Министерство образования и молодежной политики Свердловской области



ГАПОУ СО «Екатеринбургский колледж транспортного строительства»

Отчёт по программе «Практическое занятие 24»

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Группа: ПР-32

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2024

**Задание:**

Задание 2: Используя RecycleView и Fragment (навигацию по фрагментам),

создать приложение:

1 вариант «Список расходов по датам (с расшифровкой)»

**Входные и выходные данные**

private lateinit var login: EditText  
private lateinit var password: EditText

private lateinit var dateEditText: EditText  
private lateinit var taskEditText: EditText  
private lateinit var detailsEditText: EditText

**Листинг программы (если есть)**

Activity:

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".AllActivity">  
  
 <androidx.fragment.app.FragmentContainerView  
 android:id="@+id/fragmentContainerView"  
 android:name="androidx.navigation.fragment.NavHostFragment"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 app:defaultNavHost="true"  
 app:navGraph="@navigation/routes"  
 tools:layout\_editor\_absoluteX="1dp"  
 tools:layout\_editor\_absoluteY="1dp"  
 tools:ignore="MissingConstraints" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Activity Class:

package com.example.abc  
  
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import androidx.fragment.app.Fragment  
import androidx.fragment.app.commit  
  
class AllActivity : AppCompatActivity() {  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 setContentView(R.layout.*activity\_all*)  
  
 if (savedInstanceState == null) {  
 navigateToFragment(RegFragment())  
 }  
 }  
  
 fun navigateToFragment(fragment: Fragment) {  
 *supportFragmentManager*.*commit* **{** replace(R.id.*fragmentContainerView*, fragment)  
 addToBackStack(null)  
 **}** }  
}

Fragment:

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".RegFragment">  
  
 <EditText  
 android:id="@+id/login"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:layout\_marginEnd="10dp"  
 android:layout\_marginTop="200dp"  
 android:hint="@string/login"  
 android:inputType="text"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <EditText  
 android:id="@+id/password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginStart="10dp"  
 android:layout\_marginEnd="10dp"  
 android:layout\_marginTop="20dp"  
 android:hint="@string/password"  
 android:inputType="textPassword"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/login" />  
  
 <Button  
 android:id="@+id/entrance"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:layout\_marginEnd="10dp"  
 android:layout\_marginBottom="10dp"  
 android:background="@drawable/button"  
 android:text="@string/ok"  
 android:textAllCaps="false"  
 android:textSize="18sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:id="@+id/detailFragment"  
 tools:context=".RegFragment">  
  
 <TextView  
 android:id="@+id/task"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp"  
 android:text="@string/task"  
 android:textAlignment="center"  
 android:textColor="@color/black"  
 android:textSize="30sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <TextView  
 android:id="@+id/date\_text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="100dp"  
 android:text="@string/date"  
 android:textAlignment="center"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/task" />  
  
 <EditText  
 android:id="@+id/date\_edit"  
 android:layout\_width="300dp"  
 android:layout\_height="35dp"  
 android:layout\_marginTop="10dp"  
 android:background="@drawable/text\_round"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/date\_text" />  
  
 <TextView  
 android:id="@+id/name\_text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="100dp"  
 android:text="@string/name"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/date\_edit" />  
  
 <EditText  
 android:id="@+id/name\_edit"  
 android:layout\_width="300dp"  
 android:layout\_height="35dp"  
 android:layout\_marginTop="10dp"  
 android:background="@drawable/text\_round"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/name\_text"/>  
  
 <TextView  
 android:id="@+id/yet\_text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="100dp"  
 android:text="@string/yet"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/name\_edit" />  
  
 <EditText  
 android:id="@+id/yet\_edit"  
 android:layout\_width="300dp"  
 android:layout\_height="35dp"  
 android:layout\_marginTop="10dp"  
 android:background="@drawable/text\_round"  
 android:textColor="@color/black"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/yet\_text" />  
  
 <Button  
 android:id="@+id/button\_ok"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:layout\_marginEnd="10dp"  
 android:layout\_marginBottom="10dp"  
 android:background="@drawable/button"  
 android:text="@string/ok"  
 android:textAllCaps="false"  
 android:textSize="18sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout   
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".RegFragment">  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:id="@+id/recycle1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:scrollbars="horizontal"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 tools:listitem="@layout/recycleview" />  
  
 <Button  
 android:id="@+id/button\_return"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="350dp"  
 android:layout\_marginEnd="10dp"  
 android:layout\_marginBottom="10dp"  
 android:background="@drawable/button"  
 android:text="@string/plus"  
 android:textColor="@color/black"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"/>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Fragment Class:

package com.example.abc  
  
import android.annotation.SuppressLint  
import android.content.Context  
import android.content.SharedPreferences  
import android.os.Build  
import android.os.Bundle  
import androidx.fragment.app.Fragment  
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import android.widget.Button  
import android.widget.EditText  
import android.widget.Toast  
import androidx.annotation.RequiresApi  
  
class RegFragment : Fragment() {  
 private lateinit var login: EditText  
 private lateinit var password: EditText  
 private lateinit var buttonLogin: Button  
  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 }  
  
 @SuppressLint("MissingInflatedId")  
 @RequiresApi(Build.VERSION\_CODES.*O*)  
 override fun onCreateView(  
 inflater: LayoutInflater, container: ViewGroup?,  
 savedInstanceState: Bundle?  
 ): View? {  
  
 val view = inflater.inflate(R.layout.*fragment\_reg*, container, false)  
 login = view.findViewById(R.id.*login*)  
 password = view.findViewById(R.id.*password*)  
 buttonLogin = view.findViewById(R.id.*entrance*)  
  
 loadLoginData()  
  
 buttonLogin.setOnClickListener **{** if (login.*text*.toString().*isNotEmpty*() && password.*text*.toString().*isNotEmpty*()) {  
  
 if (login.*text*.toString() == "morsals1" && password.*text*.toString() == "ects32") {  
 saveLoginData(login.*text*.toString(), password.*text*.toString())  
 val addFragment = AddFragment()  
 requireActivity().*supportFragmentManager*.beginTransaction()  
 .replace(R.id.*fragmentContainerView*, addFragment)  
 .addToBackStack(null)  
 .commit()  
 } else  
 {  
 Toast.makeText(*context*, "Неверный логин и пароль", Toast.*LENGTH\_SHORT*).show()  
 }  
 }  
 else {  
 Toast.makeText(*context*, "Вы не ввели логин или пароль!", Toast.*LENGTH\_SHORT*).show()  
 }  
 **}** return view  
 }  
  
 private fun saveLoginData(login: String, password: String) {  
 val sharedPreferences = requireContext().getSharedPreferences("UserPrefs", Context.*MODE\_PRIVATE*)  
 val editor = sharedPreferences.edit()  
 editor.putString("LOGIN", login)  
 editor.putString("PASSWORD", password)  
 editor.apply()  
 }  
  
 private fun loadLoginData() {  
 val sharedPreferences = requireContext().getSharedPreferences("UserPrefs", Context.*MODE\_PRIVATE*)  
 val savedLogin = sharedPreferences.getString("LOGIN", null)  
 val savedPassword = sharedPreferences.getString("PASSWORD", null)  
  
 if (savedLogin != null && savedPassword != null) {  
 login.setText(savedLogin)  
 password.setText(savedPassword)  
 }  
 }  
  
}

package com.example.abc  
  
import android.annotation.SuppressLint  
import android.os.Bundle  
import androidx.fragment.app.Fragment  
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import android.widget.Button  
import android.widget.EditText  
import android.widget.Toast  
import java.text.ParseException  
import java.text.SimpleDateFormat  
import java.util.Locale  
  
class AddFragment : Fragment() {  
  
 private lateinit var dateEditText: EditText  
 private lateinit var taskEditText: EditText  
 private lateinit var detailsEditText: EditText  
  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 }  
  
 @SuppressLint("MissingInflatedId", "CutPasteId")  
 override fun onCreateView(  
 inflater: LayoutInflater, container: ViewGroup?,  
 savedInstanceState: Bundle?  
 ): View? {  
 return inflater.inflate(R.layout.*fragment\_add*, container, false)  
 }  
  
 override fun onViewCreated(view: View, savedInstanceState: Bundle?) {  
 super.onViewCreated(view, savedInstanceState)  
  
 dateEditText = view.findViewById(R.id.*date\_edit*)  
 taskEditText = view.findViewById(R.id.*name\_edit*)  
 detailsEditText = view.findViewById(R.id.*yet\_edit*)  
  
 val addButton: Button = view.findViewById(R.id.*button\_ok*)  
  
 addButton.setOnClickListener **{** if (dateEditText.*text*.toString().*isNotEmpty*() && taskEditText.*text*.toString().*isNotEmpty*()) {  
 if (isValidDate(dateEditText.*text*.toString()) && isInputValid(taskEditText.*text*.toString())) {  
 val item\_task = item\_task(  
 dateEditText.*text*.toString(),  
 taskEditText.*text*.toString(),  
 detailsEditText.*text*.toString()  
 )  
 ListFragment.addTask(requireContext(), item\_task)  
 (*activity* as AllActivity).navigateToFragment(ListFragment())  
 } else {  
 Toast.makeText(  
 *context*,  
 "Введённая дата или сумма не является корректной!",  
 Toast.*LENGTH\_SHORT* ).show()  
 }  
 } else {  
 Toast.makeText(*context*, "Вы не ввели дату или задачу", Toast.*LENGTH\_SHORT*).show()  
 }  
 **}** }  
  
 fun isValidDate(dateString: String, dateFormat: String = "dd.MM.yyyy"): Boolean {  
 val regex = Regex("^\\d{2}\\.\\d{2}\\.\\d{4}$")  
  
 if (!regex.matches(dateString)) {  
 return false  
 }  
  
 val sdf = SimpleDateFormat(dateFormat, Locale.getDefault())  
 sdf.*isLenient* = false  
  
 return try {  
 sdf.parse(dateString) != null  
 } catch (e: ParseException) {  
 false  
 }  
 }  
  
  
 fun isInputValid(input: String): Boolean {  
 return input.*all* **{ it**.*isDigit*() **}** }  
  
}

package com.example.abc  
  
import android.annotation.SuppressLint  
import android.content.Context  
import android.os.Bundle  
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import android.widget.Button  
import androidx.fragment.app.Fragment  
import androidx.recyclerview.widget.LinearLayoutManager  
import androidx.recyclerview.widget.RecyclerView  
import com.google.firebase.crashlytics.buildtools.reloc.com.google.common.reflect.TypeToken  
import com.google.gson.Gson  
  
class ListFragment : Fragment() {  
  
 private lateinit var recyclerView: RecyclerView  
 private lateinit var adapter: Adapter  
 private val item\_task = *mutableListOf*<item\_task>()  
  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 }  
  
 override fun onCreateView(  
 inflater: LayoutInflater, container: ViewGroup?,  
 savedInstanceState: Bundle?  
 ): View? {  
 return inflater.inflate(R.layout.*fragment\_list*, container, false)  
 }  
  
 override fun onViewCreated(view: View, savedInstanceState: Bundle?) {  
 super.onViewCreated(view, savedInstanceState)  
  
 recyclerView = view.findViewById(R.id.*recycle1*)  
 adapter = Adapter(item\_task)  
 recyclerView.*layoutManager* = LinearLayoutManager(requireContext())  
 recyclerView.*adapter* = adapter  
  
 loadTasks()  
  
 val addTaskButton: Button = view.findViewById(R.id.*button\_return*)  
 addTaskButton.setOnClickListener **{** (*activity* as AllActivity).navigateToFragment(AddFragment())  
 **}** }  
  
 @SuppressLint("NotifyDataSetChanged")  
 private fun loadTasks() {  
 val sharedPreferences = requireActivity().getSharedPreferences("tasks", Context.*MODE\_PRIVATE*)  
 val json = sharedPreferences.getString("task\_list", null)  
 if (json != null) {  
 val type = object : TypeToken<List<item\_task>>() {}.*type* val savedItems: List<item\_task> = Gson().fromJson(json, type)  
 item\_task.clear()  
 item\_task.addAll(savedItems)  
 adapter.notifyDataSetChanged()  
 }  
 }  
  
 companion object {  
 fun addTask(context: Context, item\_task: item\_task) {  
 val sharedPreferences = context.getSharedPreferences("tasks", Context.*MODE\_PRIVATE*)  
 val json = sharedPreferences.getString("task\_list", null)  
 val taskList = if (json != null) {  
 val type = object : TypeToken<MutableList<item\_task>>() {}.*type* val savedItems: MutableList<item\_task> = Gson().fromJson(json, type)  
 savedItems  
 } else {  
 *mutableListOf*()  
 }  
 taskList.add(item\_task)  
 sharedPreferences.edit().putString("task\_list", Gson().toJson(taskList)).apply()  
 }  
 }  
  
}

Adapter:

package com.example.abc  
  
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import android.widget.TextView  
import androidx.recyclerview.widget.RecyclerView  
  
class Adapter(private val item\_task: List<item\_task>) : RecyclerView.Adapter<Adapter.TaskViewHolder>() {  
 class TaskViewHolder(view: View) : RecyclerView.ViewHolder(view) {  
 val dateTextView: TextView = view.findViewById(R.id.*tv\_date*)  
 val taskTextView: TextView = view.findViewById(R.id.*tv\_name*)  
 val detailsTextView: TextView = view.findViewById(R.id.*tv\_detail*)  
 }  
  
 override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): TaskViewHolder {  
 val view = LayoutInflater.from(parent.*context*).inflate(R.layout.*recycleview*, parent, false)  
 return TaskViewHolder(view)  
 }  
  
 override fun onBindViewHolder(holder: TaskViewHolder, position: Int) {  
 val item = item\_task[position]  
 holder.dateTextView.*text* = item.date  
 holder.taskTextView.*text* = item.name  
 holder.detailsTextView.*text* = item.details  
 }  
  
 override fun getItemCount(): Int = item\_task.size  
}

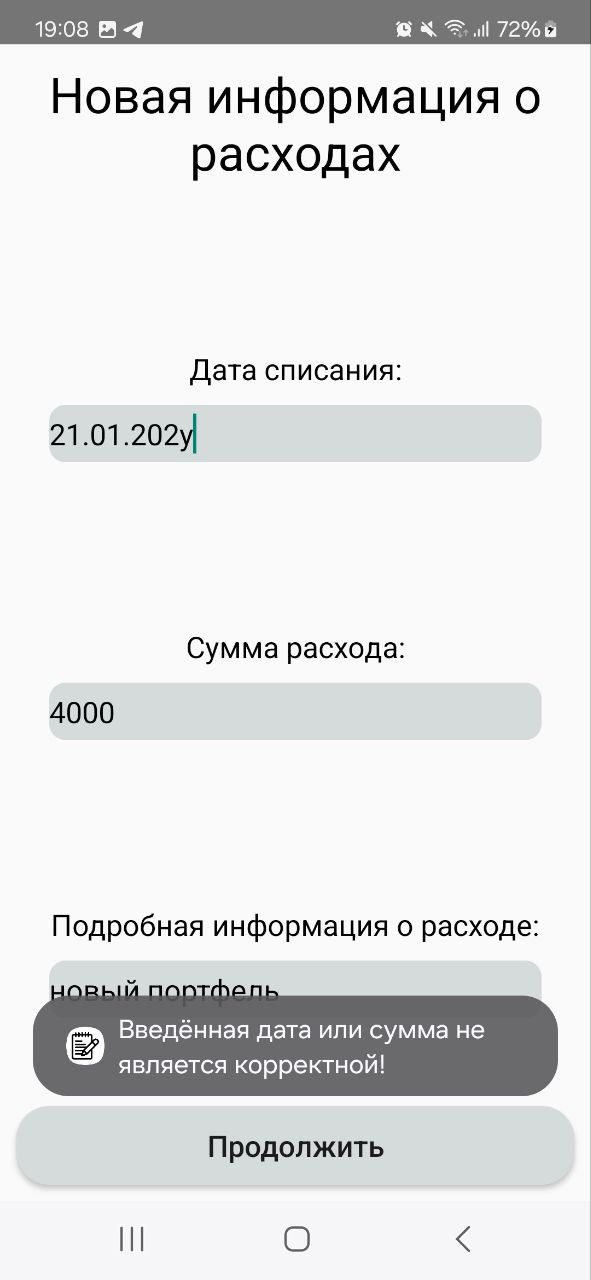
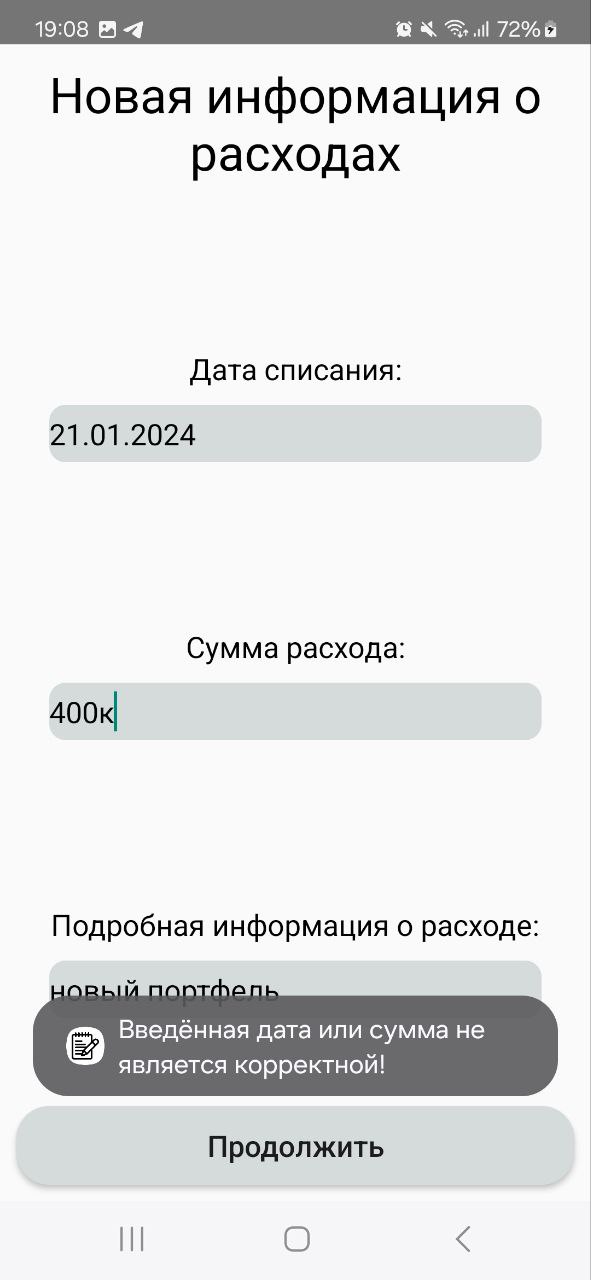
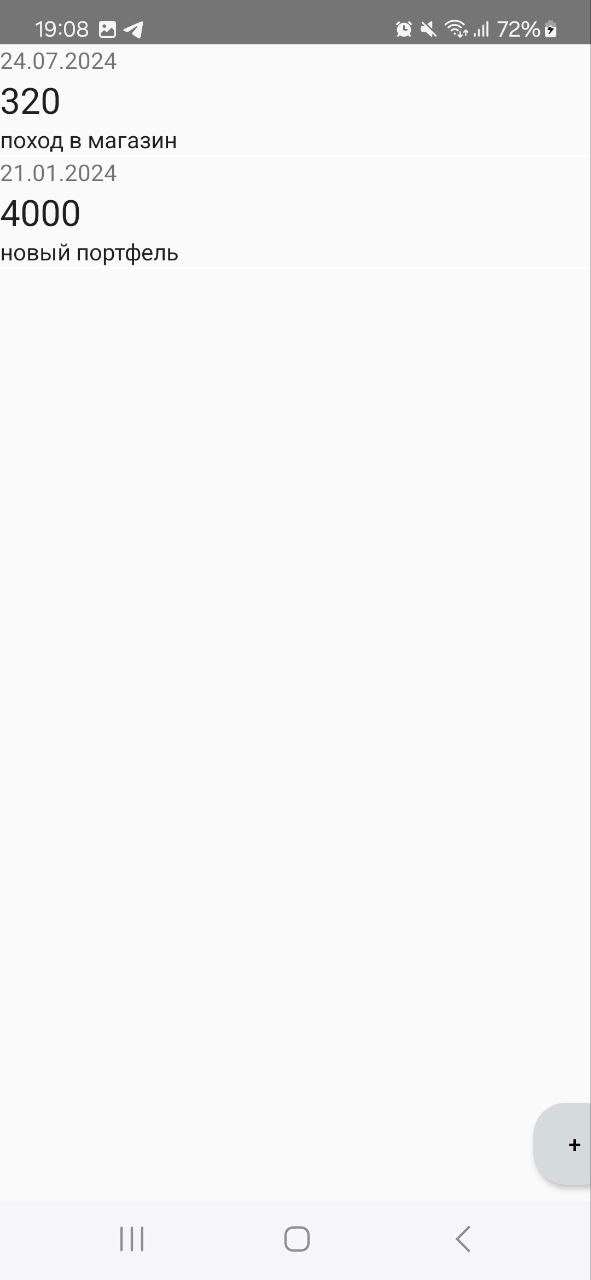
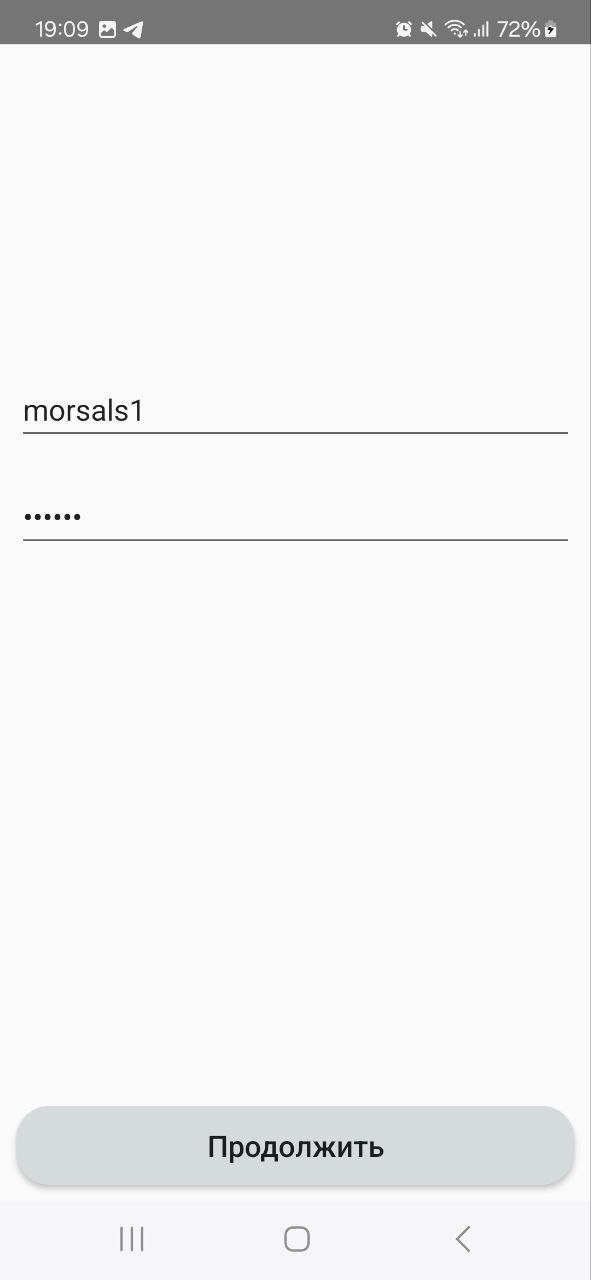
Data Class:

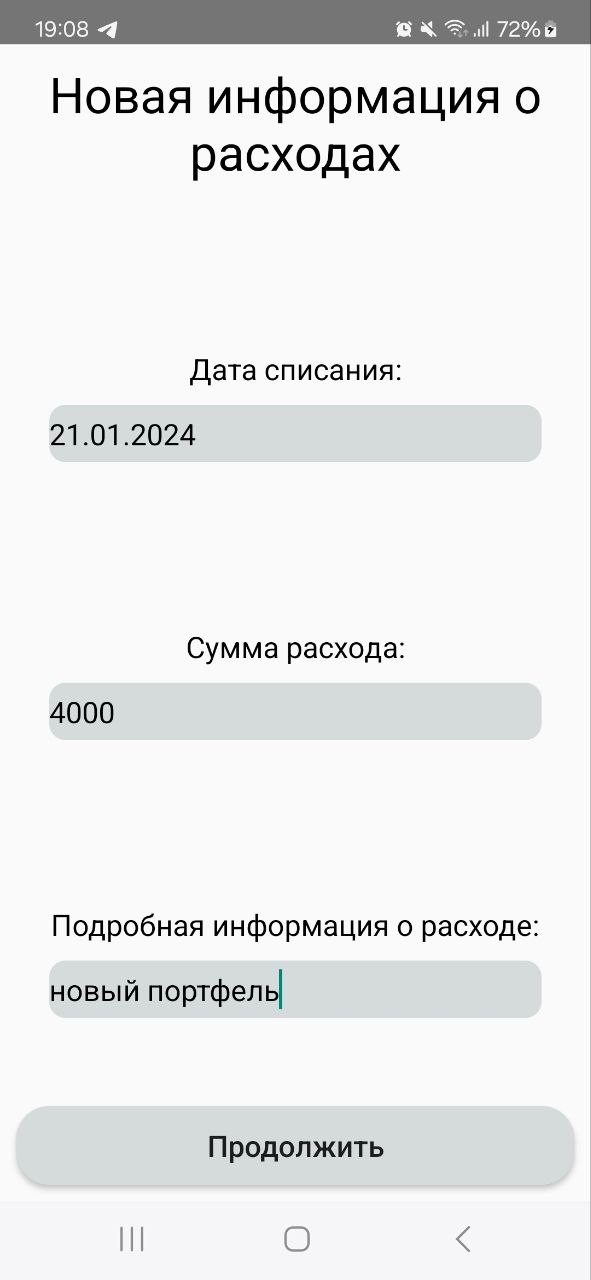
package com.example.abc  
  
import android.os.Parcel  
import android.os.Parcelable  
  
data class item\_task(  
 val date: String,  
 val name: String,  
 val details: String  
) : Parcelable {  
 constructor(parcel: Parcel) : this(  
 parcel.readString() ?: "",  
 parcel.readString() ?: "",  
 parcel.readString() ?: ""  
 )  
  
 override fun writeToParcel(parcel: Parcel, flags: Int) {  
 parcel.writeString(date)  
 parcel.writeString(name)  
 parcel.writeString(details)  
 }  
  
 override fun describeContents(): Int {  
 return 0  
 }  
  
 companion object CREATOR : Parcelable.Creator<item\_task> {  
 override fun createFromParcel(parcel: Parcel): item\_task {  
 return item\_task(parcel)  
 }  
  
 override fun newArray(size: Int): Array<item\_task?> {  
 return *arrayOfNulls*(size)  
 }  
 }  
}

RecycleView xml:

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical">  
  
 <TextView  
 android:id="@+id/tv\_date"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceSmall" />  
  
 <TextView  
 android:id="@+id/tv\_name"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAppearance="?android:attr/textAppearanceLarge" />  
 <TextView  
 android:id="@+id/tv\_detail"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="@dimen/thisis14sp"  
 android:textAppearance="?android:attr/textAppearanceLarge" />  
 <View  
 android:id="@+id/view1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="1dp"  
 android:background="@color/white" />  
</LinearLayout>

**Тестовые ситуации**

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