## CrimeListFragment

```
package com.example.criminalintent_website
import android.content.Context
import android.os.Bundle
import android.util.Log
import android.view.*
import android.widget.ImageView
import android.widget.TextView
import androidx.fragment.app.Fragment
import androidx.lifecycle.ViewModelProviders
import androidx.recyclerview.widget.LinearLayoutManager
import androidx.recyclerview.widget.RecyclerView
import androidx.lifecycle.Observer
import java.text.DateFormat
import java.text.DateFormat.FULL
import java.util.*
class CrimeListFragment: Fragment() {
    private val crimeListViewModel: CrimeListViewModel by Lazy {
         ViewModelProviders.of(this).get(CrimeListViewModel::class.java)
      rivate lateinit var crimeRecyclerView: RecyclerView
    private var adapter: CrimeAdapter? = CrimeAdapter(emptyList())
    interface Callbacks {
         fun onCrimeSelected(crimeId: UUID)
    private var callBacks: Callbacks? = null
    override fun onAttach(context: Context) {
         super.onAttach(context)
         callBacks = context as Callbacks?
    override fun onCreate(savedInstanceState: Bundle?) {
             er.onCreate(savedInstanceState)
         setHasOptionsMenu(true)
    override fun onCreateView(
         inflater: LayoutInflater,
         container: ViewGroup?,
         savedInstanceState: Bundle?
    ): View? {
         val view = inflater.inflate(R.layout.fragment_crime_list, container, false)
         crimeRecyclerView = view.findViewById(R.id.crime_recycler_view) as RecyclerView
         crimeRecyclerView.layoutManager = LinearLayoutManager(context)
    return view
} // End onCreateView
    override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
         super.onViewCreated(view, savedInstanceState)
         crimeListViewModel.crimeListLiveData.observe(
             viewLifecycleOwner,
Observer { crimes ->
                   crimes?.let {
                       Log.i(TAG, "Got crimes ${crimes.size}")
                       updateUI(crimes)
    override fun onDetach() {
         super.onDetach()
    override fun onCreateOptionsMenu(menu: Menu, inflater: MenuInflater) {
    super.onCreateOptionsMenu(menu, inflater)
         inflater.inflate(R.menu.fragment_crime_list, menu)
    // Respond to menu item selection in the app bar, save the new crime to the database,
// and notify CrimeFragment the new crime has been selected
    override fun onOptionsItemSelected(item: MenuItem): Boolean {
         return when(item.itemId) {
             R.id.new_crime -> {
                  val crime = Crime()
crimeListViewModel.addCrime(crime)
                  callBacks?.onCrimeSelected(crime.id)
              else -> return super.onOptionsItemSelected(item)
    private fun updateUI(crimes: List<Crime>) {
         adapter = CrimeAdapter(crimes)
    private fun formatDate(date: Date): String {
         return DateFormat.getDateInstance(FULL).format(date)
    private inner class CrimeHolder(view: View) : RecyclerView.ViewHolder(view), View.OnClickListener {
    private lateinit var crime: Crime
         private val titleTextView: TextView = itemView.findViewById(R.id.crime_title)
         private val dateTextView: TextView = itemView.findViewById(R.id.crime_date)
         private val solvedImageView: ImageView = itemView.findViewById(R.id.crime_solved)
              itemView.setOnClickListener(this)
         override fun onClick(v: View?) {
              callBacks?.onCrimeSelected(crime.id)
         fun bind(crime: Crime) {
              this.crime = crime
              titleTextView.text = crime.title
              dateTextView.text = formatDate(crime.date)
              //dateTextView.text = crime.date.toString()
solvedImageView.visibility = if (crime.isSolved) {
                  View.VISIBLE
                  View.GONE
    private inner class CrimeAdapter(var crimes: List<Crime>) : RecyclerView.Adapter<CrimeHolder>() {
         override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): CrimeHolder {
    val view = layoutInflater.inflate(R.layout.list_item_crime, parent, false)
              return CrimeHolder(view)
         override fun getItemCount() = crimes.size
         override fun onBindViewHolder(holder: CrimeHolder, position: Int) {
              val crime = crimes[position]
              holder.bind(crime)
         fun newInstance(): CrimeListFragment {
              return CrimeListFragment()
                                                       list_item_crime
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
    xmlns:app="http://schemas.android.com/apk/res-auto'
    android:id="@+id/constraintLayout
    android:layout_width="match_parent"
android:layout_height="wrap_content">
    <TextView
         android:id="@+id/crime_title"
         android:layout_width="0dp
         android:layout_height="wrap_content"
android:layout_marginStart="16dp"
         android:layout_marginTop="16dp
         android:layout_marginEnd="8dp
         android:text="@string/crime_title"
android:textColor="@android:color/black"
         app:layout_constraintEnd_toStartOf="@+id/crime_solved"
         app:layout_constraintStart_toStartOf="parent
         app:layout_constraintTop_toTopOf="parent" />
    <TextView
         android:id="@+id/crime_date"
         android:layout_width="0dp"
android:layout_height="wrap_content"
         android:layout_marginStart="16dp'
```

android:layout\_marginTop="16dp"
android:layout\_marginEnd="8dp"
android:text="@string/crime\_date'

android:layout\_width="wrap\_content"
android:layout\_height="wrap\_content"

app:layout\_constraintBottom\_toBottomOf="parent"

android:contentDescription="@string/crime\_solved" />

app:layout\_constraintEnd\_toEndOf="parent'
app:layout\_constraintTop\_toTopOf="parent'

app:srcCompat="@drawable/ic solved

</androidx.constraintlayout.widget.ConstraintLayout>

android:layout\_marginTop="8dp"
android:layout\_marginEnd="8dp"
android:layout\_marginBottom="8dp"

<ImageView

app:layout\_constraintEnd\_toStartOf="@+id/crime\_solved"
app:layout\_constraintStart\_toStartOf="parent"
app:layout\_constraintTop\_toBottomOf="@+id/crime\_title" />