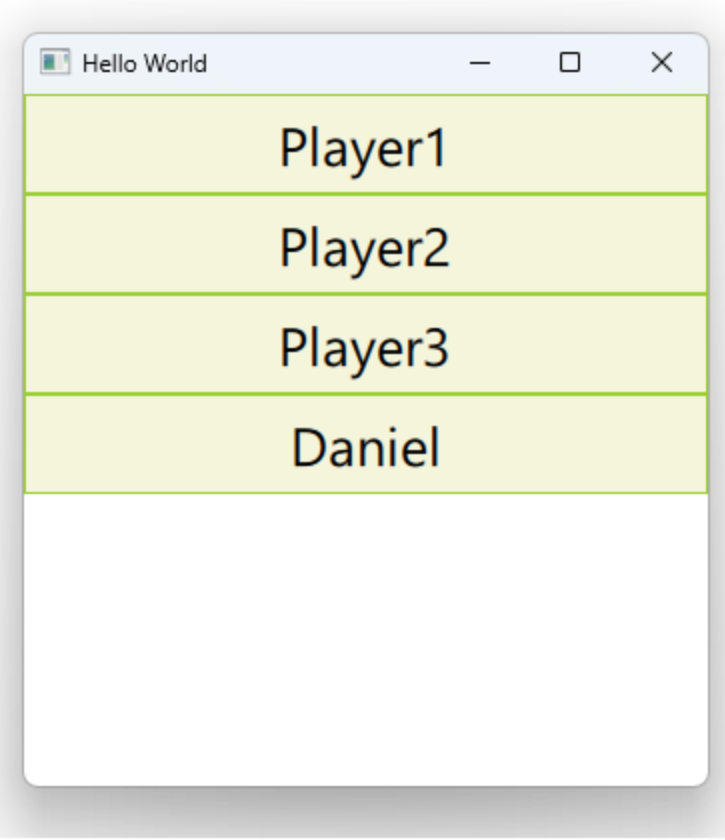
Notes to self

```
. Exploring grouped properties :
    . We want to allow the syntax like this :
                Striker{
                            name: "Captain"
                            position: "Middle Field"
                            playing: true
                            details {height : 178 ; weight : 76 ; speed : 76} <<<=====
                        }

           for the player details. Other variations are :

                    details  {
                        height : 333
                        weight : 76
                        speed : 76
                    }

           and :


                    details.height : 222
                    details.weight : 67
                    details.speed : 77


    . This is the same thing you see on elements like Font and others.

    . To set this up :
         . You create a class that wraps around your "grouped" properties,
             in this case, height, weight, speed. The wrapper class is
             PlayerDetails.

          . The "grouped" properties are decorated with the Q_PROPERTY macro.
              We also generate the necessary methods, setters, getters, signals.

             . Once we have the class, we add an object of it as a property of the
                    player class  :
                        class Player : public QObject
                        {
                            Q_OBJECT
                            Q_PROPERTY(PlayerDetails * details READ details  NOTIFY detailsChanged)
                            .....

                        };

           . Set up the necessary methods for READ and NOTIFY
          . And expose the PlayerDetails class to QML :
                qmlRegisterUncreatableType<PlayerDetails>("com.blikoon.Football", 1,0, "PlayerDetails",
                                            "Can not create PlayerDetails in QML.Not allowed.");


        . Once we have this plumbing in place, we can use our grouped properties syntax.

   . Use the Qt 5 course where necessary and improvise.
```

Grouped Properties



```
Striker{
    name: "Captain"
    position: "Middle Field"
    playing: true
    details {height : 178 ; weight : 76 ; speed : 76}
}
```

```
Defender{
    name: "Player1"
    position: "Middle Field"
    playing: true
    details  {
        height : 333
        weight : 76
        speed : 76
    }
}
```

```
Striker{
    name: "Player2"
    position: "Middle Field"
    playing: true

    details.height : 222
    details.weight : 67
    details.speed : 77
}
```

The same thing you see on elements like Font

```
class PlayerDetails : public QObject
{
    Q_OBJECT
public:
    explicit PlayerDetails(QObject *parent = nullptr);

    Q_PROPERTY(qreal height READ height WRITE setHeight NOTIFY heightChanged)
    Q_PROPERTY(qreal weight READ weight WRITE setWeight NOTIFY weightChanged)
    Q_PROPERTY(qreal speed READ speed WRITE setSpeed NOTIFY speedChanged)

    qreal height() const;
    qreal weight() const;
    qreal speed() const;
    void setHeight(qreal height);
    void setWeight(qreal weight);
    void setSpeed(qreal speed);
signals:
    void heightChanged(qreal height);
    void weightChanged(qreal weight);
    void speedChanged(qreal speed);
private:
    qreal m_height;
    qreal m_weight;
    qreal m_speed;
};
```

```
class Player : public QObject
{
    Q_OBJECT

    Q_PROPERTY(QString name READ name WRITE setName NOTIFY nameChanged)
    Q_PROPERTY(bool playing READ playing WRITE setPlaying NOTIFY playingChanged)
    Q_PROPERTY(QString position READ position WRITE setPosition NOTIFY positionChanged)
    Q_PROPERTY(PlayerDetails * details READ details  NOTIFY detailsChanged)
public:
    explicit Player(QObject *parent = nullptr);
    /*...*/
    PlayerDetails * details() ;
signals:
    void detailsChanged();

private :
    PlayerDetails m_details;
};
```

```
PlayerDetails *Player::details()
{
    return &m_details;
}
```

Use Default Properties in QML

```
Striker{
    name: "Captain"
    position: "Middle Field"
    playing: true
    details {height : 178 ; weight : 76 ; speed : 76}
}
```