cin >> experience;
  // Creatign profile with the input of the user
  Player player1(name, level, experience);
  cout << "\nOriginal Profile:" << endl;</pre>
  player1.displayProfile();
  // copy of the plyaer
  Player player2 = player1;
  cout << "\nCopied Profile:" << endl;</pre>
  player2.displayProfile();
  return 0;
}
```

Enter player name:allan

Enter player level: 10

Enter player experience points: 1000

Original Profile:

Player Profile:

Name: allan

Level: 10

Experience Points: 1000

Copied Profile:

Player Profile:

Name: allan

Level: 10

Experience Points: 1000

## 2<sup>ND</sup> QUESTION

```
#include <iostream>
using namespace std;
class Distance {
private:
 int feet;
 int inches;
public:
  Distance(): feet(0), inches(0) {}
  Distance(int f, int i): feet(f), inches(i) {}
 friend void compareDistances(Distance d1, Distance d2);
 void displayDistance() {
   cout << feet << " feet " << inches << " inches" << endl;</pre>
 }
};
void compareDistances(Distance d1, Distance d2) {
 int totalInches1 = d1.feet * 12 + d1.inches;
 int totalInches2 = d2.feet * 12 + d2.inches;
  cout << "\nCOMPARING Distances:" << endl;</pre>
  d1.displayDistance();
  d2.displayDistance();
 if (totalInches1 > totalInches2) {
```

```
cout << "First distance is greater." << endl;</pre>
  } else if (totalInches1 < totalInches2) {</pre>
    cout << "Second distance is greater." << endl;</pre>
 } else {
    cout << "Both distances are equal." << endl;</pre>
 }
}
int main() {
  int feet1, inches1, feet2, inches2;
  // IINPUT OF FIRST DISTANCE
  cout << "Enter feet for Distance 1: ";</pre>
  cin >> feet1;
  cout << "Enter inches for Distance 1: ";</pre>
  cin >> inches1;
  // INPUT OF SECOND DISTANCE
  cout << "\nEnter feet for Distance 2: ";</pre>
  cin >> feet2;
  cout << "Enter inches for Distance 2: ";</pre>
  cin >> inches2;
  // Creating distance objects with the input
  Distance d1(feet1, inches1);
  Distance d2(feet2, inches2);
  // Comparing distances from both inputs from the user
  compareDistances(d1, d2);
  return 0;
}
```

## OUTPUT FOR 2<sup>nd</sup> QUESTION

Enter feet for Distance 1: 10

Enter inches for Distance 1: 50

Enter feet for Distance 2: 13

Enter inches for Distance 2: 2

## COMPARING Distances:

10 feet 50 inches

13 feet 2 inches

First distance is greater.