Assessment Cover Sheet

This Assessment Cover Sheet is only to be attached to hard copy submission of assessments.

ASSESSMENT DETAILS

Unit title	Software Development For Mobile Device	Tutorial /Lab Group	1	Office use only
Unit code	COS30017	Due date	18 Dec 2022	
Name of lecturer/tutor	Marlene Lu			
Assignment title	Assignment 4			Faculty or school date stamp

STUDENT(S) DETAILS

	Student Name(s)	Student ID Number(s)
(1)	Alex Ngie Guan Ming	102765770
(2)		
(3)		
(4)		
(5)		

DECLARATION AND STATEMENT OF AUTHORSHIP

1. I/we have not impersonated, or allowed myself/ourselves to be impersonated by any person for the purposes of this assessment.
2. This assessment is my/our original work and no part of it has been copied from any other source except where due acknowledgement is made.
3. No part of this assessment has been written for me/us by any other person except where such collaboration has been authorised by the lecturer/tutor concerned.
4. I/we have not previously submitted this work for this or any other course/unit.
5. I/we give permission for my/our assessment response to be reproduced, communicated, compared and archived for plagiarism detection, benchmarking or educational purposes.

I/we understand that:

6. Plagiarism is the presentation of the work, idea or creation of another person as though it is your own. It is a form of cheating and is a very serious academic offence that may lead to exclusion from the University. Plagiarised material can be drawn from, and presented in, written, graphic and visual form, including electronic data and oral presentations. Plagiarism occurs when the origin of the material used is not appropriately cited.

Student signature/s

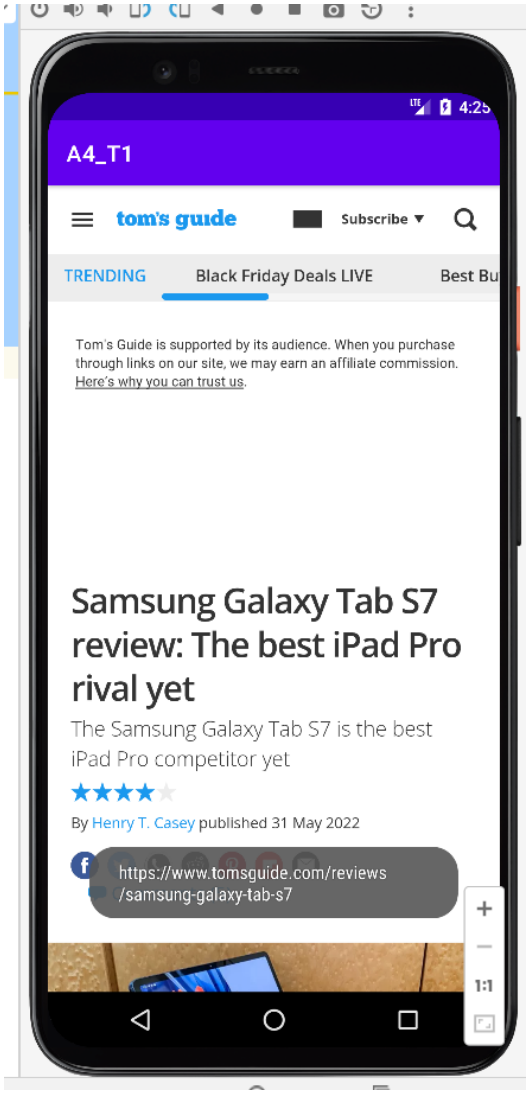
I/we declare that I/we have read and understood the declaration and statement of authorship.

(1)	alex	(4)	
(2)		(5)	
(3)		(6)	

Further information relating to the penalties for plagiarism, which range from a formal caution to expulsion from the University is contained on the Current Students website at **https://www.swinburne.edu.my/current-students/manage-course/exams-results-assessment**

Copies of this form can be downloaded from the Student Forms web page at **https://www.swinburne.edu.my/current-students/manage-course/exams-results-assessment/how-to-submit-work.php**

Assignment 4 Task 1 (Output)


4:25
A4_T1
tom's guide
Subscribe
TRENDING
Black Friday Deals LIVE
Best Bu
Tom's Guide is supported by its audience. When you purchase through links on our site, we may earn an affiliate commission. Here's why you can trust us.
Samsung Galaxy Tab S7 review: The best iPad Pro rival yet
The Samsung Galaxy Tab S7 is the best iPad Pro competitor yet
By Henry T. Casey published 31 May 2022
https://www.tomsguide.com/reviews/samsung-galaxy-tab-s7
1:1

Assignment 4 Task 1 (kt file)

MainActivity.kt

```
package com.example.a4_t1

import android.content.Intent
import android.os.Bundle
import android.widget.Button
import androidx.appcompat.app.AppCompatActivity
import androidx.fragment.app.FragmentActivity
import androidx.viewpager.widget.ViewPager
import androidx.viewpager2.widget.ViewPager2
import com.google.android.material.tabs.TabLayout
import com.google.android.material.tabs.TabLayoutMediator


class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val viewPager: ViewPager2 = findViewById(R.id.mainPager)
        val tabLayout: TabLayout = findViewById(R.id.MainTab)

        val pagerAdapter = viewPageAdapter(this)
        viewPager.adapter = pagerAdapter

        TabLayoutMediator(tabLayout, viewPager,) { tab, position ->
            val tabNames = listOf("HandPhone", "Tablets")
            tab.text = tabNames[position]
        }.attach()
    }
}
```

rcAdapter.kt

```
package com.example.a4_t1


import android.content.Context
import android.content.Intent
import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import android.widget.ImageView
import android.widget.TextView
import android.widget.Toast
import androidx.recyclerview.widget.RecyclerView

class rcAdapter(private var context: Context, private var Image:
ArrayList<Int>, private var Name:ArrayList<String>
                , private var Spec:ArrayList<String>, private var
Camera:ArrayList<String>, private var CPU:ArrayList<String>,
                private var URL:ArrayList<String>) :

    RecyclerView.Adapter<rcAdapter.ViewHolder>() {
    override fun onCreateViewHolder(viewGroup: ViewGroup, i: Int):
ViewHolder {
        val v: View =
LayoutInflater.from(viewGroup.context).inflate(R.layout.rcrow, viewGroup,
false)
        return ViewHolder(v)
    }

    override fun onBindViewHolder(viewHolder: ViewHolder, i: Int) {
        // setting image resource
        viewHolder.imgview.setImageResource(Image[i])
        viewHolder.txtName.setText(Name[i])
        viewHolder.txtCamera.setText(Camera[i])
        viewHolder.txtSpec.setText(Spec[i])
        viewHolder.txtChipset.setText(CPU[i])
        viewHolder.itemView.setOnClickListener(){
            val intent = Intent(context,MainActivity2::class.java)
            intent.putExtra("url",URL[i])
            context.startActivity(intent)
//            Toast.makeText(context,URL[i],Toast.LENGTH_LONG).show()
        }

    }
    override fun getItemCount(): Int {
        return Image.size
    }

    class ViewHolder(itemView: View) : RecyclerView.ViewHolder(itemView) {
        var imgview: ImageView
        var txtName: TextView
        var txtSpec: TextView
        var txtCamera: TextView
        var txtChipset: TextView
        init {
            // getting ImageView reference
            imgview = itemView.findViewById<View>(R.id.imgPhone) as
ImageView
            txtName = itemView.findViewById<View>(R.id.txtName) as TextView
```

```
            txtSpec = itemView.findViewById<View>(R.id.txtSpec) as TextView
            txtCamera = itemView.findViewById<View>(R.id.txtCamera) as
TextView
            txtChipset = itemView.findViewById<View>(R.id.txtCPU) as
TextView
        }
    }
}
```

FragTab.kt

```
package com.example.a4_t1

import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import androidx.fragment.app.Fragment
import androidx.recyclerview.widget.RecyclerView
import androidx.recyclerview.widget.StaggeredGridLayoutManager
import java.io.InputStream

class FragTab: Fragment() {
    private lateinit var recyclerViewAdapter: rcAdapter
    private lateinit var recyclerView: RecyclerView
    var ImageList: ArrayList<Int> = arrayListOf()
    var NameList:ArrayList<String> = arrayListOf()
    var SpecList:ArrayList<String> = arrayListOf()
    var CameraList:ArrayList<String> = arrayListOf()
    var CPUList:ArrayList<String> = arrayListOf()
    var URLList:ArrayList<String> = arrayListOf()
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
    }

    override fun onCreateView(
        inflater: LayoutInflater,
        container: ViewGroup?,
        savedInstanceState: Bundle?
    ): View? {
        var x:View =inflater.inflate(R.layout.rcview, container, false)
        getData()
        recyclerView = x.findViewById(R.id.rcViewStagged)

        // setting recyclerView layoutManager
        val layoutManager: RecyclerView.LayoutManager =
StaggeredGridLayoutManager(2, StaggeredGridLayoutManager.VERTICAL)
        recyclerView.layoutManager = layoutManager
        recyclerViewAdapter =
rcAdapter(x.context,ImageList,NameList,SpecList,CameraList,CPUList,URLList)

        // setting recycle view adapter
        recyclerView.adapter = recyclerViewAdapter
        return x;
    }

    private fun getData(){
        val txt: InputStream =
this.resources.openRawResource(R.raw.task1_data)
        val buffer = txt.bufferedReader()
```

```
        var line = buffer.readLine();
        var flag = false;
        while(line != null){
            val temp = line!!.split(":").toTypedArray()
            if(temp[0] == "Phone" || temp[0] == "Tablet"){
                if(temp[0] == "Tablet"){
                    NameList.add(temp[1])
                    flag = true
                }else{
                    flag = false
                }
            }else if(temp[0] == "Chipset" && flag){
                CPUList.add(temp[1])
            }else if(temp[0] == "Memory" && flag){
                SpecList.add(temp[1])
            }else if(temp[0] == "Camera" && flag) {
                CameraList.add(temp[1])
            }else if(temp[0] == "Image" && flag){
                val temp1 = temp[1]!!.split(".").toTypedArray()
                val id:Int =
resources.getIdentifier(temp1[0],"drawable",requireActivity().packageName)
                ImageList.add(id)
            }else if(temp[0] == "Url" && flag){
                URLList.add(temp[1]+":"+temp[2])
            }
            line = buffer.readLine()
        }
    }
}
```

fragphone.kt

```
package com.example.a4_t1

import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import androidx.fragment.app.Fragment
import androidx.recyclerview.widget.RecyclerView
import androidx.recyclerview.widget.StaggeredGridLayoutManager
import java.io.InputStream
import java.net.URL

class fragPhone: Fragment() {
    private lateinit var recyclerViewAdapter: rcAdapter
    private lateinit var recyclerView: RecyclerView
    var ImageList: ArrayList<Int> = arrayListOf()
    var NameList:ArrayList<String> = arrayListOf()
    var SpecList:ArrayList<String> = arrayListOf()
    var CameraList:ArrayList<String> = arrayListOf()
    var CPUList:ArrayList<String> = arrayListOf()
    var URLList:ArrayList<String> = arrayListOf()
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
    }

    override fun onCreateView(
        inflater: LayoutInflater,
        container: ViewGroup?,
```

```
        savedInstanceState: Bundle?
    ): View? {
        var x:View =inflater.inflate(R.layout.rcview, container, false)
        getData()
        recyclerView = x.findViewById(R.id.rcViewStagged)

        // setting recyclerView layoutManager
        val layoutManager: RecyclerView.LayoutManager =
StaggeredGridLayoutManager(2, StaggeredGridLayoutManager.VERTICAL)
        recyclerView.layoutManager = layoutManager
        recyclerViewAdapter =
rcAdapter(x.context,ImageList,NameList,SpecList,CameraList,CPUList,URLList)

        // setting recycle view adapter
        recyclerView.adapter = recyclerViewAdapter
        return x;
    }

    private fun getData(){
        val txt:InputStream =
this.resources.openRawResource(R.raw.task1_data)
        val buffer = txt.bufferedReader()
        var line = buffer.readLine();
        var flag = false;
        while(line != null){
            val temp = line!!.split(":").toTypedArray()
            if(temp[0] == "Phone" || temp[0] == "Tablet"){
                if(temp[0] == "Phone"){
                    NameList.add(temp[1])
                    flag = true
                }else{
                    flag = false
                }
            }else if(temp[0] == "Chipset" && flag){
                CPUList.add(temp[1])
            }else if(temp[0] == "Memory" && flag){
                SpecList.add(temp[1])
            }else if(temp[0] == "Camera" && flag) {
                CameraList.add(temp[1])
            }else if(temp[0] == "Image" && flag){
                val temp1 = temp[1]!!.split(".").toTypedArray()
                val id:Int =
resources.getIdentifier(temp1[0],"drawable",requireActivity().packageName)
                ImageList.add(id)
            }else if(temp[0] == "Url" && flag){
                URLList.add(temp[1]+":"+temp[2])
            }
            line = buffer.readLine()
        }
    }
}
```

viewPageAdapter.kt

```
package com.example.a4_t1

import androidx.fragment.app.Fragment
import androidx.fragment.app.FragmentActivity
import androidx.fragment.app.FragmentManager
import androidx.lifecycle.Lifecycle
import androidx.viewpager2.adapter.FragmentStateAdapter

class viewPageAdapter(fragmentManager: FragmentActivity) :
    FragmentStateAdapter(fragmentManager) {

    override fun getItemCount(): Int {
        return 2
    }

    override fun createFragment(position: Int): Fragment {
        when (position) {
            0 -> return fragPhone()
            else -> return FragTab()
        }
    }
}
```

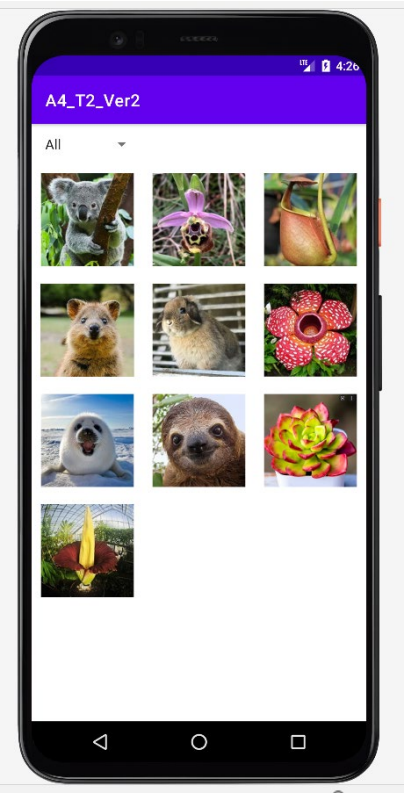
web,kt

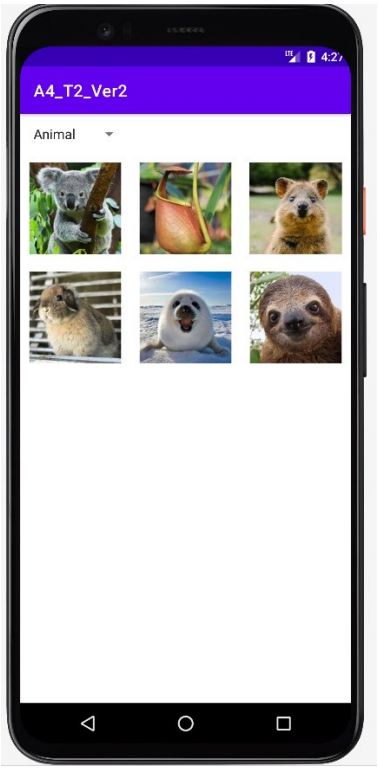
```
package com.example.a4_t1

import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import android.webkit.WebResourceRequest
import android.webkit.WebSettings
import android.webkit.WebView
import android.webkit.WebViewClient
import android.widget.Toast
import androidx.fragment.app.Fragment

class web(private val url:String):Fragment() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)

    }

    override fun onCreateView(
        inflater: LayoutInflater,
        container: ViewGroup?,
        savedInstanceState: Bundle?
    ): View? {
        var v:View = inflater.inflate(R.layout.webvie,container,false)
        return v
    }

    override fun onViewCreated(view: View, savedInstanceState: Bundle?) {
        super.onViewCreated(view, savedInstanceState)
        var myWebView:WebView = view.findViewById(R.id.webview)
        val webSettings = myWebView.settings
        webSettings.javaScriptEnabled = true
        myWebView.webViewClient = WebViewClient()
        Toast.makeText(view.context,url,Toast.LENGTH_LONG).show()
        myWebView.loadUrl(url)
    }
}
```

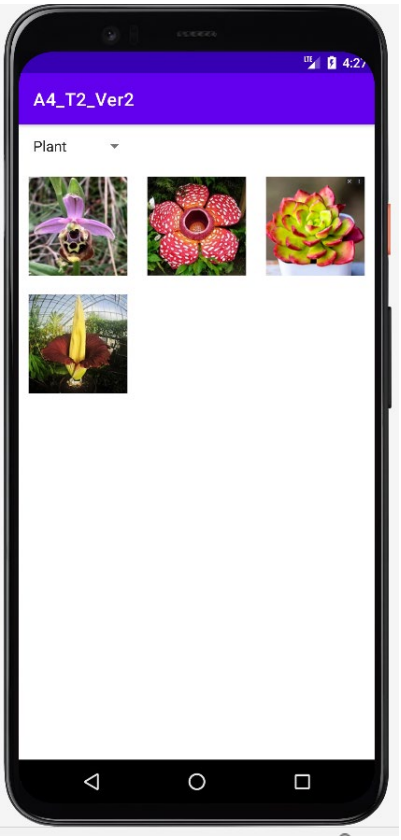
MainActivity2.kt

```
package com.example.a4_t1

import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Toast

class MainActivity2 : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main2)


supportFragmentManager.beginTransaction().add(R.id.flact2,web(intent.getStr
ingExtra("url").toString())).commit()
    }
}
```

Assignment 4 Task 2 (output)







Assignment 4 Task 2 (kt file)

MainActivity.kt

```
package com.example.a4_t2_ver2

import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.util.Log
import android.view.View
import android.widget.*
import com.squareup.picasso.Picasso

class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        val data:MyData = GenerateData()
        val gv:GridView = findViewById(R.id.GVimg)
        var ll:ArrayList<img> = data.specific("all")
        var dataAdapter = GVAdapter(ll, this@MainActivity,data.Url())
        gv.adapter = dataAdapter
        gv.onItemClickListener = AdapterView.OnItemClickListener { _, _,
position, _ ->
            // inside on click method we are simply displaying
            // a toast message with course name.
            val intent:Intent = Intent(this,MainActivity2::class.java)
            intent.putExtra("name",ll[position].name)
            intent.putExtra("url",data.Url() + ll[position].img)
            startActivity(intent)
//            Toast.makeText(
//                applicationContext, ll[position].name + " selected",
//                Toast.LENGTH_SHORT
//            ).show()
        }

        val spn:Spinner = findViewById(R.id.spinSelect)
        val spinAdapter: ArrayAdapter<String> =
            ArrayAdapter(this, android.R.layout.simple_list_item_1,
data.dropdown())

spinAdapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdow
n_item)
        spn.adapter = spinAdapter
        spn.onItemSelectedListener = object :
AdapterView.OnItemSelectedListener {
            override fun onItemSelected(p0: AdapterView<*>?, p1: View?, p2:
Int, p3: Long) {
                if(p2 == 1){
                    ll = data.specific("animal")
                    dataAdapter =
GVAdapter(ll,this@MainActivity,data.Url())
                    gv.adapter = dataAdapter
                }else if(p2 == 2){
                    ll = data.specific("plant")
                    dataAdapter =
GVAdapter(ll,this@MainActivity,data.Url())
                    gv.adapter = dataAdapter
                }else{
                    ll = data.specific("all")
```

```
                    dataAdapter =
GVAdapter(ll,this@MainActivity,data.Url())
                    gv.adapter = dataAdapter
                }
            }

            override fun onNothingSelected(p0: AdapterView<*>?) {
                TODO("Not yet implemented")
            }
        }
        // on below line we are setting adapter to our grid view.


    }

    fun GenerateData():MyData{
        val mm:MyData = MyData()
        mm.Url("http://172.17.3.254/mobile_a4t2/")
        var ii:img = img("koala","koala_thumb.jpg","koala.jpg","animal")
        mm.add(ii)
        ii = img("orchid","orchid_thumb.jpg","prchid.jpg","plant")
        mm.add(ii)
        ii = img("pitcher","pitcher_thumb.jpg","pitcher.jpg","animal")
        mm.add(ii)
        ii = img("quokka","quokka_thumb.jpg","quokka.jpg","animal")
        mm.add(ii)
        ii = img("rabbit","rabbit_thumb.jpg","rabbit.jpg","animal")
        mm.add(ii)
        ii = img("rafflesia","rafflesia_thumb.jpg","rafflesia.jpg","plant")
        mm.add(ii)
        ii = img("seal","seal_thumb.jpg","seal.jpg","animal")
        mm.add(ii)
        ii = img("sloth","sloth_thumb.jpg","sloth.jpg","animal")
        mm.add(ii)
        ii = img("succulent","succulent_thumb.png","succulent.png","plant")
        mm.add(ii)
        ii = img("titan
arum","titan_arum_thumb.jpg","titan_arum.jpg","plant")
        mm.add(ii)
        return mm
    }
}
```

MyData.kt

```
package com.example.a4_t2_ver2

data class img(val name:String,val thumb:String,val img:String,val
type:String)

class MyData {
    val data:ArrayList<img> = arrayListOf()
    var url:String = ""
    fun add(temp:img){
        data.add(temp)
    }

    fun specific(temp:String):ArrayList<img>{
        val t:ArrayList<img> = arrayListOf()
        for(i in 0..data.size-1){
            if(data[i].type.compareTo(temp) == 0 || temp.compareTo("all")
== 0){
                t.add(data[i])
            }
        }
        return t
    }

    fun Url(temp:String){
        url = temp
    }

    fun Url():String{
        return url
    }

    fun allImg():ArrayList<img>{
        return data
    }

    fun dropdown():ArrayList<String>{
        val temp:ArrayList<String> = arrayListOf()
        temp.add("All")
        temp.add("Animal")
        temp.add("Plant")

        return temp
    }
}
```

GVAdapter.kt

```
package com.example.a4_t2_ver2

import android.content.Context
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import android.widget.*
import com.squareup.picasso.Picasso

class GVAdapter(
    // on below line we are creating two
    // variables for course list and context
    private val dataList: ArrayList<img>,
    private val context: Context,
    private val url:String
) :
    BaseAdapter() {
    // in base adapter class we are creating variables
    // for layout inflater, course image view and course text view.
    private var layoutInflater: LayoutInflater? = null
    private lateinit var imgcol: ImageView

    override fun getCount(): Int {
        return dataList.size
    }

    override fun getItem(position: Int): Any? {
        return null
    }

    override fun getItemId(position: Int): Long {
        return 0
    }

    // in below function we are getting individual item of grid view.
    override fun getView(position: Int, convertView: View?, parent:
ViewGroup?): View? {
        var convertView = convertView
        if (layoutInflater == null) {
            layoutInflater =
                context.getSystemService(Context.LAYOUT_INFLATER_SERVICE)
as LayoutInflater
        }
        if (convertView == null) {
            convertView = layoutInflater!!.inflate(R.layout.imggv, null)
        }
        imgcol = convertView!!.findViewById(R.id.imgMain)
        Picasso.get().load(url + dataList.get(position).thumb).into(imgcol)
        return convertView
    }
}
```

MainActivity2.kt

```
package com.example.a4_t2_ver2

import android.media.Image
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.ImageView
import android.widget.TextView
import com.squareup.picasso.Picasso

class MainActivity2 : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main2)
        val txt:TextView = findViewById(R.id.txt)
        val img:ImageView = findViewById(R.id.img)

        txt.setText(intent.getStringExtra("name"))
        Picasso.get().load(intent.getStringExtra("url")).into(img)
    }
}
```