

MINISTERUL EDUCAȚIEI REPUBLICII MOLDOVA

UNIVERSITATEA TEHNICĂ A MOLDOVEI

Facultatea „Calculatoare, Informatică și Microelectronică”

FILIERA ANGLOFONĂ

RAPORT

Lucrare de laborator nr. 3

la Programarea Aplicațiilor Mobile

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Laboratory Work 3

Subject: Simple HTTP Client (Web Service Emulation)

Objectives: Develop an app on Android using Android Studio. Purpose of work:

To create an application that will load from a web resource (preferred: <https://news.yam.md/en/rss>) its RSS feed.

Tasks:

The web service will be programmatically emulated using the HTTP protocol (GET;) methods

- a) possibility to add 2 or more RSS feeds
- b) the ability to navigate to the post from the loaded stream
- c) local storage of flux, keeping it until user destroys it

Introduction

This work is of high importance since it is the third ever mobile application development experience.

It is supposed to form an understanding of advanced concepts like RSS loader, HTTP client, HTTP methods and more. The amount of tasks seems tiny yet each of them have their own speciality, and their category of stuff to be learnt. Therefore, anything that's to be learnt will be of help to sharpen the skill of mobile development.

Short Theory

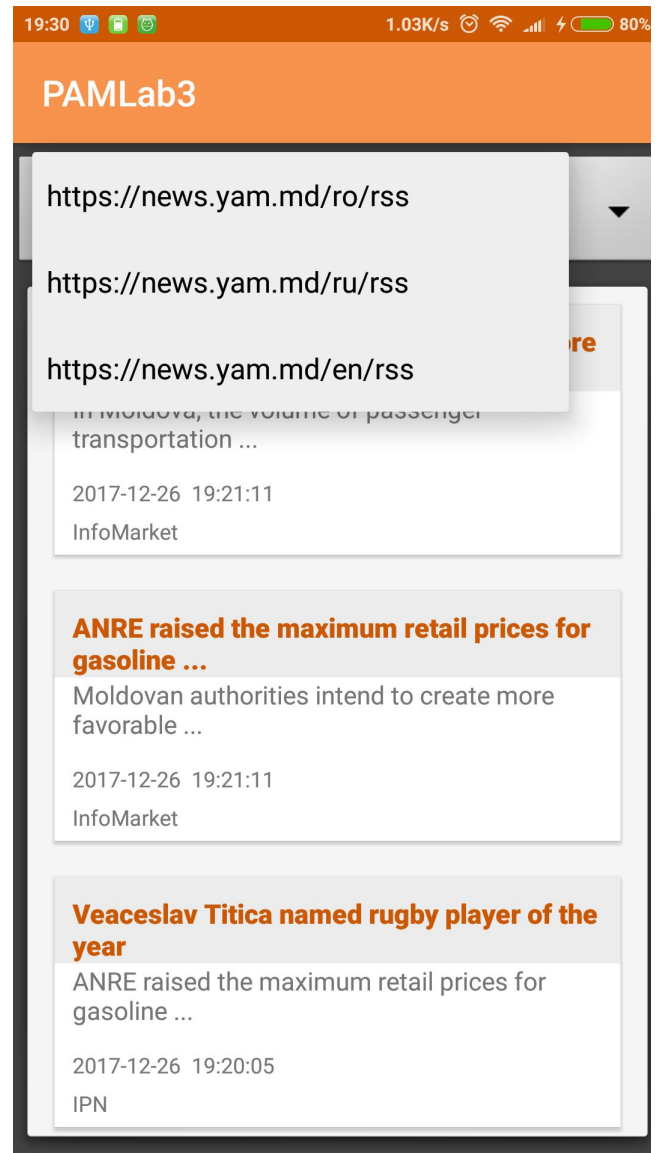
RSS (Rich Site Summary; originally **RDF Site Summary;** often called **Really Simple Syndication**) is a type of web feed which allows users to access updates to online content in a standardized, computer-readable format. These feeds can, for example, allow a user to keep track of many different websites in a single news aggregator. The news aggregator will automatically check the RSS feed for new content, allowing the content to be automatically passed from website to website or from website to user. This passing of content is called web syndication. Websites usually use RSS feeds to publish frequently updated information, such as blog entries, news headlines, audio, video. An RSS document (called "feed", "web feed" or "channel") includes full or summarized text, and metadata, like publishing date and author's name.^[1]

Task Implementation and result verification

1) Having multiple RSS feeds:



*fig.1. The default RSS feed
(Romanian news)*



*fig.2. The multiple choice of RSS feeds, with
english news already selected (on background)*

As visible from the previous screen shots, there's a few feeds to be selected from, and to avoid complexity of implementation, since all RSS feeds are differently structured, the same site was decided to be chosen as the source for the different RSS flows.

2) Being able to navigate to the post from the loaded stream

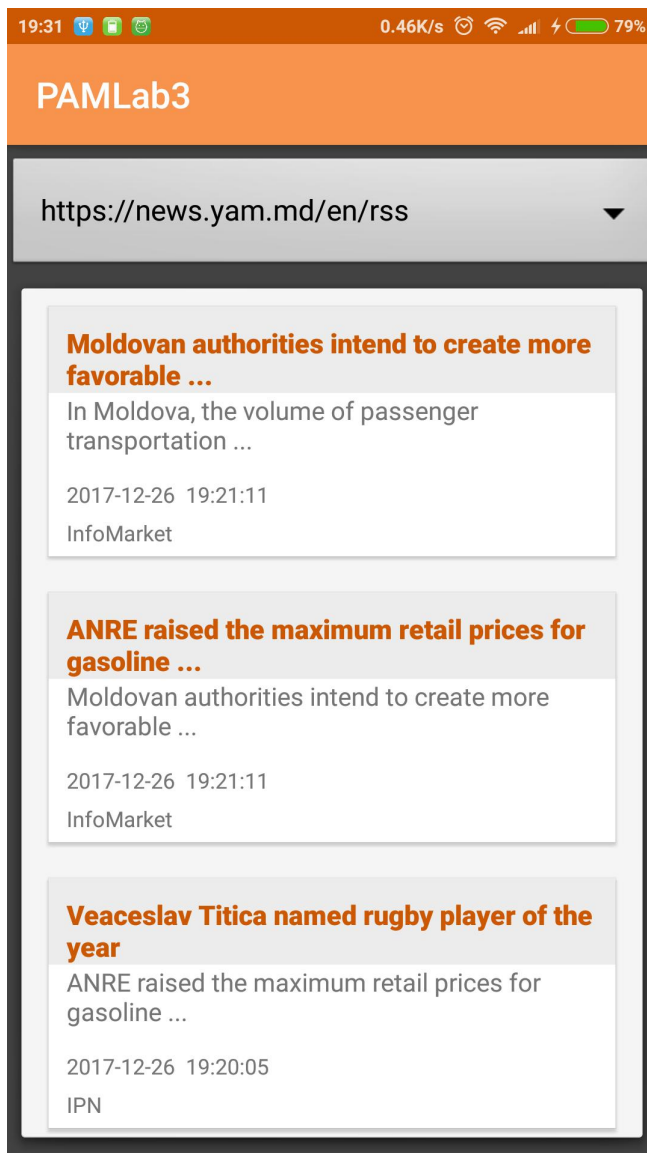


fig.3. Selected English news feed

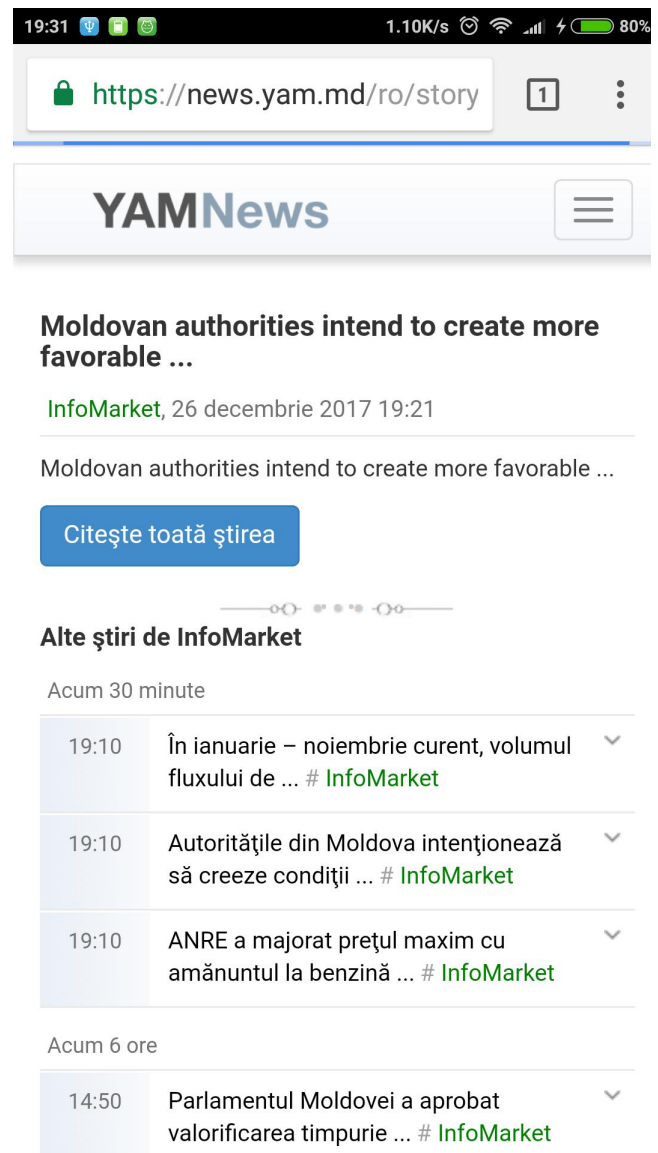


fig.4. A new browser activity is open due a click on the first title

3) Local storage of the feed, keeping it until user destroys it

The RSS feed, being once loaded, is available to be scrolled for as long as the user needs it, and regardless of the situation on access to internet, it is available until the app is closed. While there is internet, the app may load the new selected feeds, however once it ceases, there is no more possibility to load feeds unless the internet access is reestablished.

Conclusion

During this laboratory work, there has been lots of encounters with requirements for learning and problem solving of challenging levels.

The whole project took a while to complete, yet the progress was linear. This is a pleasant fact because without progress, there's no regain of motivation in continuing, which is the requirement for any of this laboratory works to be completed.

Also, there was a nice amount of studying involved for things like parsing, xml handling, RSS concept and format, and many more that are the building bricks to a web application development.

This very laboratory work marks a great first step towards the understanding of web developing on a mobile platform. Personally it is an area that was avoided for years!

Bibliography

- **[1] What is an RSS feed**
<https://www.digitaltrends.com/computing/what-is-an-rss-feed/>
- **Handwritings from Mobile Applications Programming course** of Lector:
prof.univ. I.Antohi.
Chişinău: UTM
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Annex

Code source:

<https://github.com/StasBizdiga/PAM>