**Emro Science and Education**
Open-access scientific journal
Journal homepage: https://journal.emro.uz

OPEN ACCESS

CONFERENCE PAPER OPEN ACCESS

Vol. 1 No. 1 (2023) · “Axborot oqimlari va intellektual tizimlarning ijtimoiy, iqtisodiy va texnik-texnologik tarmoqlardagi o‘rni” mavzus...

*materiallar to‘plami*

# ANDROID ILOVALARIDA TARMOQLI DASTURLASH BILAN ISHLASH.

**Xamdamova Madina Jahongirbek qizi, Andijon mashinasozlik instituti, Intellektual boshqaruvi va kompyuter tizimlari, Axborot tizimlari va texnologiyalari, 3-bosqich talabasi,**

**Annotatsiya:** Mobil ilovalarda tarmoqli dasturlash. Hozirgi kunda internet tarmog’i barcha sohalarda rivojlanib ulgurgan. Demak biz mobil qurilmalardan foydalanish jarayonida faqat SMS/MMS yoki elektron pochta xabaralari emas balki internet xizmatlaridan foydalanishimiz mumkin.

***Kalit so‘zlar:*** *GET, POST, ConnectivityManager, getAllNetworkInfo*

Buning uchun ilovalarni yaratishda tarmoqda dasturlash, ya’ni, maxsus protokollar (HTTP), maxsus metodlar (GET, POST), ma’lumotlarni yuklab olish va boshqa xizmatlar (JSON) dan foydalanish ko’nikmalariga ega bo’lishimiz lozim.

Tarmoqqa ulanishni tekshirish

Demak tarmoq bilan ishlash jarayonida birinchi bo’lib, tarmoq holatini ya’ni ulanganlik holatini tekshirib ko’ramiz. Android tizimida buning uchun ConnectivityManager sinfidan foydalaniladi. Ushbu sinf orqali yaratilgan ob’ekt getSystemService() metodini chaqirish orqali initsializatsiya qilinadi. Ushbu holat bo’yicha quyida dastur kodi keltirilgan:

```
ConnectivityManager check = (ConnectivityManager)
this.context.getSystemService(Context.CONNECTIVITY_SERVICE);
```

Bundan keyin biz tarmoq haqidagi ma’lumotni to’liq olishimiz kerak bo’ladi. Buning uchun getAllNetworkInfo metodidan foydalaniladi. Ushbu metodi NetworkInfo tipidagi massiv qaytaradi va quyidagicha foydalaniladi:

```
NetworkInfo[] info = check.getAllNetworkInfo();
```

Endi ushbu info nomli massivga kelgan qiymat orqali ilova tarmoqqa ulanganligini tekshirish uchun getState metodidan foydalaniladi:

```
for (int i = 0; iif (info[i].getState() == NetworkInfo.State.CONNECTED){
Toast.makeText(context, "Internet is connected
Toast.LENGTH_SHORT).show();
}
}
```

Bundan tashqari tarmoq holatini tekshirish uchun quyidagi konstatntalardan foydalaniladi:

№ State
1 CONNECTING
2 DISCONNECTED
3 DISCONNECTING
4 SUSPENDED
5 UNKNOWN

Internet bog’lanishni tekshirish

 Yangi Android loyiha yaratamiz va uni Networking deb nomlaymiz.

Ilovaning AndroidManifest.xml fayliga quyidagi “permission” qo’shib qo’yiladi:

MainAcivity.java fayli mos holda o’zgartiriladi



Published: 10.11.2023

**Cite this article:** Xamdamova Madina Jahongirbek qizi (2023). Android ilovalarida tarmoqli dasturlash bilan ishlash. Emro Science and Education, 1(1). https://journal.emro.uz/public/maqola/389

*© 2023 The Author(s). Published by Emro Science and Education. This is an open access article.*

activity_main.xml fayli ham mos holda o’zgartiriladi
activity_main.xml
MainActivity.java
//Package name here import android.app.Activity; import android.os.Bundle; import java.io.IOException; import java.io.InputStream; import java.net.HttpURLConnection; import java.net.URL; import java.net.URLConnection; import android.util.Log; public class MainActivity extends Activity {
/** Called when the activity is first created. */
@Override public void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main);
} public void checkInternetConnection(){
…..
}
}
MainActivity.java-> checkInternetConnection(){…..}
ConnectivityManager check = (ConnectivityManager) this.context.
getSystemService(Context.CONNECTIVITY_SERVICE);
if (check != null)
{
NetworkInfo[] info = check.getAllNetworkInfo(); if (info != null)
for (int i = 0; i {
Toast.makeText(context, "Internet is connected",
Toast.LENGTH_SHORT).show();
}
}
else{
Toast.makeText(context, "not conencted to internet",
Toast.LENGTH_SHORT).show();
}
Binary ma’lumotlarni yuklab olish
 Yangi DownloadData nomli Android loyiha yaratamiz
 Loyihaning main.xml faylini quyidagicha o’zgartiramiz
AndroidManifest.xml fayliga quyidagi permission qo’shib qo’yiladi
MainActivity.java // Package nomi loyihangizga mos qoldiring // Kerakli sinflarni import qiling public class MainActivity extends Activity { ImageView img;
private InputStream OpenHttpConnection(String urlString) throws IOException{
InputStream in = null; int response = -1;
URL url = new URL(urlString);
URLConnection conn = url.openConnection(); if (!(conn instanceof HttpURLConnection)) throw new IOException(“Not an HTTP connection”);
try{
HttpURLConnection httpConn = (HttpURLConnection) conn;
httpConn.setAllowUserInteraction(false); httpConn.setInstanceFollowRedirects(true); httpConn.setRequestMethod(“GET”); httpConn.connect();

response = httpConn.getResponseCode(); if (response == HttpURLConnection.HTTP_OK) { in = httpConn.getInputStream(); } } catch (Exception ex){
Log.d(“Networking”, ex.getLocalizedMessage()); throw new IOException(“Error connecting”);}
return in;
}
private Bitmap DownloadImage(String URL) MainActivity.java
{
Bitmap bitmap = null; InputStream in = null; try {
in = OpenHttpConnection(URL); bitmap = BitmapFactory.decodeStream(in); in.close();
} catch (IOException e1) {
Log.d(“NetworkingActivity”, e1.getLocalizedMessage());
} return bitmap;
} private class DownloadImageTask extends AsyncTask { protected Bitmap doInBackground(String... urls) { return DownloadImage(urls[0]);
}
protected void onPostExecute(Bitmap result) {
ImageView img = (ImageView) findViewById(R.id.img); img.setImageBitmap(result); }
}
MainActivity.java
@Override public void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.main); new DownloadImageTask().execute(
“http://www.mayoff.com/5-01cablecarDCP01934.jpg”);
}
} // MainActivity sinfi
Izoh:
Dastur natijasi sifatida ko’rsatilgan manzil bo’yicha rasm yuklab olinadi va ilovadagi ga rasm yuklanadi

## Foydalanilgan adabiyotlar

1. Beginning AndroidTM 4 Application Development”, by WeiMeng Lee, printed at Radha Offset, Delhi in 2013, pages – 533. Chapter-10. Networking
2. “AndroidTM Application Development Cookbook”, by WeiMeng Lee, printed at Sharda Offset Press, Delhi in 2013, Chapter-6. Network programming
3. http://www.tutorialspoint.com/android/android_netwo rk_connection.htm
4. http://www.tutorialspoint.com/android/android_json_p arser.htm