Contact group creation and retrieval using Qt Mobility

Description

This article describes how to add a contact group to the phonebook using Qt Mobility APIs. In addition, it explains:

1. How to add contacts to a created contact group
2. How to retrieve contacts from a created contact group

Preconditions (optional)

Latest Qt and Qt Mobility should be available on the device.

Project file

Include the contacts from Qt Mobility:

```
CONFIG += mobility
MOBILITY += contacts
```

Add the necessary capabilities:

```
symbian: {
    TARGET.CAPABILITY = ReadUserData WriteUserData
}
```

Header file

```
#include <QContact>
#include <QContactManager>
#include <QObject>
#include <QString><br>
// Qt Mobility namespace declaration
QTM_USE_NAMESPACE;<br><br>
class MyContactsHandler : public QObject
{
    Q_OBJECT<br>
public:
    MyContactsHandler(QObject *parent = 0);
    virtual ~MyContactsHandler();<br>
public:
    bool addGroup();
    bool addContactsToGroup();
    bool getContactsFromGroup(int index, QContactId &groupId, QContactId &memberId);
    QString nameField(QString aContactType);<br>
private: // Data
    QContactManager *m_manager;
    QContact m_contactGroup;
};
```

Source file

```
#include "contacthandler.h"
#include <QContactName>
#include <QContactPhoneNumber>
/*!
  Constructor.
*/
MyContactsHandler::MyContactsHandler(QObject *parent /* = 0 */)
    : QObject(parent),
      m_manager(0)
{
    m_manger = new QContactManager(this);
}
/*!
  Destructor.
*/
MyContactsHandler::~MyContactsHandler()
{
 delete m_manager;
}
```

First, create the contact group.

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```
    /*!
      This method is used to add a new contact group in the phone book.
    */
    bool MyContactsHandler::addGroup()
    {
        m_contactGroup.setType(QContactType::TypeGroup);
        QString saveNameField = nameField(QContactType::TypeGroup);
        QContactName name = m_contactGroup.detail(QContactName::DefinitionName);
        name.setValue(saveNameField, "testGroupContact1");
        m_contactGroup.saveDetail(&name);
        m_contactGroup = m_manager->compatibleContact(m_contactGroup);
        return m_manager->saveContact(&m_contactGroup);
    }
```

After creating the contact group, add the contacts to the created group.

```
    /*!
      This method demonstrates how to add contacts into the created contact group.
    */
    bool MyContactsHandler::addContactsToGroup()
    {
        // Add one test contact to phonebook.
        QContact testContact;
        QString saveNameField = nameField(QContactType::TypeContact);<br>
        if (!saveNameField.isEmpty()) {
            QContactName name = testContact.detail(QContactName::DefinitionName);
            name.setValue(saveNameField, "TestContact1");
            name.setLastName("Last");
            testContact.saveDetail(&name);
        }<br>
        QContactPhoneNumber phoneNumber =
            testContact.detail(QContactPhoneNumber::DefinitionName);
        phoneNumber.setNumber("9999999999");
        testContact.saveDetail(&phoneNumber);
        testContact = m_manager->compatibleContact(testContact);
        bool success = m_manager->saveContact(&testContact);<br>
        // Create and save the group relationship.
        QContactRelationship groupRelationship;
        groupRelationship.setFirst(m_contactGroup.id());
        groupRelationship.setRelationshipType(QContactRelationship::HasMember);
        groupRelationship.setSecond(testContact.id());<br>
        return m_manager->saveRelationship(&groupRelationship);
    }
```

After adding the contacts to the created group, retrieve the contacts from the group.

```
    /*!
      This method demonstrates how to retrieve contacts from the created
      contact group.
    */
    bool MyContactsHandler::getContactsFromGroup(int index, QContactId
                                                &groupId, QContactId &memberId)
    {
        QList<QContactRelationship> relationshipList;
        QContactRelationship relItem;
        relationshipList = m_manager->relationships(m_contactGroup.id());<br>
        if (index < relationshipList.count()) {
            relItem =  relationshipList.at(index);
            groupId = relItem.first();
            memberId = relItem.second();
            return true;
        }<br>
        // No contact found with the given index!
        return false;
    }
```

Utility method:

```
    /*!
      This method is used to get the field part for contact/contact group.
    */
    QString MyContactsHandler::nameField(QString aContactType)
    {
        QMap<QString, QContactDetailDefinition> defs =
            m_manager->detailDefinitions(aContactType);
        QContactDetailDefinition nameDef =
            defs.value(QContactName::DefinitionName);<br>
        if (nameDef.fields().keys().contains(QContactName::FieldCustomLabel)) {
            return QString(QLatin1String(QContactName::FieldCustomLabel));
        }
        else if (nameDef.fields().keys().contains(QContactName::FieldFirstName)) {
            return QString(QLatin1String(QContactName::FieldFirstName));
        }<br>
        // Not found!
        return QString();
    }
```


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