**package** com.example.daniel.tesispaul;  
**import** android.app.PendingIntent;  
  
**import** android.content.Intent;  
**import** android.content.IntentFilter;  
**import** android.graphics.Color;  
**import** android.nfc.NdefMessage;  
**import** android.nfc.NdefRecord;  
**import** android.nfc.NfcAdapter;  
**import** android.nfc.Tag;  
**import** android.nfc.tech.Ndef;  
**import** android.nfc.tech.NdefFormatable;  
**import** android.os.Parcelable;  
**import** android.support.v7.app.ActionBarActivity;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.Menu;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
**import** android.widget.ToggleButton;  
**import** java.io.ByteArrayOutputStream;  
**import** java.io.UnsupportedEncodingException;  
**import** java.util.Locale;  
  
  
**public class** MainActivity **extends** ActionBarActivity {  
  
 NfcAdapter **nfcAdapter**;  
  
 ToggleButton **tglReadWrite**;  
 EditText **txtTagContent**;  
  
 Button **btnDescargar**;  
  
 **public** String **numeroH**=**""**;  
 **public** String **nombre**=**""**;  
 **public** String **direccion** = **""**;  
 **public** String **telefonoT** = **""**;  
 **public** String **representante** = **""**;  
 **public** String **institucion** = **""**;  
 **public** String **cedula** = **""**;  
 **public** String **nacimiento** = **""**;  
 **public** String **estadoCivil** = **""**;  
 **public** String **instruccion** = **""**;  
 **public** String **procedencia** = **""**;  
  
  
 **public** String **tx1**=**"Número Historia: "**;  
 **public** String **tx2**=**"Nombre del paciente: "**;  
 **public** String **tx3**=**"Dirección del paciente: "**;  
 **public** String **tx4**=**"Teléfono del trabajo: "**;  
 **public** String **tx5**=**"Nombre del representante: "**;  
 **public** String **tx6**=**"Institución:"**;  
 **public** String **tx7**=**"Cédula de ciudadanía: "**;  
 **public** String **tx8**=**"Fecha de nacimiento: "**;  
 **public** String **tx9**=**"Estado civil: "**;  
 **public** String **tx10**=**"Instrucción: "**;  
 **public** String **tx11**=**"Procedencia: "**;  
  
  
  
  
  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
  
 **nfcAdapter** = NfcAdapter.*getDefaultAdapter*(**this**);  
 **tglReadWrite** = (ToggleButton)findViewById(R.id.***tglReadWrite***);  
 **txtTagContent** = (EditText)findViewById(R.id.***txtTagContent***);  
  
  
 }  
  
 @Override  
 **protected void** onResume() {  
 **super**.onResume();  
  
 enableForegroundDispatchSystem();  
 }  
  
 @Override  
 **protected void** onPause() {  
 **super**.onPause();  
  
 disableForegroundDispatchSystem();  
 }  
  
  
 @Override  
 **protected void** onNewIntent(Intent intent) {  
 **super**.onNewIntent(intent);  
  
 **if** (intent.hasExtra(NfcAdapter.***EXTRA\_TAG***)) {  
 Toast.*makeText*(**this**, **"Recibiendo"**, Toast.***LENGTH\_SHORT***).show();  
  
  
 **if**(**tglReadWrite**.isChecked())  
 {  
 Parcelable[] parcelables = intent.getParcelableArrayExtra(NfcAdapter.***EXTRA\_NDEF\_MESSAGES***);  
  
 **if**(parcelables != **null** && parcelables.**length** > 0)  
 {  
 readTextFromMessage((NdefMessage) parcelables[0]);  
 }**else**{  
 Toast.*makeText*(**this**, **"No se encuentra tecnologia NFC!"**, Toast.***LENGTH\_SHORT***).show();  
 }  
  
 }**else**{  
 Tag tag = intent.getParcelableExtra(NfcAdapter.***EXTRA\_TAG***);  
  
  
 }  
  
 }  
 }  
  
 **private void** readTextFromMessage(NdefMessage ndefMessage) {  
 String [] parte;  
  
  
 NdefRecord[] ndefRecords = ndefMessage.getRecords();  
  
 **if**(ndefRecords != **null** && ndefRecords.**length**>0){  
  
 NdefRecord ndefRecord = ndefRecords[0];  
  
 String tagContent = getTextFromNdefRecord(ndefRecord);  
  
 parte = tagContent.split(**"@"**);  
 String parte1 =parte [0];  
 String parte2 =parte [1];  
  
 **if** (**nombre** == **""** || **numeroH** == **""** || **direccion** == **""** || **telefonoT** ==**""** || **representante** ==**""** || **nacimiento** ==**""** || **cedula** == **""** ) {  
  
 **if** (parte1.equals(**"1"**)) {  
 **numeroH** = parte2;  
 } **else if** (parte1.equals(**"2"**)) {  
 **nombre** = parte2;  
 } **else if** (parte1.equals(**"3"**)){  
 **direccion** = parte2;  
 } **else if** (parte1.equals(**"4"**)){  
 **telefonoT** = parte2;  
 } **else if** (parte1.equals(**"5"**)){  
 **representante** = parte2;  
 } **else if** (parte1.equals(**"6"**)){  
 **nacimiento** = parte2;  
 } **else if** (parte1.equals(**"7"**)){  
 **cedula** = parte2;  
 }  
  
 **txtTagContent**.setTextSize(1,22);  
 **txtTagContent**.setTextColor(Color.*rgb*(240,75,24));  
 **txtTagContent**.setText(**"\*\*\* RECIBIENDO INFORMACION \*\*\* \n \n \n ..........POR FAVOR ESPERE......"**);  
 }  
  
 **else** {  
 *//txtTagContent.setText(txtTagContent.getText()+parte1);* **txtTagContent**.setTextSize(1,17);  
 **txtTagContent**.setTextColor(Color.*rgb*(94,79,137));  
 **txtTagContent**.setText(**tx1**+**numeroH** + **"\n"** +**tx2**+ **nombre** + **"\n"** +**tx3** +**direccion**+ **"\n"** +**tx4** +**telefonoT**+ **"\n"** +**tx5** +**representante**+ **"\n"**+**tx8** +**nacimiento**+ **"\n"**+**tx7** +**cedula**+ **"\n"** + **"\n"** + **"\n"** + **"\n"** + **"\n"** + **"\n"** +**"Descargar ficha completa"**);  
  
  
  
 Toast.*makeText*(**this**, **"COMPLETADO"**, Toast.***LENGTH\_LONG***).show();  
 }  
  
  
  
 *// txtTagContent.setText(txtTagContent.getText()+tagContent);* }**else** {  
 Toast.*makeText*(**this**, **"Vuelva a acercar los dispositivos!"**, Toast.***LENGTH\_SHORT***).show();  
 }  
  
 }  
  
  
  
  
 **private void** enableForegroundDispatchSystem() {  
  
 Intent intent = **new** Intent(**this**, MainActivity.**class**).addFlags(Intent.***FLAG\_RECEIVER\_REPLACE\_PENDING***);  
  
 PendingIntent pendingIntent = PendingIntent.*getActivity*(**this**, 0, intent, 0);  
  
 IntentFilter[] intentFilters = **new** IntentFilter[]{};  
  
 **nfcAdapter**.enableForegroundDispatch(**this**, pendingIntent, intentFilters, **null**);  
 }  
  
 **private void** disableForegroundDispatchSystem() {  
 **nfcAdapter**.disableForegroundDispatch(**this**);  
 }  
  
 **private void** formatTag(Tag tag, NdefMessage ndefMessage) {  
 **try** {  
  
 NdefFormatable ndefFormatable = NdefFormatable.*get*(tag);  
  
 **if** (ndefFormatable == **null**) {  
 Toast.*makeText*(**this**, **"Tag is not ndef formatable!"**, Toast.***LENGTH\_SHORT***).show();  
 **return**;  
 }  
  
  
 ndefFormatable.connect();  
 ndefFormatable.format(ndefMessage);  
 ndefFormatable.close();  
  
 Toast.*makeText*(**this**, **"Tag writen!"**, Toast.***LENGTH\_SHORT***).show();  
  
 } **catch** (Exception e) {  
 Log.*e*(**"formatTag"**, e.getMessage());  
 }  
  
 }  
  
  
  
  
  
  
  
 **public void** tglReadWriteOnClick(View view){  
 **txtTagContent**.setText(**""**);  
 }  
  
  
 **public** String getTextFromNdefRecord(NdefRecord ndefRecord)  
 {  
 String tagContent = **null**;  
 **try** {  
 **byte**[] payload = ndefRecord.getPayload();  
 String textEncoding = ((payload[0] & 128) == 0) ? **"UTF-8"** : **"UTF-16"**;  
 **int** languageSize = payload[0] & 0063;  
 tagContent = **new** String(payload, languageSize + 1,  
 payload.**length** - languageSize - 1, textEncoding);  
 } **catch** (UnsupportedEncodingException e) {  
 Log.*e*(**"getTextFromNdefRecord"**, e.getMessage(), e);  
 }  
 **return** tagContent;  
 }  
  
}